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Introduction

Purpose
Every year at the national and regional conferences participants’ present thought-provoking, insightful papers and posters on teaching issues. Unfortunately, many of these may be largely forgotten after the conference has ended. To capture and share this wealth of material with a wider audience, the Society for the Teaching of Psychology (Division Two of the American Psychological Association) has created this recurring STP e-book series that organizes this material into topical categories, and provides readers with a summary of each conference presentation and the first author’s contact information.

Sources
In this, the inaugural volume, we provide summaries of teaching presentations originally delivered at one of the following eleven national or regional conferences, many of which are sponsored by the Society for the Teaching of Psychology.

The Society for the Teaching of Psychology hosts a Teaching Institute each year at the Association for Psychological Science meeting. The APS-STP Teaching Institute is held as a pre-conference to the regular conference of the Association for Psychological Science. The teaching institute begins with a Wednesday evening workshop and continues all day Thursday with plenary and concurrent sessions on a host of topics relevant to the teaching of psychology. The institute also includes an active and vibrant poster session. In addition, STP sponsors three talks during the regular convention.

The Society for the Teaching of Psychology contributes to the program at the American Psychological Association’s annual convention. Posters and one-hour symposia on teaching and learning are welcome; completed empirical and cross-divisional research is particularly encouraged. Individual papers or other formats are not accepted.

STP’s Annual Conference on Teaching takes place each year in October. The conference program includes keynote addresses and concurrent sessions featuring nationally recognized teachers and advocates for undergraduate education, a poster session, publishers’ displays, and plenty of time to get to know other teachers who are passionate about teaching psychology.

The National Institute on the Teaching of Psychology is an annual conference for teachers of psychology. Invited presentations include workshops, concurrent sessions, and general sessions on topics of interest to psychology teachers at all levels, from high school through university. To assist these teachers in improving their effectiveness and enhancing their students’ learning, the Institute program offers updated content and new instructional techniques and classroom activities.

The purpose of the Stanford Psychology One Conference is to harness the vast potential of the introductory psychology course by developing a community of supportive and instructors who share ideas and resources, and challenge one another to the highest standards of teaching excellence. Stanford University initiated this conference in 2012.
devoted exclusively to teaching the introductory course. The first Stanford Psychology One Conference was organized to celebrate the tenth anniversary of Stanford's Psychology One Program, a program devoted to the teaching of introductory psychology. Due to its positive reception, the conference has since become an annual tradition, supported over the years by grants from the APS Teaching Fund, and APA's Board of Educational Affairs.

The Southwest Teachers of Psychology (SWToP) is an organization of instructors of psychology at the university, community college, and high school levels. Historically, SWToP hosted an annual conference that allowed these teaching professionals the free exchange of philosophies, research, and instructional materials for the teaching of psychology in an informal, collegial, and supportive atmosphere. In 2010 SWToP became an official affiliate organization of the Southwestern Psychological Association. As an affiliate organization, SWPA schedules poster, symposia, and workshops specific to the teaching of psychology at their conference held each April. In this manner, SWToP maintains its identity and autonomy, providing the opportunity to share teaching experiences, discover new ways to approach the classroom, and meet people with a passion for teaching psychology.

In 2009, the Council for the Teaching of Undergraduate Psychology (CTUP) merged with the Society for the Teaching of Psychology (STP) to create a stronger network to support teaching development for instructors who attend the Midwestern Psychological Association (MPA) conference. At MPA, the teaching sessions offer teachers of psychology at all levels the opportunity to enhance their teaching skills through invited workshops and lectures on successful teaching strategies and techniques presented by psychology instructors who have successfully employed these methods. These sessions also provide opportunities for instructors to present their own successful methods in posters and to discuss teaching topics in participant idea exchanges.

The Rocky Mountain Psychological Association sponsors the Portenier/Wertheimer Teaching Conference each year. The conference is designed for faculty who teach at four-year universities and colleges, community colleges, and high schools. Specifically, the conference is for those who wish to explore new ideas that will enhance and broaden their teaching skills. This celebration of teaching is designed to provide useful and interesting information directly related to teaching psychology, and the opportunity to see award-winning teachers in action. The conference also provides a forum for the discussion and exchange of knowledge and practice about the teaching of psychology as well as student learning and assessment.

The mission of the Mid-Atlantic Teaching of Psychology Conference is to bring together teachers of psychology from universities, two and four year colleges, and high schools who wish to enhance their teaching of psychology and expand their teaching skills through workshops, lectures, and participant idea exchanges on successful teaching strategies and techniques. In addition, MATOP fosters the development of valuable teacher networks that further strengthen the continued support of good teaching and professional fellowship.
The **Mountain States Teaching of Psychology Conference** is designed for psychology instructors at high schools, community colleges, 4-year colleges, and universities, although the conference has broad topics that will also be relevant to non-psychology teachers. The distinguishing feature of this conference is the INTERACTIVE nature of all workshops. Dick Gorman who died in 2010 founded the conference. The conference serves as a meaningful way to honor his legacy and passion for the teaching of psychology.

The **Southeastern Teaching of Psychology Conference** is sponsored by Kennesaw State University's Center for Excellence in Teaching & Learning. Held annually, SETOP is an opportunity for teachers of psychology to discuss and share experiences and techniques. The conference offers concurrent sessions and invited addresses on teaching techniques and issues associated with undergraduate education.

**Organization**

The presentations are organized into twenty-seven topical areas, including broad areas such as student advising, assessment issues, the design of capstone courses, undergraduate research, writing, student engagement, student success, critical thinking, ethics, online teaching, pedagogy, professional development for both faculty and for students, and the scholarship of teaching and learning (SoTL).

In addition to those broad areas, presentations summaries/posters address approaches to teaching specific subjects including clinical and counseling psychology, cognitive psychology and the psychology of learning, developmental psychology, gender, the history of psychology, interdisciplinary studies, multicultural psychology, neuroscience, psychopathology, research methods, service learning, social psychology, and statistics.

**Acknowledgments**

We want to thank our co-editors for their invaluable assistance in assembling the materials from their respective conferences for publication in this e-book. We also are grateful to the authors for their willingness to share their work with our readers. For their invaluable assistance in helping to format each of the entries in the e-book, we would like to thank a number of graduate teaching assistants at Texas A&M University-Kingsville, including Nadia Sherman, Victoria Moyorido and Claudia De La Torre.

For this e-book, our goal is that the reader to find entries that will answer questions, generate ideas, and adapt information to lectures, discussions and conversations. For each of the contributions, we have provided the first author's contact information so that you may follow up on entries of interest and obtain additional information not in the summary.

Richard L. Miller & Tyler Collette  
Texas A&M University – Kingsville  
February 2017
Section I
Advising

1. Experiencing and Teaching Personal Well-being

2. Providing Effective Graduate School Advising to Undergraduate Students in Psychology: A Workshop to Identify Effective Practices

3. Models for Advising Students about the Graduate School Application Process: A Roundtable Discussion

4. To Go or Not to Go: Graduate Study in Psychology
Experiencing and Teaching Personal Well-being

Debra Park
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Presented at: Mid-Atlantic Teaching of Psychology, 2016
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Teaching students essential habits and competencies that support their ongoing personal well being and development should be part of the curriculum in schools. Helping individuals identify their strengths, talents, and purposes during their adolescence and young adulthood will impact their identity in a positive way and empower them in ways that will lead to a more successful transition from high school to college, to adulthood. Skills that will help them enter the workforce and contribute to their society in a positive fashion can be introduced in our psychology classes and many of these concepts can be studied through themes related to personal well-being habits. These well-being habits can be the focus of psychology lessons but can also be integrated into other subjects as well.

Teachers need to help their students be the very best they can be – to use their strengths not only to learn in their classrooms but also to flourish. As Martin Seligman and other positive psychologists would say: “Be proactive instead of reactive”. We need to prevent problems instead of solving the problems after the fact. This is so true in the classroom - as a college instructor as well as for the K-12 educator. What we know about how people learn and the skills needed to deal with adversity, how to learn from our failures - along with the content teachers need to bring these lessons into their classrooms

In schools dedicated to the teaching of academic, social, and emotional skills teachers need to be provided the opportunity to identify their own strengths, talents, and purposes – and develop their own personal well-being habits. The social and emotional well being of students and teachers is vital to creating safe and caring learning environments in which all students thrive academically and socially. As teachers we need to model well-being habits and “practice what we teach”. If we are psychologically and physically healthy, thriving within our families and communities, then we can be healthy teachers and promote well being in our schools, for our students.

If you know your strengths and use them, as a teacher you will be more engaged, more effective, experience that “flow” state more often and influence your students in a much more positive way. Students know when their teachers enjoy what they do...and that passion is very contagious. Instructors aware of their students’ strengths can differentiate instruction, scaffold learning and provide students with skills that they will use not just in
their classrooms but in their everyday lives. Researchers in the field of positive psychology point to specific ways of thinking and acting that can strongly impact our sense of well-being and happiness. The resulting discoveries are enriching the practices of teaching, counseling, clinical psychology, psychiatry and life coaching.

With the focus that has been put on standardized testing, we do not want to lose sight of some very important things that we know about how children learn and what affects learning. Our mindsets affect our perceptions of others and ourselves. This influences our decision making as teachers and impacts our students’ academic success.

So many of our students are affected by psychological disorders that disrupt their lives; they need to learn social emotional skills to help them cope. We need to teach them resilience and problem solving skills, provide them with opportunities to discover their strengths, to find their purpose, enjoy learning and develop their passion - leading to a more meaningful life. We cannot fix everything but we can contribute to the development of these skills that individuals need to flourish.

The teachers attending this workshop will be provided with resources on psychological science in the areas of human happiness, positive psychology and mental well-being that relate to many different units of study that are presented in the Introduction to Psychology course. A major focus will be on the development of character strengths.
Providing Effective Graduate School Advising to Undergraduate Students in Psychology: A Workshop to Identify Effective Practices

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Presented at: Rocky Mountain Psychological Association, 2016
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According to the American Psychological Association, approximately 6% of all college undergraduates earn psychology degrees, making psychology the fourth most popular undergraduate major in the United States (http://www.apa.org/monitor/2008/06/undergradmajor.aspx). However, a Bachelor’s degree in psychology often is not sufficient to secure fulltime employment in the field. Consequently, about 40% of psychology majors who graduate from four-year institutions will go on to obtain a graduate degree. This level of post-graduate academic attainment is the highest for all undergraduate majors (Halonen, 2011).

Psychology departments best serve their students when they provide effective advising about the path to graduate school admissions. The APA Guidelines for the Undergraduate Psychology Major 2.0 recognize that high quality faculty advising is important to prepare undergraduate students for graduate school. Other resources on effective undergraduate education also point to the importance of graduate school advising (e.g., Ware et al., 1993). Yet research suggests that many undergraduate programs do not provide appropriate advising to their students. For example, Appleby and Appleby (2006) concluded that the findings from their research on the “kisses of death” in graduate school applications indicate that psychology majors are “likely to commit many of these KODs [kisses of death] because of a lack of exposure to information that would otherwise enable them to understand the graduate school culture, the requirements of the graduate school application process, and the exact nature of some of its components” (p. 22). The researchers further stated that these problems “resulted more from a lack of appropriate advising and mentoring than from a lack of applicants’ intelligence” (p. 22). Thus, there is an apparent need for psychology departments to improve the quality of graduate school advising delivered to undergraduate students. The proposed workshop is intended to address this need.

The primary goals of the workshop are to examine the current state of graduate school advising in psychology departments and to identify effective practices for faculty to assist undergraduate students applying to graduate programs. As a point of departure, the workshop moderators presented the advising program that they have implemented in their psychology department. Central to this program is the designation of specialized faculty advisors whose primary responsibility is assisting students with the process of applying to graduate programs in psychology. These advisors have two main roles. One is working individually with students to help them identify their career objectives, select appropriate
graduate programs, and negotiate important aspects of the application process such as writing application essays and interviewing. The other is developing programmatic department-wide advising initiatives. These include creating and hosting graduate school information seminars, developing websites and vetting internet sources, curating relevant resources, and establishing formal collaborations with academic support services.

After describing their own advising program, the workshop moderators invited participants to share advising practices that they or their departments currently employ and to discuss potential strategies to enhance the quality of graduate school advising. As part of this discussion the moderators facilitated a brainstorming session on how to approach the challenges faced by graduate school advisors, such as when and how best to get information about graduate school to students; how to help students identify programs and evaluate fit; how to have difficult discussions with students who presently are not competitive graduate school candidates; and how to assess the effectiveness of graduate school advising efforts. The moderators also encouraged student attendees to suggest advising resources and practices that they believe would be most helpful in gaining acceptance to high quality graduate school programs. Workshop attendees participated in advising role playing activities and received advising resources.

References
Psychology continues to be among the most popular undergraduate majors in the United States (US Department of Education, 2016). However, a bachelor’s degree in psychology usually is not sufficient to gain full-time employment in the field (Halonen, 2011). A survey of over 4,500 psychology alumni from a large Midwestern university that was completed the year following graduation found that 25% of psychology alumni believed their education did “not at all” prepare them for their current job; only 16% indicated that their education prepared them “very well” for their current job (Borden & Rajecki, 2000). Due to the difficulties that psychology majors face obtaining employment in the field, approximately 40% of individuals with a baccalaureate degree in psychology will eventually earn a graduate degree (Halonen, 2011). In recognition of this trend, the APA Guidelines for the Undergraduate Psychology Major (Version 2.0), in its Professional Development learning goal, formally recognized the importance of providing guidance to psychology majors about graduate school admissions (Halonen et al., 2013). One of the strongest predictors of admission to graduate programs in psychology is the quality of interaction between students and faculty during academic advising sessions (Stoloff et al., 2012; Stoloff, Good, Smith, & Brewster, 2015). Yet research suggests that undergraduate programs often do not provide effective advising to their students who hope to attend graduate school (e.g., Appleby & Appleby, 2006; Sanders & Landrum, 2012). This shortcoming prompted a roundtable discussion that was designed to identify effective strategies for helping psychology undergraduates gain admission to graduate programs.

To provide a framework for the discussion, attendees responded to two writing prompts: 1) “what do undergraduate students need to know about graduate school in psychology,” and 2) “how faculty can help students during different stages of students’ academic career learn what they need to know.” Attendees then shared their responses in a group discussion hosted by the roundtable facilitators. One of facilitators took notes of the main points that were raised during the discussion, which are summarized below.

There was general consensus that students need to be informed that a professional career in psychology usually requires obtaining a graduate degree. The attendees also agreed that students need more information about the different areas of specialization in the field and the particular graduate degree and training that are required to work in these areas. It was noted that there may be more than one path to reach a career goal. Others commented that in some cases, the most appropriate training might be in a discipline other than psychology, for example a Masters in Social Work program. The attendees also stressed that students should know that the skills and experience they should gain as undergraduates depend on the students’ particular educational and professional goals. For
example, a student who wants to become a Licensed Psychological Counselor needs to gain clinical/counseling experience (e.g., as an intern at a treatment facility), whereas a student who wants to earn a Ph.D. to become a university professor needs to gain research experience (e.g., as a research assistant).

The discussion of how faculty can help students learn what they need to know identified two basic mechanisms for providing assistance: individual advising and departmental programmatic initiatives. In regard to individual advising, attendees commented that students often have a great deal of anxiety about graduate school. Several attendees noted that in the first advising session, it was important to redirect the focus away from graduate school and to instead encourage students to describe what they would like to do in their career. Follow up advising sessions usually are devoted to identifying the graduate degrees and training that would allow students to reach their career goals, and to helping students locate relevant information and resources. In this discussion the point was made that because no person is steeped in every area of the field, the advisor’s role often is to teach students how to find what they need to know rather than providing students with content-specific information. For example, the advisor might point a student to the APA’s *Graduate Study in Psychology*, or suggest that the student meet with a particular faculty member who has expertise in the student’s area of interest. When students decide to apply to graduate programs, the advisor’s responsibility is to guide the student through the nuts and bolts of the application process. Additionally, the advisor should guide students about how best to present their experiences and accomplishments throughout the graduate school application process. This endeavor typically includes activities such as assisting with personal statements and practicing interviewing strategies.

The discussion of departmental initiatives identified a number of strategies for getting information about graduate school to students. Top among these was a requirement that students complete a careers course or course module early in the curriculum. To make this information real to students, it was suggested that departments display faculty biographies that include faculty members’ interests, education, and training. Several attendees also suggested that student clubs take an active role in disseminating information about graduate school. One noteworthy proposal was to encourage student clubs to sponsor forums where senior-level psychology students, some of whom have applied or will soon apply to graduate programs, provide information about graduate school to students in earlier stages of their academic careers. The focus of these forums could be tailored to the developmental stage of the attending students. It was also suggested that student clubs host speakers from different graduate programs; the speakers could include student alumni and other graduate students in addition to faculty. Finally, roundtable attendees proposed that departments develop elective courses for upper-level psychology students who have serious interest in attending graduate school. These courses might be designed to assist students with the application process or to provide students with the skills and experience they need to become competitive applicants (e.g., Advanced Statistics).

The roundtable sparked a much-needed conversation about ways to enhance the effectiveness of graduate school advising. It elicited useful strategies for assisting undergraduate students through individual advising and through department-sponsored programs. Attendees left the roundtable eager to apply these strategies and to move the conversation forward.
References
We examined if providing students with resources can make a difference in the consideration of graduate school regarding self-efficacy, certainty, confidence, and awareness. Twenty-six first-year psychology majors were randomly assigned to one of four study conditions, and also completed a 16-item pretest-posttest survey about graduate school intentions.

The number of undergraduate psychology students is constantly increasing, creating a higher demand for graduate training. Adequate guidance and preparation for undergraduate students in the psychology program (Neimeyer, Saferstein, & Pickett, 2004) is necessary to succeed in graduate school. Encouragement to get undergraduate students to think deeply about graduate school could be very beneficial to psychology students at all levels (Stinnett, Bui, & Capaccioli, 2013). The purpose of this study is to determine if resources provided to students can make a difference in graduate school decision-making regarding self-efficacy, certainty, confidence, and awareness. We surveyed first-year psychology majors using the online program Qualtrics. We hypothesize that there is a difference in the four interventions tested with regard to the outcome of variables concerning self-efficacy, certainty of the admission process, confidence in applying, and awareness of the competitive nature of applications to psychology programs.

Method
First-year psychology majors were emailed to participate in an online survey through Qualtrics. There were four different versions of the study, each with the same 16-item pretest and posttest survey (the first 15 items using a 5-point agreement scale, and the last item using a 4-point importance scale). In Version 1, 3 students watched a video with information regarding graduate school that was recorded by a Boise State psychology professor. In Version 2, 8 students watched a video with information regarding graduate school that was recorded by a former student that did not attend Boise State. In Version 3, 8 students completed an in-depth survey regarding attending graduate school. In Version 4, 4 students read three articles regarding graduate school admission. The students were randomly assigned to one of the versions through a link sent through email.

Agreement Scale Items
- I think a lot about what I will do after I finish my bachelor's degree.
- I am concerned about my future job/career options.
- I know I want to go to graduate school in psychology.
I am comfortable with my current educational path.
I spent enough time thinking about my future.
I understand how competitive graduate school admissions can be.
I know the steps it takes to apply to graduate school.
I know how to create an effective resume for job applications.
Right after graduation, I hope to get a good job with my bachelor’s degree in psychology.
Right after graduation, I hope to be enrolled in a psychology graduation program.
Right after graduation, I hope to be pursuing more education, but not in a psychology graduate program.
I am confident in my current ability to make the decision about future educational options.
I am confident that I will be successful after earning my bachelor’s degree.
I wish I spent more time thinking about my future.
I wish I had more information about how to make decisions about my future.

Importance Scale Item
Today, how important is it to you to be able to make the decision about going to graduate school or not?

Results
There is a significant difference between pretest scores ($M = 2.58, SE = 0.28$) and posttest scores ($M = 3.06, SE = 0.32$) on student answers to the item about the knowledge on the steps it takes to apply to graduate school, $F(1,18) = 6.19, p = .023$. There is a significant difference between pretest ($M = 1.89, SE = 0.23$) and posttest ($M = 2.56, SE = 0.26$) on answers to the item asking about the decision right after graduation, to pursue more education, but not in a psychology program, $F(1,18) = 6.94, p = .020$.

Discussion
Despite the fact that only had 26 students participate in the study, significant differences emerged over time for 2 of the 16 pretest-posttest questions. There was no specific intervention that caused a significant differential increase on the knowledge on the steps it takes to apply to graduate school. Exposure to graduate school information can trigger self-reflection in students who participated in this study. These results are encouraging, even with a small number of participants. We plan on continuing data collection during Spring 2016 and perhaps Fall 2016, to verify/replicate our current findings as well as have a better chance of being able to determine if one of the four intervention strategies might have more of a benefit compared to the other strategies.
References


Section II
Assessment

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2. A Measure of Academic Maturity in College Students
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4. Building Bridges: Teaching and Assessment in GE Courses
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Assessing Students’ Written Communication Skills in Social Sciences

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INTRODUCTION
Improving students' abilities to write effectively has long been considered an important goal of a college education. This is seen as a skill that will serve students across their college careers and their professional lives. Effective written communication can improve students' ability to learn effectively. Students may feel that the instructor should not, or need not consider correct word usage, mechanics, sentence structure, and organization as part of the grade of written assignments for those courses outside of English classes. Only content is important. Instructors may struggle with how to handle peer student writing since it affects the content of the material that they need their students to acquire. For instructors, remaining objective while evaluating student writing can also be difficult. This is where using a rubric can be beneficial. It brings uniformity to the evaluation of writing across courses and settings by specifying salient features of writing quality and levels of writing proficiency and it offers a reference to common criteria and language providing objectivity to the evaluation process. As students are provided with criterion-based holistic scoring to evaluate papers, they develop a better understanding of the problems as well as the successes of writing.

As part of the ongoing process of departmental assessment, the Social Sciences Department at Luzerne County Community College, in the 2014-2015 AC, determined to assess written communication skills of students across department programs, including psychology. The department adopted the written communication rubric used by the English Department to assess written assignments across several courses in their department. In addition to resulting in an assessment of student writing in social sciences courses, utilizing the rubric allowed for an evaluation of transfer of learning from English composition courses to other courses in a student's curriculum. Data from 329 students was collected and analyzed and the use of this strategy was assessed.

METHODS
SAMPLE:
329 undergraduate students enrolled in selected sections of Psychology, Sociology and history. Of these students, the data from 235 students was able to be used.

PROCEDURE:
Social Science Department faculty were trained by the English Department in the use of their written communication rubric. Students completed a written assignment that was part of the requirements for their course. Instructors, using the common written communication rubric adapted by the Social Sciences department, graded the assignment.

RESULTS
- A total of 70% (n=179) of students attained scores of 70% or higher on the total score. The average score for this group was 78%.
- Average total score was 22.54 (out of a maximum 30 points).
- There was no significant difference in the average total scores of the five criteria areas that the rubric measured: content, organization, word usage, sentence structure, and mechanics. However, a larger number of class sections reached the benchmark in the later three criteria than in the former two criteria.
- In the advanced level courses (200-level), only 42% of the sections reach the benchmark of 70% in the content criteria.
- Fifty-six students failed to submit the assignment and 18 of the submitted assignments were considered non-scorable for the following reasons: student wrote too little to allow a reliable judgment of writing, student did not write on the assigned topic, or students plagiarized.

CLOSING THE LOOP
Considerations and Future Research
- Future research may want to consider the fact that less proficient students may have already withdrawn or may be part of the number of students who failed to submit the assignment. Therefore, multiple assignments done early in the semester may remedy this problem.
- Future research may want to consider the fact that less proficient students may have already withdrawn or may be part of the number of students who failed to submit the assignment. Therefore, multiple assignments done early in the semester may remedy this problem.
- Consider the fact that content specialists (not English instructors) graded this assignment. This might explain why students reached the 70% benchmark with lower frequency in the content and organization criteria than in the criteria areas related most directly to writing mechanics.

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Addison, Althoff, and Pezold (2009) developed the Academic Maturity Scale (AMS) to measure the extent to which college students maximize their academic potential. The original version of the AMS consisted of 100 items that assessed four dimensions of academic maturity: organization, motivation, responsibility, and self-awareness. The series of studies described here were designed to produce a more concise version of the AMS, and to assess the reliability and validity of the revised instrument.

To examine the factor structure of the 100-item AMS, we used data from 425 undergraduate psychology students who completed the scale. Two separate principal components analyses, the first with a Varimax rotation and the second with a Promax rotation, showed evidence for a four-factor structure, supporting the original notion of academic maturity as a construct consisting of four dimensions. By eliminating redundant and unrelated items, we reduced the AMS to a 30-item instrument with four factors: motivation, time management, focus, and responsibility. It is noteworthy that these factors are quite similar to those in the original version of the AMS. Examples of items for each of the four factors are:

**Motivation:**
- I set specific academic goals for myself.
- It is important to me to understand the subject matter of the course.

**Time Management:**
- I tend to do most of my studying the night before the exam. (reverse-scored)
- I usually begin working on large projects as soon as they are assigned.

**Focus:**
- I find it difficult to follow a study schedule. (reverse-scored)
- During class, I often find it difficult to keep my attention focused on the instructor. (reverse-scored)

**Responsibility:**
- When I do poorly on an exam, I talk to the instructor to find out what I can do to improve.
- I try to identify individuals in my classes who I could ask for help if I need it.
We then conducted several studies to examine the validity of the motivation and time management subscales on the revised AMS. In the first of these studies, 88 undergraduate psychology students (67 women, 21 men), with a mean age of 20.94 (SD = 4.9) completed the revised AMS, the Academic Motivation Scale (Vallerand et al., 1992), and the Time Management Questionnaire (TMQ; Britton & Tesser, 1991). The Academic Motivation Scale is a 28-item instrument designed to measure the three types of academic motivation: intrinsic motivation, extrinsic motivation, and amotivation. It is one of the most widely used measures of motivation in an academic setting. The TMQ is a 35-item instrument on which higher scores correspond to better time-management practices. The TMQ has been used extensively with college student populations. Results of correlation analyses indicated a significant, positive relationship between scores on the AMS motivation subscale and scores on both the intrinsic and extrinsic motivation subscales of the Academic Motivation Scale, \( r(82) = .67, p < .001; r(81) = .31, p < .01 \), respectively. Additionally, there were significant, positive correlations between scores on the AMS time management subscale and scores on both the Short Range Planning and Long-Range Planning subscales of the TMQ, \( r(84) = .46, p < .001; r(84) = .63, p < .001 \), respectively. These results support the validity of the motivation and time management subscales of the AMS.

To examine the validity of the focus subscale of the AMS, we collected data from 111 undergraduate students (89 women, 22 men) with a mean age of 20.21 (SD = 3.40). We examined the correlation between AMS focus scores and scores on the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), a 15-item scale designed to assess a core characteristic of mindfulness, defined as a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place. The MAAS has shown excellent psychometric properties across a number of studies. Factor analyses based on data from diverse samples have confirmed a single factor scale structure (Carlson & Brown, 2005). Internal consistency levels (Cronbach’s alphas) generally range from .80 to .90. The results of the analyses indicated a significant, positive correlation between AMS focus scores and MAAS scores, providing support for the validity of the focus subscale of the AMS.

Finally, we examined correlations between scores on the responsibility subscale with those on three other instruments, including the Self-Control Scale (Tangney, Baumeister, & Boone, 2004), a 36-item instrument with demonstrated reliability and validity. The other two instruments are subscales of the Academic Self-Regulation Scale (Magno, 2010), which was developed to measure self-regulation in an academic context. The two subscales measure seeking assistance (8 items), and learning responsibility (5 items). Data from 70 participants yielded significant, positive correlations for responsibility subscale scores and those on the Self-Scoring Self-Control Scale \( r = .28, p < .05 \), the Seeking Assistance Subscale \( r = .43, p < .001 \), and the Learning Responsibility Subscale \( r = .345, p < .01 \). These findings support the validity of the responsibility subscale of the AMS.

The AMS could be particularly useful in academic advising settings. The scale could help academic advisors determine whether students are making the most of their potential, as well as help students recognize areas in which they could improve. AMS scores could help
advisors tailor their advice to students more effectively, by making more specific suggestions regarding students’ short-term goals, as well as their future careers.

References


APA Goal #5 Professional Development: Assessment Outcomes for Sophomore and Senior Psychology Majors

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The objective of our study was to implement assessment measures concerning the professional development of psychology majors (APA Goal #5). Sophomore and senior-level psychology majors completed a battery of measures and we examined those outcomes for the expected developmental changes over time.

In recent years, psychology as a major has become increasingly more popular. According to the National Center for Education Statistics (NCES, 2014), of the 1.8 million bachelor’s degrees conferred in 2011-12, six percent were in the field of psychology. Also, in 2014, 259,789 high school students took the Advanced Placement Psychology exam (College Board, 2014). With increased interest in the field of psychology, there is a need to make sure that these students are well prepared for life after graduation. To aid perspective psychology professionals, APA released a second version of its guidelines for undergraduate psychology education in 2013. An important aspect of being ready for post-graduation for undergraduate students is professional development, which is Goal 5 in the guidelines. The areas of emphasis in this goal are: application of psychology-specific content and skills, effective self-reflection, project management skills, teamwork skills, and career preparation (APA, 2013). Our focus for this study was to assess professional development in both sophomore-level and senior-level psychology majors, according to Goal 5 in Version 2.0 of the APA Guidelines for the Undergraduate Psychology Major.

Method
A total of 97 participants (34% sophomores, 66% seniors) listed with psychology as their major participated in this study. Participants in this study were recruited via email, and completed the measures using online survey software Qualtrics. In a first attempt at systematic assessment of some of the Goal #5 subcategories, we administered the following scales:

- Psychology Majors Career Information Survey
- Psychology as Science Questionnaire
- Academic Locus of Control Scale
- Leadership Self-Report Scale
- Metacognitive Awareness Inventory
- Managerial Grid and Leadership Style Questionnaire
- Unvalidated Graduate School Potential Test
Students who completed the survey did so voluntarily, and were given an unlimited amount of time. In total, participants were asked 181 survey questions.

Results
We hypothesized that when developmental differences were present, senior-level psychology majors would score significantly higher in various aspects of professional development than sophomore-level psychology majors. Due to the high number of questions asked, we used a Bonferroni correction ($p < .001$) so that our rejection of the null hypothesis would be more difficult, that is, more conservative. Our analysis at this time focused on item-based response differences between sophomores and seniors. Using the Bonferroni criterion, there was one statistically significant difference between sophomores ($M = 1.38, SD = 0.50$) and seniors ($M = 1.07, SD = 0.25$) using the scale $1 = true$ and $2 = false$ on answers to the item “I know what kind of information is most important to learn,” $t(84) = 3.95, p < .001$. For other $t$ tests, $p$ values approached significance but were not significant with the Bonferroni correction (all $ps$ between .005 and .001). Those items include:

- “I know how to go about preparing for, selecting, and getting into graduate school,” with seniors agreeing more than sophomores;
- “I can identify several different fields of study that would allow me to do counseling/therapy and I understand what each of these involves,” with seniors agreeing more than sophomores;
- “It’s just as important for psychology students to do experiments as it is for students in chemistry and biology,” with seniors agreeing more than sophomores;
- “I can be easily talked out of studying,” with sophomores reporting true more often than seniors;
- “I am not available when people need me,” with sophomores agreeing more than seniors;
- “I know how well I did once I finish a test,” with seniors reporting true more often than sophomores.

Discussion
With additional testing and modification, this battery of inventories may be appropriate as one method of approximating the competencies of psychology majors regarding professional development. Multiple strategies must be employed to improve the current effort, including (1) examine scale responses on a holistic level rather than item analysis, reducing the need for the conservative Bonferroni correction; (2) apply multivariate analyses to the current data set to identify trends that may currently exist; and (3) continue data collection during the Spring 2016 semester to strengthen and replicate the current efforts. The sophomore-to-senior psychology major compares appears to be a promising method for measuring professional development, but continued work is needed to demonstrate the validity of the outcomes.
References
Introductory Psychology frequently earns the designation of a general education (GE) course, signifying the course addresses objectives considered essential in higher education. GE classification affords departments many benefits, including large enrollments and a diverse population to participate in research. GE objectives are often the reason students choose to take Introductory Psychology, yet they are not necessarily top-of-mind for most instructors. Understandably, integrating mandatory, pre-determined, and sometimes vague objectives is a challenge for both seasoned faculty and many first-time or graduate instructors teaching Intro Psych across the country. We aim to help instructors of Introductory Psychology consider the important role of their course in the broader GE curriculum and to share strategies for understanding, supporting, and assessing general education learning objectives (GE LOs).

Across institutions, the goal of general education is for students to develop valuable, enduring competencies that benefit them regardless of their major discipline. At Ohio State University (OSU) over 38,000 undergraduate students have taken Introductory Psychology in the last decade, with the vast majority reporting they chose the course to fulfill a GE requirement. OSU specifies three objectives specific to the social sciences, including:

1. understand theories and methods of social science inquiry,
2. understand individual behavior, differences and similarities in social and cultural contexts, and the processes by which groups function, and
3. comprehend and assess individual and group values and their importance in social problem solving and policy making.

Two additional social diversity-related objectives for our course include:

1. describe and evaluate the roles of such categories as race, gender, sexuality, disability, class, ethnicity, and religion within cultures of the United States and
2. recognize the role of social diversity in shaping their own attitudes and values.

All instructors teaching Introductory Psychology at Ohio State must include all five of these objectives on their syllabi verbatim and assess how well the course meets these objectives each semester.

Assessment is more than a requirement, it is a responsibility. Assessment is not an evaluation of teaching effectiveness, but an opportunity to understand what students gain from their experience in a course. Assessment helps us be better teachers, better meet students’ needs, and ensure that they develop the critical GE competencies the course is intended to meet. At OSU, we utilize a multi-pronged approach to assessment of GE outcomes, including student reflection papers, embedded testing, surveys of student perceptions, and pre-/post-testing. For the majority of these assessments, we use online tools such as our university Learning Management System (LMS), survey construction tools (Qualtrics), and testing software (ExamSoft) to automate the assessment process for both students and instructors and provide ongoing data to inform instruction over time.
Our assessments often show that students are mastering the GE LOs, but they also reveal targets for course improvement. For example, in 2015-16, we were not meeting desired levels of mastery with respect to one social science-related GE LO: **students comprehend and assess individual and group values and their importance in social problem solving and policy making.** Additionally, compared to the other objectives, instructors reported the lowest confidence in teaching this objective and administered the fewest assignments related to it. It is important for us as program administrators to help instructors understand the course requirements.

We aimed to improve course outcomes through instructor development and adjustments to the method of instruction. We first organized a professional development event for instructors that included a panel of experts who specialize in applying research to inform social policy, followed by a collaborative, team-based activity to map the curriculum to identify relevant content, and then develop tools to improve instruction. Increasing instructors’ understanding of the objective and collaboratively developing ideas for integrating this objective into the course are critical first steps in what we see as a three-step process in aligning learning objectives (GE or others) and improving outcomes.

**Step 1: Make sure instructors understand the course objective(s).** We cannot teach something we don’t understand. The broad language employed in many GE ELOs allows the same objective to be relevant for multiple courses across disciplines. However, how that broad language translates to specific concepts within one’s course can sometimes be difficult to discern. Most Introductory Psychology instructors could easily identify how well students understand or apply of specific concepts, such as correlation or operant conditioning, but it is much harder to identify where we cover content relevant to “individual and group values and their importance in social problem solving and policy making.” Once they understand the meaning, instructors can take the next step to make the objective more concrete.

**Step 2: Relate each learning objective to specific course content.** Instructors are encouraged to review the curriculum and to map specific content to each objective, including detail on why this material is relevant and specific suggestions for teaching the connection between the objective and the content. This map can then be used as a quick reference guide for both new and experienced instructors alike. Resources like these are important especially for new instructors but effortful to develop and maintain, which leads to our final step.…

**Step 3: Pool resources and collaborate with other instructors teaching the same course to identify and fill in gaps in their approach.** At most institutions Intro is taught by more than one instructor who can work together to refine their understanding of LOs, generate teaching strategies, develop common materials, and collaborate on assignments, in-class resources, and assessment tools. It is often helpful to then create a portal where instructors can share these resources with one another.

Following these steps at OSU led to improved outcomes as early as the following semester. Although the GE designation earned by many Introductory Psychology courses requires adherence to pre-determined, external learning objectives, this does not mean instructors lose the freedom to develop their own courses. Rather, GE designation provides instructors with an emphasis or direction to guide their coverage of course material. Look at this as an opportunity to share more than just details of course content but overarching themes to enrich students’ experiences and your own.
Assessing Student Achievement with Applied Assignments: How to Get Good Data from Assignments Students Are Interested in

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When psychology instructors develop assignments and tests, they are primarily focused on measuring the breadth and depth of knowledge in a particular area of psychology (e.g., developmental theory, or social theories or categories of abnormal behavior and corresponding treatments. Another important aspect of college level learning includes intellectual skill development (http://degreeprofile.org/read-the-dqp/the-degree-qualifications-profile/specialized-knowledge) such as:

- analytic inquiry and operations
- use of information resources
- engaging diverse perspectives
- ethical reasoning
- quantitative fluency
- communicative fluency

Sometime the focus on specialized knowledge comes at the expense of clearly defining and systematically assessing intellectual skills. While our class assignments and activities may help develop these skills specialized knowledge as well intellectual skills, we are sometimes not able to get our students excited about the assignments, and students frequently feel the assignments are too bookish and academic and are unable to see how they apply to real life.

By clearly articulating both specialized knowledge and intellectual skills, we clearly define a degree’s meaning in the context of what the graduate knows AND is able to do as a result of his or her studies. This also provides objective, formative assessment data, which can be used to improve consistency across courses and programs. If we can make our assignments applied and interesting, and have them relate to realistic problems and current events, students will engage more with the material, be motivated to read the textbook, and seek out additional resources to expand their knowledge.

Taking a deliberate approach to designing assessments can result in yielding reliable data while ensuring student engagement with the content. Steps include:

- Measure student success by defining and assessing course goals, objectives and competencies via competency-based assessments for each course that demonstrate both what a student knows and can do.
• Define a small set of course objectives (COs) for each course. Ensure both specialized knowledge and intellectual skills are tapped by these COs, and are appropriate to the level of the course. These COs map directly to program outcomes (POs) and the institutional learning outcomes (ILOs).
• Determine which courses should introduce, which courses should reinforce, and which courses should be used to demonstrate mastery of the various program outcomes. Use detailed curriculum maps to determine which courses introduce, reinforce and demonstrate mastery of particular outcome/s.
• Develop a small (2-3) set of assessments within each course, which map back to COs and provide a measure of student learning. Together they must measure all the course objectives.
  – Make such assessments more applied in nature. They can take a variety of forms (paper, presentation, exams, case studies, portfolios etc.) as opposed to simple, multiple choice or essay exams focused primarily on evaluating mastery of content.
  – Keep in mind these assessments cannot and should not assess students on every topic covered in the course, but are key to assessing the course objectives and hence, the program outcomes.

The presentation shared ideas for designing meaningful and reliable assessments that effectively measure student learning while also providing the opportunity to apply concepts to realistic problems and current events, which the students find engaging and interesting. Examples from lower and upper division psychology courses were discussed.

Feedback from faculty after a full annual cycle of implementation revealed a generally positive response: Faculty viewed these assessments as comprehensive, efficient, challenging, and manageable. They notes that assessments require demonstration of higher-order learning, and reported active use of the detailed rubrics to guide grading/feedback to students. Faculty and student alike expressed appreciation for the real-world application, and seemed to enjoy the creativity. Challenges tended to be student-preparedness related: Some students seemed ill prepared for assessments, particularly at-risk students; some did not have the basic skills, such as how to use PPT, Excel, etc. and highlighted the need to address such gaps earlier in the curriculum, with a refreshed early in the class. This also underscored the need to provide clearer instructions, and/or fewer components in each assessment. Current revisions include providing samples, templates for the desired product, as well as audio-visual tutorials as needed.

By clearly articulating both specialized knowledge and intellectual skills, we clearly define a degree’s meaning in the context of what the graduate knows **AND** is able to **do** as a result of his or her studies. If deliberately designed and mapped to course objectives, applied assignments can serve as robust assessment tools while also keeping the students excited about learning the course material and applying it to the field and/or to daily life. They can help us measure not just the knowledge base but also intellectual skills, such as analytic inquiry, use of information resources, engaging diverse perspectives, and quantitative and communication fluency.
Effects of Free vs. Cued Recall and Open vs. Closed Book Recall on Immediate and Delayed Quiz Performance

Jeffrey Nevid & Yea Seul Pyun
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Presented at: National Institute for the Teaching of Psychology
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Background
- Memory retrieval processes can be used as active learning strategies in study periods to reinforce and strengthen new learning.
- Evidence supports the benefits of effortful retrieval processing in strengthening retention of newly learned material.

Purpose of the Study
- We used a 2 (cued vs. uncued recall) x 2 (open vs. closed book) experimental design on both immediate and one-week (delayed) quiz performance.
- In uncued recall, participants were instructed to write down as much information as they could recall from text passages they had just read. In cued recall, participants were instructed to write answers to three questions intended to guide their recall of important test material.
- In open book recall, participants had access to this test material as retrieval cues, whereas in closed book recall they relied on their own memory.

Method
- A total of 137 undergraduate students in introductory psychology participated in the study.
- Participants were randomly assigned to take one of the two quiz versions for the immediate performance and an alternative version for the delayed performance at a one-week retrieval.
- The quiz consisted of 20 multiple choice questions.
- Participants used a computer in the recall task during the retrieval condition, and word count served as a control variable.

Table 1
Means and Standard Deviations for Performance

<table>
<thead>
<tr>
<th>Performance</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>74.42</td>
<td>14.80</td>
<td>137</td>
</tr>
<tr>
<td>Delayed</td>
<td>66.82</td>
<td>16.93</td>
<td>132</td>
</tr>
</tbody>
</table>

Table 2
Multiple Linear Regressions of Study Conditions on Performance

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Immediate</th>
<th>Delayed</th>
<th>R²</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>.14</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Count</td>
<td>.37**</td>
<td>.36**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>.17</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Count</td>
<td>.36**</td>
<td>.35**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cued vs. Uncued</td>
<td>.09</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open vs. Closed Book</td>
<td>-.10</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>.17</td>
<td>.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Count</td>
<td>.36**</td>
<td>.35**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cued vs. Uncued</td>
<td>.01</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open vs. Closed Book</td>
<td>-.22</td>
<td>.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cued/Unsure x Open/Closed Book</td>
<td>.30</td>
<td>.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Procedure of the Study

Results
- Word count was a significant predictor of test performance at both assessment intervals.
- The open book condition was associated with better test performance upon immediate testing compared to the closed book condition.
- There were no significant differences for either cued/uncued or open/closed book conditions when participants were retested in one week.
- No interaction effects were observed on either testing performances.

Discussion
- Students benefited from the opportunity to use text materials during the recall task when they were tested immediately.
- Despite a short-term advantage of allowing students access to text material, this learning benefit appeared to dissipate quickly over time.
Psychological testing—especially testing of mental abilities—has a long, controversial, and sometimes unsavory history (Fletcher & Hattie, 2011). This history provides the foundation for many common misconceptions about the nature and value of tests, as well as the intentions of testing advocates. Paradoxically, testing is simultaneously one of the most valued and most disdained tasks that psychologists perform. The controversial history of mental ability testing, coupled with many people’s dislike of tests, makes them an easy target for criticism. It is perhaps unsurprising that many people see tests as inherently flawed instruments—and even tools of social injustice that deny people the opportunity to reach or display their full potential (Guinier, 2015). Although some criticisms certainly have merit, many critics are willing to trust their intuition and confidently dismiss tests based on superficial appraisals. Likewise they are often quick to conclude that because a test does not tell us everything we need to know, it tells us nothing. A few of the primary debates regarding testing pertain to the validity of intelligence tests, the association between SAT scores and college performance, and the value of multiple-choice testing. As is so often the case in psychology, many common beliefs square poorly with empirical evidence.

Intelligence testing has a particularly controversial history. Disagreements regarding appropriate definitions of intelligence and the significance of intelligence tests emerged as soon as researchers published the first tests, and they have waned little in the century since. Most models of intelligence include a $g$ (general intelligence) factor, originally identified by Spearman (1904) who noted that scores on tests of virtually all cognitive tasks are positively correlated. Spearman conceptualized $g$ as a sort of mental energy that powers all specific abilities. Although there is debate about the nature of this general ability, measures of it correlate with all sorts of important life outcomes. For example, $g$ is positively associated with income and longevity, and negatively associated with criminality (Lubinski, 2004). It is also positively correlated with occupational attainment, as well as job performance both in complex, mentally demanding occupations and comparatively simple jobs (Gottfredson, 2002). The research demonstrating the importance of $g$ is extensive, and it is clear from this enormous body of evidence that IQ tests measure a meaningful construct.

Another testing debate pertains to the question of whether the SAT predicts college performance. Many students, teachers, parents, and administrators contend that SAT scores do not correlate with college grade point average when in fact the two variables do correlate. This simply means, as demonstrated by hundreds of studies, that students with
higher SAT scores tend to earn higher college grades than students with lower scores. There are certainly students whose performance does not follow this pattern, but such examples are consistent with the fact that the correlation is not perfect; they do not disprove the general trend. In large scale studies, the association between SAT scores and first-year college GPA is nearly always close to .35 (see for example Ramist, Lewis, & McCamley-Jenkins, 1994). Following major revisions of the SAT in 1995 and 2005, the association remained virtually unchanged (see Bridgeman, McCamley-Jenkins, & Ervin, 2000; Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008). The correlation is modest but it is not zero; moreover it is often of greater magnitude than the correlation between high school grades and college GPA (Kobrin et al., 2008). Decisions concerning the use of the SAT can be informed by a host of important considerations, but scores do correlate with college grades at least as well as any other available predictor.

A third testing debate pertains to the value of multiple-choice testing. Many critics claim that multiple-choice tests are useful only when measuring basic content knowledge and are useless for assessing thinking or problem solving (see Frederiksen, 1984). A great deal of research suggests that scores on multiple-choice and open-ended tests tend to be highly correlated—contradicting the claim that they generally measure different things. For example, one researcher meta-analyzed 56 comparisons of multiple-choice and open-ended test sections from a variety of academic domains and educational levels (Rodriguez, 2003). After correcting for measurement error, the correlation between test formats was .87. Researchers studying large data sets from Advanced Placement exams have likewise found that differing formats are highly correlated (e.g., Lukhele, Thissen, & Wainer, 1994), and have found little evidence to suggest that multiple-choice items assess only simple recognition and essay items assess higher-order thinking skills (Bennett, Rock, & Wang, 1991). These patterns also emerged in a study of college course examinations (Bracht & Hopkins, 1970). Although the essay items for the exams were written specifically to assess higher-order thinking skills requiring analysis and application of knowledge, and they were scored by instructors according to a precise rubric, correlations between scores on the essay and multiple-choice sections—corrected for measurement error—ranged from .81 to .95 across five classes. It is also important to note that there is little scientific evidence for the common claim that many students are effective learners but are simply bad at taking multiple-choice tests. For example, one group of researchers found that most students' performance was not discrepant across exam formats, and when individual students demonstrated format discrepancies on one test, the discrepancies were usually not repeated on subsequent tests (Bleske-Rechek, Zeug, & Webb, 2007).

The three topics discussed above represent only a fraction of the contentious issues pertaining to testing. What is perhaps most important is that many beliefs—even among people in academia—are influenced by incomplete or inaccurate information. Tests certainly cannot tell us everything we need to know about a person, and their use often merits thoughtful critique. Since there is no indication that testing will cease to play an influential role in academia as well as in society in general, it is important that discussion be based on research rather than opinion.
References


How Do You Know If Your Learning Objectives Are Being Met? Instructor Versus Student Perceptions

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Making the Most of Self-Assessment: The Importance of Pre- and Post-Exam Reflection

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Measuring Metacognitive Calibration Accuracy Across Exams and Question Type

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Introduction

In the classroom it is important for students to be able to accurately assess the extent of their knowledge. Defined as “thinking about thinking,” metacognition is a fundamental learning skill, yet most students enter college without ever exploring their own thoughts about learning. Students who are more “metacognitively aware” are in a better position is to identify or methodologys for a test, provide early guidance during testing or better comprehension, or generate self-feedback indicating that a new skill is being properly assessed (Hacker, 2000; Gershman, 2006). Calibration often is a person’s ability to accurately predict or assess their performance. College-age students are consistently found to be more realistic predictors of their own performance on exams (Graham, 2014), but there are several factors which may influence the accuracy of their judgments.

In this classroom study, students were given 4 exams over the course of a semester. Each exam included a combination of multiple choice (MC) and short answer (SA) questions. Immediately before and after each exam students predicted their performance on each portion of the exam (and provided confidence judgments for each estimate). Throughout the semester students engaged in metacognitive training exercises aimed at improving their ability to plan, monitor, and evaluate their learning. This study examined the influence of question type on metacognitive calibration accuracy.

Research Question: Does exam question type (MC or SA) influence metacognitive calibration accuracy?

Results

**MC estimates are more accurate than SA estimates after exam**

Significant correlation between Final Grade and MC accuracy

Students made significantly higher grade estimates for MC than SA across 4 exams

Postdictions are more accurate than Predictions & MC more accurate than SA overall

No significant correlation between Final Grade and SA accuracy

Students overpredicted MC grades and underpredicted SA grades

Conclusions & Implications

- Metacognitive monitoring is necessary for efficient thinking. The results from this study can be used to:
  1. Help students develop a more adequate impression of what they have learned and what they have not yet learned. This may help students to regulate their learning behavior more effectively.
  2. Provide insight to teachers about students judgments of performance across different types of testing (retrieval vs. recall). More abstract forms of testing (including open ended questions), may negatively impact a student’s ability to accurately judge their performance as compared to more structured models.
- Future research should further examine the relationship between various forms of testing and student ability to accurately judge their performance in the classroom.

---

**Method**

Participants: Junior/Senior college-age students in an upper level Cognitive Psychology course (N=15)

Procedure:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Week in the semester</th>
<th>Content Covered</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>Intro to Cognition of Learning, Cognitive Representations, Attention</td>
<td>Multiple Choice (80 points), Short Answer (20 points)</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>Intro to Cognition of Learning</td>
<td>Multiple Choice (80 points)</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>Cognition &amp; Visual Imagery</td>
<td>Multiple Choice (80 points), Short Answer (20 points)</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>Cognition &amp; Problem Solving</td>
<td>Multiple Choice (80 points), Short Answer (20 points)</td>
</tr>
</tbody>
</table>
Case Study: Developing and Maintaining a Content Valid Program Assessment at a Community College

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Presented at: The 28th Association for Psychological Science  
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Abstract

This abstract provides a guideline for one method of program exam development, as well as a list of the challenges experienced at a community college. At this time, the method appears to satisfy the Higher Learning Commission (HLC). Though the presentation reflects one community college process, it is likely that other institutions have similar experiences.

Method

Exam Development

A content validation approach, using subject matter experts, was used to develop a psychology program exam at a community college. A multiple choice format was chosen over others, because this format is easy to grade. Also, taking a challenging multiple choice program exam would give students exposure to exams they may take in the future with similar formats, such as the ACT, SAT and GRE. It was hypothesized that as students progressed through the program and took higher level psychology courses, scores on the exam would increase.

Ninety multiple choice questions were submitted by full time psychology faculty. From these 90 questions, 40 were selected based on how well each question appeared to assess: 1) general knowledge of introductory psychological principles; 2) ability to apply basic theories and concepts to hypothetical situations; 3) achievement of psychology program outcomes; 4) ability to think critically (interpret, evaluate, synthesize information). To ensure adequate content sampling, approximately the same number of questions was chosen to assess each program outcome; some questions assessed more than one outcome.

The first administration of the exam yielded fairly high reliability. A coefficient of .8 (Kudor Richardson and Cronbach Alpha) was obtained on the first administration to 200 students; this coefficient remained consistent for all of the following administrations. Point biserial correlations between items and total score were examined to ensure validity.

Exam Administration
To establish baseline scores for Introductory Psychology students, the exam was administered on the first day of class in face to face Introductory Psychology classes in Fall 2009 and Spring 2010 semesters. Instructors provided a brief explanation to students about the exam and its purpose (i.e., to compare pretest with posttest scores, to determine if students were meeting program outcomes, and to assist teachers with instruction). To determine if learning was occurring, the exam was administered again as a post test at the end of the semester, on the last day of class or during finals. Students were told not to study for the exam, and were told that the exam results would provide feedback for instructors to improve teaching methods. In addition to administering the exam as a pre/posttest in introductory classes, students were also assessed in three, 200 level courses over three semesters, and a capstone course, at the end of one semester. This enabled score comparisons at various points from program entry through exit.

Results

As expected, results showed moderate gains in exam scores as students progressed through the program, indicating that learning was occurring. Compared to entry into the program, an increase of 15% was found upon completion of the introductory course, 34% increase upon completion of a 200 level course, and 37% increase upon completion of the capstone course. Scores increased from an average of 19 questions correct (48%) upon entry to 34 correct (85%) upon completion of the capstone course.

Though there were concerns about test/retest effects, based on student reactions and performance, this did not appear to be an issue. Students stated they did not remember specific questions from the test. In addition, the test consisted of 40 items which is a lot to remember from one semester to the next. Finally, 200 level students were only allowed to take the exam once at the end of a semester to prevent retesting during the same semester.

Actions Based on Exam Results (or, in HLC Terms “Closing the Loop”)

Based on the exam results, instructors made several changes to help improve instruction methods and student performance. First, college advisors were asked to suggest to incoming students that they complete remedial course work prior to enrolling in an Introductory Psychology course. Though instructors reported a qualitative difference in their introductory classes after this change was implemented (e.g., better notetaking and class discussion), this change did not result in higher test scores on the program exam. Second, a psychology club was implemented; however, the majority of the college’s students work 30 plus hours a week, on average, so few have time to contribute to a club. Also, the college has few psychology majors, so the membership of the club has only about three to five active members in a given semester. This extra-curricular offering was not enough to make a difference in exam scores. Third, a one credit, voluntary Psychology Lab was offered to supplement the introductory course. Due to various administrative reasons, the lab could not be mandatory for students and as a result, few signed up to take it due to their busy schedules. Due to low enrollment, it was not possible to determine if those who took the lab performed better on the program exam than those who did not take the lab.
The lab was cancelled after one semester, which prevented combining and analyzing exam data over several semesters.

Two positive changes resulted for faculty. First, instructors seemed to engage in more discussion about teaching methods, assignments, and technology tools with the goal of learning from each other and improving teaching skills. No direct measures were made to determine if more discussion actually took place, but developing the exam and discussing exam results did require instructors to meet and engage. Second, a list of topics was generated by faculty to ensure adequate coverage of material in introductory psychology courses, regardless of instructor.

Discussion

Challenges and Assessment Issues

A number of factors proved to be, and continue to be, problematic for program assessment at this community college. One of the issues involves tracking and monitoring psychology students at the college. At this time, the college does not have a system in place to ensure that all students (who declare themselves to be psychology majors) be given the program exam prior to leaving the college and/or transferring to a four year institution; thus valuable data may be lost. Also, the number of psychology majors is small, so collecting enough data to determine trends is challenging. To have enough test scores to conduct a reliable and valid analysis, the exam must be administered over at least several years. This is a long time to wait to obtain data, which may possibly be confounded or out of date due to cohort influences. Another issue is that current technology at the college is limited, making it difficult to obtain statistical information other than broad descriptive data. To assist instructors with improving teaching methods, more detailed information is required (e.g., the specific topics students are struggling with, the specific groups needing assistance). Last, but not least, one challenge arose due to the transfer of assessment coordinator responsibilities from one faculty to the next, which resulted in some record management and storage issues.

Possible Future Changes

There are a number of changes that need to be considered which may result in improvements in the program assessment process. Some changes to be considered include: 1) track students throughout the program to ensure they are tested upon entry and completion of the program; 2) encourage all full time and adjunct psychology faculty to administer the exam under the same conditions; 3) purchase technology with the capacity to analyze results using more advanced statistics; 4) standardize the administration and record management process to ensure better communication and monitoring of exam results over time.

Concluding Comments
One of the main goals of program assessment, according to the HLC, is to utilize program exam results to improve the learning process for our students. Though the exam described in this report demonstrates that students are learning as they progress through this program, there is always room for improvement; the challenge is to develop an exam that provides reliable and valid results to base changes on. One should make changes judiciously when basing them on program assessment results.
The present study attempted to explore if learning college level introductory psychology, as defined by the empirically demonstrated mastery of predetermined learning objectives, is as effective in the web-based platform as it is in the traditional setting or web-enhanced classrooms. Data from 250 community college students participating in an introductory psychology course were compared across the three instructional modalities and revealed that those students in the web-based and web-enhanced modalities scored significantly higher on a measure of learning effectiveness than those in the traditional classroom modality. These findings differ from previous studies where no differences were found between the three modalities. The findings are discussed in terms of the benefits of web-based and web-enhanced modalities to force the distributed practice of learning outside of the classroom context for later recognition, recall and application.

Learning Objectives Instrument (LOI)

- To measure learning an instrument was constructed to measure ten distinct learning objectives. The instrument was constructed using multiple-choice items from a test bank provided by the textbook publisher (Myers 2008).
- Embedded in examinations throughout the semester in introductory psychology courses during a piloting phase over a 4-year period of time. Those items with 50% difficulty, such that half the sample passed while half the sample failed, were compiled into a cumulative final examination for the present study.
### Demographic Profile of the Total Sample (N=347)

<table>
<thead>
<tr>
<th></th>
<th>Web-Based</th>
<th>Web-Enhanced</th>
<th>Traditional</th>
<th>Total Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Enrollment</td>
<td>111</td>
<td>108</td>
<td>128</td>
<td>347</td>
</tr>
</tbody>
</table>

- **Age**
  - X=22, SD=6.4
  - X=20.1, SD=5.1
  - X=20.0, SD=3.5
  - X=21, SD=5

- **Gender**
  - **Males**
    - N=40 (36%)
    - N=42 (38%)
    - N=36 (28%)
    - N=118 (34%)
  - **Females**
    - N=71 (64%)
    - N=69 (62%)
    - N=92 (72%)
    - N=232 (66%)

- **Race**
  - **White**
    - N=90 (81%)
    - N=74 (68%)
    - N=79 (62%)
    - N=243 (70%)
  - **Black**
    - N=5 (4.5%)
    - N=12 (11%)
    - N=13 (10.2%)
    - N=30 (8.6%)
  - **Hispanic**
    - N=9 (8%)
    - N=11 (10%)
    - N=19 (15%)
    - N=39 (11%)
  - **Asian**
    - N=3 (3%)
    - N=3 (6%)
    - N=13 (10%)
    - N=25 (7%)
  - **Am-In**
    - N=2 (2%)
    - N=0 (0%)
    - N=0 (0%)
    - N=2 (0%)
  - **Other**
    - N=1 (1%)
    - N=3 (3%)
    - N=4 (3%)
    - N=8 (2%)
Results

The hypothesis based on a review of the literature predicting that there would be no significant
difference between the three modalities on learning was rejected. The present findings suggest that the
web-based and web-enhanced modalities yielded significantly higher learning effectiveness scores
than the traditional modality.

Results of Analysis of Variance (N=250)

Learning Outcome Score (LOI) by Modality

<table>
<thead>
<tr>
<th>Modality</th>
<th>LOI Score</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-Bsd.</td>
<td>X=53.1*</td>
<td>80</td>
</tr>
<tr>
<td>Enhan.</td>
<td>X=55.3#</td>
<td>36</td>
</tr>
<tr>
<td>Tradit</td>
<td>X=48.5*#</td>
<td>115</td>
</tr>
</tbody>
</table>

F= 5.45, p<.005; *p<.05; #p<.01
Learning by Modality

![Graph showing learning by modality with Online, Blended, and Traditional Face to Face modalities on the x-axis and Mean of Learning on the y-axis. The graph shows a peak in learning for Blended modality followed by a decrease in learning for Traditional Face to Face.]
Discussion
• The explanation for the differences in the mean scores on the LOI by modality may reside in any one or combination of the following factors:
  • (1) the modality of the testing,
  • (2) the students experience with higher education,
  • (3) the nature of the material in introductory psychology, or
  • (4) the way that learning effectiveness was assessed in the study.

The Modality of Assessment
• When contrasted with the traditional mode of instructional delivery, the enhanced modalities provide the learners with a structure for distributed, rather than mass, practice. The context for learning is presented as a self-directed pursuit of engaging the course material in an innovative
platform beyond the traditional classroom setting. Perhaps many learners in the traditional modality see the learning process as ending when the class period ends. Online assignments provide them with another way to engage the content of the course. The discussion forums give students a chance to participate in interactions with peers and the professor in a contemporary format that is identical to the way that they interact in other domains of their lives. Additionally, the dis-inhibition effect present in online communication may serve students who might be reticent to participate in a face-to-face discussion. This participation may further serve the student in learning the material.
The Students

- Reisetter, LaPoint & Korcuska (2007) found that online learners believed that they developed self-regulation skills including time management, self-discipline, independence, effective use of resources, and problem solving. They learned to recognize their preferred cognitive modes and to make use of optimal learning times to process content and expected that most of their learning would be independent. One study by Chappell, Rhodes, Solomon, Tennant, and Yates (2003), found that the need for personal change fuels and organizes adult learning and might serve in the learners’ search for "technologies of the self". These would include such metacognitive skills as: self-knowledge, self-control, self-care and self-creation. These skills may be used to promote change and adult learners are likely to prefer learning environments, online or traditional, that they perceive will assist them with their personal identity development.

The Students (continued)

- Second, perhaps students who select themselves into web-based courses are more disciplined and effective learners. While this might explain their outperforming in web-based classes in prior studies, the descriptive data associated with this sample would indicate that this is not a particularly seasoned student population in higher education. The learners in this sample, across instructional modalities, were fairly new to higher education and seemed to favor a higher opinion of more traditional modalities. Overwhelmingly, students who selected the web-based version of the class reportedly did so out of convenience factors, whereas those choosing the other two modalities did so out of meta-cognitive reasons and a low opinion of web-based learning.

The Nature of the Material

- The introductory psychology course in question contained mostly explicit knowledge embedded in the learning objectives of the course. Rosenberg (2001)
posed that explicit knowledge may be more effectively delivered to and acquired by learners in a technology-enhanced modality. Hui, Hu, Clark, Tam, and Milton (2008) found that no learning settings are universally and equally effective across all subject areas or learning objectives, because some embrace explicit knowledge, whereas others entail tacit knowledge. They found greater learning effectiveness and learning satisfaction when technology-based learning supports students’ accumulation of explicit knowledge rather than tacit knowledge. Learning this type of knowledge involves large amounts of memorizing facts, names, theories and identifying the application of conceptual information. The deeper more implicit learning involving the use of content and direct application of theoretical concepts is less of an emphasis in an introductory survey course. As a result of the course favoring more surface knowledge, the web-based and web-enhanced format provides students with the creative rehearsal strategies that have been shown to best facilitate the learning of explicit knowledge.

The Assessment Method

• Lastly, the significantly higher scores for the web-based and web-enhance group might be due to the assessment procedure and the congruity of the context of encoding and retrieving information. The “levels of processing” framework might not fully explain the differences in scores on the outcome variable but rather “the principles of encoding specificity” which states that what is learned depends on the learner’s focus of attention and the context of the learning episode. Successful retrieval occurs when the cues at the time of retrieval match what was learned or what cues were available during encoding. Successful retrieval depends on the contextual cues available at retrieval and their similarity to those that existed during encoding. This view of learning has been heavily supported in research studying congruity between the encoding and retrieval contexts (Tulving and Osler, 1968; Tulving and Thomson, 1971; Roediger and Payne, 1983; Emmerson, 1986).
The Assessment Method (cont’d)

• Instead if we start with the assumption that the encoding process takes place in the context of the web-based assignments in the web-based and web-enhanced modalities, then we may conclude that encoding is not effectively taking place in the traditional modality since it lacks web-based assignments whereby the students independently engage the material within a technological mode within which most of the rest of their interactions reside. The results of this study might be best understood if one assumes that the majority of encoding, and therefore the first step in learning, is best done in the web-based and web-enhanced self-directed, solitary, distributed practice context of outside of the classroom. When the web-based context serves as the context for retrieval, students perform better on learning tasks in that context, because it provides the same cues that were present during the encoding of said material.

Recommendations

• Minimize differences between instructional modalities by adding web-enhancements to provide students with structured ways of independently engaging the material.
• Provide congruous cues to learning in both the encoding and retrieval contexts.
• Frequently test recall and recognition in the same context where encoding took place to provide a dipstick for learning.
• Provide opportunities for the generalization of recall strategies to other contexts, also known as “learning transfer”.

Recommendations

• Clarify expectations of web-based courses.
• Have at least one objective standardized method of evaluation in your courses
• Use department-wide objective standardized methods for evaluating learning success since LO’s are the same for each section, whereas pedagogy is not.
• Sharing best practices
References


Teaching Psychological Assessment: Instructor Expectations and Grading Practices

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Although psychological assessment is considered a critical component in clinical psychology training, a recent study (Ready & Veague, 2014) and several preceding studies (Childs & Eyde, 2002; Krishnamurthy et al., 2004; Watkins, 1991) have highlighted a significant gap between the training doctoral students receive in psychological assessment versus expectations at internship. In addition to acquiring foundational knowledge in administration and test interpretation, students also need skills in report writing as it is a reflection of their assessment knowledge and understanding. Assessment courses are typically seen as a “gateway” to the field, thus making grading of student report writing crucial in terms of their readiness for clinical assessment work. Despite this, there are no universally accepted standards for evaluating and grading student assessment reports. An important question relevant to this is what are instructors’ expectations of student assessment reports, and how do they evaluate student work?

Even though most instructors develop their own grading rubrics, the agreement of these standards across different instructors is unclear. Recently, a Proficiency Report Review Form was developed by the Society for Personality Assessment toward recognizing a level of post-licensure proficiency via written reports. This form and process was, in part, the basis for the present study. In order to address this particular aspect of assessment training, nine assessment instructors associated with five clinical psychology programs in the San Francisco Bay Area reviewed and rated the same student report using their own grading standards. Then a rating form was created and used with these instructors on several other student reports. This symposium included the results of such reviews, including variations and similarities in grading practices. In addition, basic components of an assessment report rubric at the student level along with preliminary data on its
usefulness were introduced. Finally, future steps including further data gathering and wider use and applicability of such a rubric were presented.

Results of the first phase of the study, where instructors rated the same student report using their own version of a grading tool, resulted in significant disagreement between instructors regarding quality of the report. Grades ranged between A- to C, and instructor comments further reflected such variation. This finding suggested a need for: 1) Increased discussion among instructors and supervisors regarding expectations for student assessment report writing; and 2) A move toward some agreement regarding instructor expectations for student assessment reports as well as grading practices.

Phase 2 of the study consisted of instructors reviewing the same report as in Phase 1, but using the rubric rating form developed by the group. The rubric included the same five categories as the Proficiency Report Review Form: Comprehensiveness, Validity, Integration, Person-Centered, and Overall Writing. Each category had several items listed with a range of points awarded to every item. Each category had a total of 100 points, allowing for a simple overall grade calculation at the end of the review. Despite using the same grading rubric, grades still ranged between A- and C, but with somewhat less variation within that range. Conclusions included that instructors’ interpretations of rubric items varied quite a bit, further reflecting differences in expectations. Therefore, additional clarification and revision of the rubric is needed. More importantly, the core underlying instructor expectations of assessment reports that provide a basis for grading practices need to be better understood and agreed upon.

Next steps include continuing with development and revisions of the rubric, collecting data on multiple student reports using the revised rubric, collecting additional data about instructor expectations, and considering expectations across training levels. Finally, we suggest that graduate assessment teaching at the graduate level might benefit from an increase in consistency, training, instruction, and expectations.

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Put Your Pencils Down: How to Implement Computer-Based Assessments

Kristie M. Harris, Anne C. Wilson, Melissa Beers
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Trading Effectiveness for Efficiency: Methods of Classroom Quizzing

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Value-Added Program Assessment in the Psychology Classroom

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This symposium capitalized on the combined wisdom of 5 seasoned professionals who have been involved in the processes of student outcome assessment in psychology for over 100 years of combined experience.

Eric Landrum presented a brief overview of APA’s guidelines version 2.0 and what resources are available from APA and STP to support program assessment in psychology.

Eric Amsel presented an example student learning outcomes assessment at the general education level by sharing computer games/simulations used in General Psychology to teach the science and application of the discipline. A demonstration was included.

Richard Miller and Jeanne Butler presented AAC&U student learning outcomes and then described teaching activities that could also be used to assess those outcomes. The presentation clarified that the instructor does not need to create assessment instruments that are only used for assessment purposes but could rather use an instrument or technique that would be both a learning experience as well as providing data for assessment.

Susan Becker discussed methods for departments to enhance student learning by having a common rubric/assessment scheme across levels of student outcomes to both accomplish the requirement of student learning outcome assessment and to enhance overall student achievement programmatically. Systems for both writing and oral presentations were presented.
Colleges and universities continue to grapple with meaningful and useful assessment of student learning, particularly in the general education curriculum. This session explored how a high enrollment Introduction to Psychology course was used to examine student learning outcomes within the general education curriculum at a small, liberal arts college. Because of limited resources (e.g., time, personnel, money), the focus of departmental and general education assessment has been on keeping assessment practices ‘doable’. Thus, most assessment of student learning has occurred through the evaluation of authentic student assessments that exist within current classes and/or departmental structures. In addition, in the quest for meaningful assessment data that contributes to program improvement, the use of course- and department-based student work has been found to provide direct information that is useful for highlighting potential problems with instruction or a curriculum.

The three primary goals of Juniata's general education curriculum are: 1) communication skills, 2) higher order thinking skills, and 3) knowledge about and ways of understanding the world. The current study focused on the third goal: knowledge about and ways of understanding the world. This goal centers around the liberal arts distribution of the general education curriculum, where students must take two courses in each of the five curriculum designations: fine arts, international, social sciences, humanities, and natural sciences.

The curriculum definition of social science, as voted on by the faculty, is “social scientists strive to understand a wide range of human behavior, from the formation of the self to the interaction of nations. Knowledge is acquired from systematic study using a diverse set of scientific methods including laboratory experiments, field observations, survey analysis, quantitative and qualitative ethnographic analyses, and insight acquired through experience” (Juniata College, 2016, pp. 103-104). For assessment purposes, this definition presents numerous challenges. For example, the definition does not include any clearly articulated student learning outcomes. In addition, it includes broad statements about the understanding of human behavior, but outlines a limited focus, with sole emphasis on the methods of inquiry.

The first step in the current assessment process was to gain a better understanding of the range of social science courses available to students as well as the enrollments in the social science designated courses that are offered. Data from the Registrar’s office identified a total of 29 unique 100-level social science courses offered across the Fall 2005-Fall 2015 semesters. The academic departments with the most 100-level social science designated courses were the departments of Accounting, Business, and Economics (6 courses), Education (6 courses), and Politics (6 courses). However, when evaluating enrollments across all social science courses over that same time frame, it was found that
the largest enrolled course was Introduction to Psychology, with 1,950 students having completed the course. The next highest enrolled courses were Introduction to Sociology (1,526 students) and Introduction to Business (1,426 students).

Consequently, as a first attempt to understand student learning in 100-level social science designated courses, it was decided to begin our assessment with the largest enrolled course, Introduction to Psychology. The student learning objectives for this course include: understanding of psychology as an empirical science that is based on critical thinking; awareness of the breadth and diversity within the field; understanding the interconnectedness of the sub-fields of psychology; awareness of professional opportunities within the field; and application of psychological principles to everyday life. With these learning objectives as the backdrop, as well as awareness of the notable limits of the current social science definition, a search for a more comprehensive definition of social sciences was conducted. This was completed through a brief review of curricula from peer institutions. The results of this web-based review provided a definition of social science that contained four core themes: 1) major concepts, theories, or principles to describe human experiences and behavior; 2) methods of systematically evaluating questions related to human experiences and behavior (research methods); 3) methods of manipulating data related to questions designed to understand human experiences and behavior; and 4) roles of individuals in cultural, social, economic, and political worlds.

Subsequently, exam questions from three semesters of a team-taught Introduction to Psychology course were analyzed by two independent raters for representation of the four social science themes. Results revealed that the majority of the exam questions reflected the social science theme of major concepts, theories, or principles (87%). The remaining questions reflected methods of evaluating questions (11%), manipulation of data (1%) and roles of individuals in cultural, social, economic, and political worlds (1%). The exam questions were further analyzed for their level of student learning (e.g., remember, understand, or apply) based on Bloom’s Revised Taxonomy (Krathwohl, 2002). Seventy-five percent of the exam questions were coded as reflecting Bloom’s Taxonomy level of understand (e.g., summarize, classify), while 25% reflected the level of remember (e.g., recognize, recall). Inter-rater agreement for social science theme and Bloom’s Taxonomy level, calculated through simple agreement (Cooper, Heron, & Heward, 1990), was 91%.

A review of student performance on the exams identified consistent levels of learning across the four social science themes. Correct percentage of responses in these categories ranged from 74% correct for major concepts, theories or principles to 80% correct for roles of individuals. An analysis of student learning by level of learning (e.g., remember versus understand) also revealed consistent performance across question type, with the average percent correct being 76% for remember-level questions and 74% for understand-level questions.

This assessment identified that students demonstrated adequate levels of knowledge and understanding of core social science themes, particularly in the area of major social science concepts, theories, or principles. Although these findings suggest that the introductory psychology course supports the general education goal of broadening knowledge about and ways of understanding the world, it is unclear how well this relates to learning in other 100-level social science courses. A next step is to test the applicability of this social science framework to other 100-level social science courses.
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Assessment is an iterative process that is focused on the continual improvement of program delivery and student learning. Effective assessment practices allow us to gather a detailed understanding of how our curriculum and pedagogical practices support students' attainment of specific learning outcomes. Through the process of assessment, we can better understand what we are doing, what we might need to be doing, and what we might be able to do better. While this is the ultimate goal of assessment, many academic departments continue to struggle with the development and implementation of assessment plans that adequately achieve this goal. Essentially, the development of clearly articulated assessment plans that are ongoing, sustainable, and useful remains a difficult task.

In this session, members of the Department of Psychology at Juniata College, a small, residential liberal arts college, shared how they have developed an ongoing, useful assessment plan that has helped to foster improvement in the academic program. Specifically, the faculty shared how they have adopted the APA Guidelines for the Undergraduate Psychology Major: Version 2.0 (2013) as the framework for the institutionally required annual assessment of student learning. In an effort to keep the assessment plan ongoing, sustainable, and useful, the faculty shared how the focus of assessment has been on authentic student work that is embedded within required courses. In addition, faculty shared how the analysis of data has fed back into curricular and pedagogical changes. Lastly, how this departmental assessment process ties to institutional assessment was discussed.

The revised APA Guidelines for the Undergraduate Psychology Major (APA, 2013) contain goals that reflect the diverse knowledge and skills that one needs to be a psychologically literate citizen. However, the breadth of some of the goals makes them especially challenging to assess formally. Consequently, in our department, we started our assessment with what we considered the comparatively "easy" outcomes: knowledge base, critical thinking, and communication.

In assessing Goal 1: Knowledge Base in Psychology, there were multiple potential assessment tools, each with its own set of shortcomings. For example, an internally developed test to measure knowledge of the field offers much control over the assessed content, but suffers from the inability to compare student outcomes to any external standard. In contrast, using a standardized (external) test allows for comparison with national reference groups, but adds a financial cost. Our department has used the Psychology Area Concentration Achievement Test (PACAT), which we required for all graduates. Initially, this assessment was not linked to a specific grade or course, and we noticed that graduating seniors often failed to recall basic material representing the
breadth of psychology. As such, we restructured our senior capstone course to provide a big-picture overview of the field and embedded the PACAT as a component of the course grade. After these curricular changes were made, student performance on the PACAT increased significantly.

Similarly, for Goal 2: Scientific Inquiry and Critical Thinking, critical thinking could be measured through externally-developed tools. However, measures of critical thinking tend to emphasize formal reasoning rather than discipline-specific thinking skills. As a result, we developed, revised, and used our own measure, the Psychological Critical Thinking Inventory (Dunwoody, McKellop, & Baney, 2011), which allows us to assess the development of students’ critical thinking skills at multiple points in our curriculum.

For Goal 4: Communication, we developed a shared rubric that is used to grade papers across all sections of our required Research Methods course. We also designed our required Senior Capstone as a speaking class where students take turns teaching the course material. In both cases, students receive individualized feedback and have multiple opportunities to develop these skills.

The remaining learning goals, Goal 3: Ethical and Social Responsibility in a Diverse World and Goal 5: Professional Development, presented more challenges in assessment. Because Goal 3 focuses not just on professional ethics, but also on personal and social ethics, it spurred much debate within the department. Based on these discussions, we came to unanimous agreement that professional ethics is an essential component of our undergraduate curriculum. In addition to ethics being covered across our program curriculum, it was agreed that certain courses should contain a larger focus on professional ethics. As a result, professional ethics in research is emphasized in the required Research Methods course. Our primary mechanism of assessment for this goal is having our students, during the Research Methods course, complete the online Protecting Human Research Participants course sponsored by the National Institutes of Health (NIH, 2011). For personal and social ethics, the department is not in unanimous agreement about adopting the teaching and assessment of “values that will contribute to...building a society responsive to multicultural and global concerns (APA, 2013, p. 15).” Departmental discussions on this aspect of Goal 3 have focused on how politically or ideologically conservative students might perceive this focus, how much we should teach social values, and how we can realistically assess such attitudinal shifts given the influences of demand characteristics and social desirability. However, this learning goal is consistent with our newly adopted Institutional Learning Outcomes and will be a continuing point of discussion within the department.

Currently, Goal 5: Professional Development is primarily addressed through less formal means within our department. For example, students complete supervised internships and engage in faculty-led research. Connections to their professional development occur from these activities in numerous ways (e.g., working in groups to build teamwork capacity), but are often not formally assessed. To expand student knowledge of careers and opportunities, our alumni share their graduate and professional experiences in a variety of venues. These experiences, plus faculty advising, help students consider and evaluate career options as well as work toward professional preparedness. Currently, some aspects of this goal (e.g., capacity for leadership, work well with others, support for career development in the department) are assessed through an annual self-report senior exit-survey and a 6-year cycle alumni survey.
References
Section III
Capstone Courses

1. Psychology Peer Mentors: Capstone Students Mentoring Introduction to Psychology Students

2. History as Capstone: Teaching History of Psychology to Maximize its Value as a Capstone Class

3. Designing and Assessing the Capstone or Outcomes Course in Psychology

4. Reducing Research Anxiety in a Senior Thesis Psychology Course

5. The Psychology Capstone as an Interdisciplinary Course: A Case Study
Psychology Peer Mentors: Capstone Students Mentoring Introduction to Psychology Students

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Peer mentoring is a teaching method that results in a valuable experience for both the mentor and the mentee (Harper & Allegretti, 2015). In this study, senior-level students in an undergraduate psychology capstone course served as peer mentors for introduction to psychology students, as a way of bringing undergraduate students together at the beginning and the end of their psychology curriculum. By embedding this peer mentoring experience into the capstone course, it was expected that peer mentors would be able to draw from their experiences in previous psychology courses to assist the introductory students with developing their own skills in research and critical thinking.

METHOD

In this study, 30 psychology capstone students assisted 58 introductory psychology students with three lab assignments. These introductory psychology students were enrolled across two course sections. On three occasions during the semester, six groups of five capstone students and 6–12 introductory students met to discuss lab assignments. The capstone students identified a time outside of class during which each of the six groups could meet, and the introductory students signed up for one of the groups. The students met in the evenings with the peer mentors facilitating the groups.

In preparation for the peer mentoring sessions, the introductory students were given the three written lab assignments during regular class time by their respective professors. The capstone students were given detailed, written instructions and an explanation of each of the three lab assignments in their capstone course. They were also given instructions about how to facilitate a discussion about the topic of the lab.

During the peer mentoring sessions, the capstone students began with a discussion of their interests in psychology and an overview of the assignment. Then, the capstone students met individually with one to three introductory students to talk specifically about ideas for completing the assignment. The lab assignments included an observational study of public behaviors, a self-modification behavior change study, and an evaluation of implicit association tests that were developed by the capstone students. For the first two labs, the students discussed ideas for their hypotheses, possible strategies for collecting data, and ethical considerations. The capstone students also assisted the introductory students in preparing their research proposals. Following the first two peer mentoring sessions, each introductory student presented a research proposal in class and turned in a written proposal. The class discussed the proposals and made suggestions, and the respective professors reviewed the written proposals before giving each student permission to collect the data. The third lab involved the introductory students taking an implicit association
test that was developed by their group of capstone students for their senior-level course. The students then discussed the development of the test, the logic behind the methodology, the hidden biases, and how to counter hidden biases. In class following the third lab assignment, the students discussed their results of the implicit association tests and the implications of hidden biases.

**A Brief Summary of the Lab Assignments**

**Lab 1:** Write a proposal for a quasi-experimental observation of a public behavior in which each student will operationally define the public behavior, identify the independent and dependent variables, and describe the observational method that you will follow to collect data. Each student will also present the proposal in class, conduct the study, and summarize the study in a paper using the APA guidelines.

**Lab 2:** Write a proposal for a behavioral self-control study in which each student will operationally define a behavior to change, identify antecedents of the behavior during a baseline period, and identify potential immediate and delayed positive reinforcement for the behavior that you have chosen. Each student will present the proposal in class, conduct the study, and summarize the study in a paper.

**Lab 3:** Write a paper evaluating implicit association tests developed by the capstone students. Each student should also complete two IATs: [https://implicit.harvard.edu/implicit/](https://implicit.harvard.edu/implicit/) and discuss any hidden biases.

**ASSESSMENT**

Following the peer mentoring sessions, students completed an evaluation comprised of 11 questions using a five-point Likert scale. The assessment evaluated each peer session on a variety of aspects including the degree of helpfulness, level of comprehension of the assignment, and overall quality of engagement. They were also asked to comment on their experience and to suggest ways of improving the process.

**Sample Assessment Questions (Introductory Students)**

- I feel more prepared to complete the assignment now that I have received help from my peer mentor.
- My peer mentor helped me identify specific parts needed in my study.

**Sample Assessment Questions (Capstone Students)**

- I feel that the General Psychology students are prepared to complete the assignment now that I have helped them as a peer mentor.
- I was able to help the students identify specific parts needed in the study.

**RESULTS & DISCUSSION**

The evaluations indicated strong agreement by both groups of students that the experience was effective for all three assignments. Mean scores for all students on the three labs were 4.2 – 4.8 indicating “strong” to “very strong” agreement for each of the questions. Comments were also very positive. Capstone students comments included that they appreciated being able to reflect upon their earlier psychology courses. The Introductory students’ responses included that they found the experience helpful and enjoyed interacting with seniors.

In summary, our results suggest that peer mentoring is an experience that can benefit both the mentee and the mentor. The mentee has the advantage of additional instruction in a small group environment that facilitates discussion and critical thinking. They also may
develop social relationship with senior-level students who can discuss a broad range of transitional questions that they may have. By having a peer mentoring experience embedded in their capstone course, the peer mentors have an opportunity to reflect over previous work in psychology and to develop teaching skills. Bringing students together who are at the beginning and the end of the psychology curriculum provides an opportunity to enhance the students’ learning experience.

References
History as Capstone: Teaching History of Psychology to Maximize its Value as a Capstone Class

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A senior capstone class is designed for students to reflect on, integrate, and apply the acquired knowledge and experiences in the major (Dunn & McCarthy, 2010; Hauhart & Grahe, 2010; Watkins & Miller, 2014). It is a course recommended as part the APA guidelines for the undergraduate psychology major (APA, 2014), and a History and Systems in Psychology (H/S) class is a popular capstone offering (Wadkins & Miller, 2011). The purpose of this presentation was to better align the capstone-related student learning outcomes and the H/S class curriculum.

History, Identity, and Literacy: Using History of Psychology as a Tool to Promote Students’ Psychological Literacy and Identity (Amsel)

The goals of a Capstone course requirement and a History and System class have a good deal of overlap: To promote students’ critical reflection on, conceptual integration of, and improved application of the discipline. These goals are also central to the concept of psychological literacy defined as an integrated set of disciplinary beliefs, attitudes, skills, and knowledge that is acquired through training and adaptively used to solve real world life and community problems (Amsel et al., 2015; Cranney & Dunn, 2011; Craney, Morris, & Botwood, 2015; McGovern et al., 2010). History of psychology can be used as a tool in the service of promoting students’ psychological literacy and identity as psychologically-informed citizens. It comes as no surprise that students have limited insight into the science and practice of the discipline (Amsel et al., 2014; Amsel et al., 2015). These findings motivated the re-design of a History and System (H/S) class, and the creation of a new one-credit capstone requirement for all graduating students which uses history to promote psychological literacy. The H/S class adds a curricular twist by presenting the history of psychology backward to promote students’ contextualized understanding of their research interests and the historical forces that shaped them. Paralleling traditional textbook and lecture presentations that begin with modern psychological systems and ends with ancient Greek philosophy, students were assigned five written papers tracing the historical roots of
a selected recent research paper. The one-credit capstone class required of all majors uses history to promote psychological literacy applied to personal and professional issues. Personal issues include understanding the emergence of career options in the field, and professional issues address the relation between science and practice in the discipline over time.

**Science vs. Scientism: Anchoring a Critique of Psychology in a History and Systems Capstone Experience (Cox)**

Capstone courses have the difficult mandate to unify the knowledge gained in students’ entire course of study; by showing how history has canalized current thought, History and Systems courses uniquely help students critique what is claimed to be new. Psychology has always borrowed from other sciences, both directly and metaphorically. For example, the mental chemistry model of the mind, borrowed from Boyle and Newton’s corpuscular theory of matter, ruled from Locke to J.S. Mill. Physiological materialism and views of scientific method come directly from students of J.P. Müller’s Berlin physiology lab. Of course, William James’s consciousness emerged from a “Darwinized” brain, and the environment selects fit behaviors as evolution selects the attributes of organisms. But students are as uninformed about the philosophy and the history of science as they are they are of psychology’s past. My way of addressing this is to: 1. Provide a rich, multi-sourced narrative, to walk students through a slow-building argument in the context of its times; 2. Weave the history of science into the history of psychology; and 3. Help them use their newfound knowledge to separate science from scientism. Tracing these borrowings serves not only to unify students' knowledge of psychology, but also to embed it into other crucial scientific paradigms. But with the development of principles of scientific discourse came a desire to claim scientific authority, and we have often overstepped our bounds. Evolution also gave us the dubious or disproven theories of recapitulation, eugenics, genetic determinism and the “billiard ball genetics” of “a gene for” complex psychological “traits.” Knowing this history can help students evaluate current claims of, say, evolutionary psychology. Practically, such a capstone course could offer class wiki assignments to connect current researchers with the network of the past, Construct Maps with a historical dimension, or a rich historical section for students’ senior or honors theses.

**The History and Systems Capstone Experience: Helping Students Integrate Historical Perspectives Within and Outside of Our Disciplinary History (Woody)**

The H/S capstone experience serves many goals in the psychology curriculum, and it holds a unique position that can enable students to extend their historical investigations into other questions within and outside of psychology. As a capstone, H/S can integrate and contextualize students’ understanding of psychology as a discipline. For example, students can better understand not only the connections between individual learning theorists, but also why United States psychology departments as well as the larger culture in the 1950s provided such fertile soil for behaviorism. Beyond disciplinary questions, historical perspectives can inform ongoing cultural questions, such as the persistence of residential segregation by race (Lowen, 2005); the interactions between the historical waves of racism and eugenics in our culture and similar waves in psychological science (Gould, 1981; Guthrie, 2003; Winston, 2004); and the contributions of cold war scholars for
the current APA ethical crisis surrounding psychologists’ participation in coercive interrogations (Woody, 2015). Additionally, as students recognize the complexity of historical figures in psychology, they can also perceive the complexity and inconsistency of individuals outside of psychological history. Wrestling with G. Stanley Hall’s public sexism and his support for women graduate students (Deihl, 1986) as well as his public racism and anti-Semitism and his support for his African-American, Japanese, Chinese, and Jewish-American students (Guthrie, 2003; Sato et al., 2012) can illuminate the thoughts and actions of complex individuals across other histories (e.g., President Woodrow Wilson’s deep commitment to human rights and the League of Nations and his decision to resegregate the federal bureaucracy by race; Lowen, 2007). Examination of these questions can enable students to recognize the complexity and contextual forces in our disciplinary history and then extend this historical worldview to other questions in our culture and their lives.

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Designing and Assessing the Capstone or Outcomes Course in Psychology

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The American Psychological Association (APA) has outlined the guidelines for the undergraduate major in psychology (American Psychological Association, 2013). Assessment is embedded into each psychology course to measure specific learning outcomes associated with APA psychology curriculum goals. The intention of the capstone or outcomes course is intended to provide a mechanism for the student to demonstrate the knowledge, skills, and abilities gained through the entire curriculum as a whole. A capstone or outcomes course provides students with the opportunity to integrate and synthesize the elements of the psychology curriculum. Assessment of the student performance in the capstone or outcomes course provides the department faculty with valuable data regarding how well the curriculum is structured and integrated as a whole, may reveal particular program components or courses that may need to be modified, and may reinforce program essentials which are particularly effective.

The outcomes course in psychology synthesizes and assesses students’ mastery of APA curriculum competencies in the areas of knowledge base, scientific inquiry and critical thinking, ethical and social responsibility in a diverse world, communication, and professional development (American Psychological Association, 2013). The learning objectives for the outcomes course should be mapped onto the curriculum objectives with the assessment metrics yoked to the learning outcomes. Outcomes courses may be best delivered in a seminar format where students have the opportunity to discuss and synthesize the material and to receive mentoring from the faculty member on integrative assignments. There are a variety of options when considering the design of the outcomes course, including issues based, topics based, research based, and practicum based platforms. Issues based courses may focus on applying the theories and science of psychology to an issue such as the psychological needs of refugees, whereas, a topics based course may focus on a specific subject in the discipline such as attachment or the unconscious. Research type outcomes courses involve students developing and executing a research project where they need demonstrate their competencies of the five curriculum goals. A practicum outcomes course typically requires students to complete a minimum of a 200 hour supervised experience (for four credits) in the field accompanied by a seminar course where they would complete additional assignments demonstrating their ability to integrate theory, science, and practice. Regardless of the type of outcomes course offered, the learning objectives remain the same. Students should be able to demonstrate their mastery of the curriculum objectives through both writing and oral presentation skills.
while reflecting their awareness and sensitivity toward ethical, gender, and cultural/diversity issues as quantified by assessment metrics.

Assessment is a culture and should be a routine practice and used to inform curriculum decisions. Assessment of the learning objectives for the outcomes course should aim at measuring how well the students have achieved the curriculum goals as outlined by APA's Guidelines for the Undergraduate Psychology Major (American Psychological Association, 2013) and practical outcomes such as entry level employment and admission to graduate schools. The assessment plan should be clear which assignment and metric is being used to measure each learning objective. Grades on assignments are not suitable for curriculum assessment. Metrics typically include rubrics, the national examination in psychology, practicum supervisor ratings, and the portfolio. A portfolio assignment can be a very useful experience for students. Developing a portfolio provides students with the opportunity to reflect on their growth and development as they progressed through the major, helps them to compile and articulate their achievements that can be used for graduate school or job applications, and helps them integrate their college experience as a whole. Creating a dynamic assessment cycle provides the opportunity for faculty members to continuously inform curriculum and program decisions resulting in quality psychology education while ensuring adherence to the APA guidelines for the undergraduate major in psychology (American Psychological Association, 2013).

There are challenges to delivering rigorous outcomes courses and for assessment. Large psychology programs may find it difficult to logistically manage intensive outcomes course assignments due to large class sizes which are less conducive to a seminar format or to a format requiring oral presentations and involved assignments requiring close mentoring by faculty members. Although programs with smaller class sizes may have the advantage to being able to better able to deliver an outcomes course in a seminar format and with intensive assignments, smaller class sizes may often do not provide enough power to statistically analyze outcomes every year. Instead, the data may need to be complied for two or three years in order to amass a large enough sample size. Strategies will need to be developed and tested for delivering outcomes courses in an online format to ensure that they are equivalent to face-to-face course delivery. Through the typical five-year self-study cycle, all of the curriculum objectives should be assessed, analyzed, and finding interpreted in order to inform curriculum decisions and development. Data from curriculum assessment, especially related to the outcomes or capstone course has the capacity to make a meaningful contribution to the scholarship of teaching and learning of psychology strengthening the discipline as a whole. Continued research on evidenced based practices for designing, delivering, and assessing the outcomes course in psychology remains needed.

References
Reducing Research Anxiety in a Senior Thesis Psychology Course

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The Psychology Capstone as an Interdisciplinary Course: A Case Study

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Section IV
Clinical/Counseling Psychology

1. Applicability and Outcomes of a Case-Based Learning Format in a Doctoral Level Theories of Counseling Course

2. Preparing Doctoral Psychology Students for Practice in Integrated Care Settings I: Interprofessional Education

3. Preparing Doctoral Psychology Students for Practice in Integrated Care Settings II: A Primary Care Psychology Curriculum

4. Learning Assessment, Treatment and Prevention of Suicidality via Role-Play

5. Utilizing Standardized Patients in Psychology Training Programs
Applicability and Outcomes of a Case-Based Learning Format
in a Doctoral Level Theories of Counseling Course

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Background

Case-based teaching methods are popular among college and university professors (Krain, 2010). Although many instructors use case studies to enrich their curriculum, little empirical evidence has supported the use of these important tools. Literature supports the effectiveness of case studies in providing students with skills to improve writing, speaking, listening, and critical thinking (Golich, Boyer, Franko, & Lam, 2000; Hino, Silver, C., & E., 2004). Additionally, case-based learning has an extensive history of effectiveness within business, hard sciences, and law training programs (Krain, M., 2010). Case studies illustrate issues and factors that affect decision-making, reveal realistic and complex situations, underscore important assumptions and principles, and highlight rationales behind theoretical models (Golich et al., 2000). The aim of this study was to explore select variables and their role in learning outcomes using a case-based teaching format.

Study Participants

The study group consisted of 15 doctoral-level students enrolled in an advanced course in Counseling Psychology at a large public southeastern university. Demographic information included mean age 38 years old, 53% from the U.S., 27% African-American, 10% Asian, 53% female, 43% English-speaking, 15% Hispanic, and 15% African-American. Common learning styles included Visual (n=10), Auditory (n=7), and Tactile (n=4).

Instrumentation

Cognitive Flexibility Inventory (CFI; Dennis & VanDer Wal, 2010). The CFI measures three aspects of cognitive flexibility: (a) the tendency to perceive difficult situations as controllable (Control sub-scale); (b) the ability to perceive multiple alternative explanations for life occurrences and human behavior (Alternative sub-scale); and (c) the ability to generate multiple alternative solutions to difficult situations (Alternative sub-scale) (Dennis & VanDer Wal, 2010).

Methods

Self-Efficacy for Learning Questionnaire (SELF; Zimmerman & Kitsantas, 2005). The SELF measure was developed to measure student confidence in learning processes like reading, writing, test-taking, and study practices. Higher scores indicate more positive self-efficacy for learning (Zimmerman & Kitsantas, 2005).

Preliminary Findings

Informed consents were completed at the beginning of the semester. Information about previous learning experiences with case methods was gathered. Data were collected three times during fall semester 2015. The CFI, SELF, NSLQ, and VAK were administered twice (beginning and end of semester) via Qualtrics. A survey soliciting qualitative feedback regarding the course was administered via Qualtrics at the end of the semester. “Cognitive flexibility and qualitative information are reported in this study.”

Discussion and Implications

Practical significance of the findings may include a way to gauge students’ ability to explore alternative solutions to problems given material that is ambiguous or information-limited.

Furthur study of empirical methods to measure student readiness and willingness to engage in perspective-taking during case-based discussion is warranted.

Measures of cognitive flexibility may help identify students who can effectively understand multiple perspectives.

Selected References


Preparing Doctoral Psychology Students for Practice in Integrated Care Settings I: Interprofessional Education

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In recent years, the American Psychological Association has developed the *Competency Benchmarks for Professional Psychology*, a set of core competencies that doctoral students in APA accredited clinical, counseling, and school psychology are expected to develop during their training (Assessment of Competency Benchmarks Workgroup, 2008). Included in the *Competency Benchmarks* document is a domain that articulates competencies in Interdisciplinary Systems. The competencies in the Interdisciplinary Systems domain are the same as those detailed by the Interprofessional Education Collaborative (IPEC, 2011) in its document, *Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel*. Both the APA Competency Benchmarks Workgroup and the IPEC Expert Panel specify the following interdisciplinary/interprofessional competencies: 1) effective communication with other health professions, 2) teamwork with other health professions, 3) knowledge of the roles and responsibilities of those professions, and 4) knowledge of their values and ethical standards.

The IPEC Expert Panel (2011) further articulated that training in these core competencies should occur via *Interprofessional Education* (IPE) defined by the World Health Organization as occurring “when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.” (WHO, 2010). According to this definition, the purpose of Interprofessional Education is to train professionals in core competencies that translate to the broader health care environment as a means of developing collaborative practice and improving health outcomes via team-based, integrated care.

Workforce needs catapulted by health care reform support the value of a team-based, integrated approach to patient care, especially in primary care settings. Mounting evidence suggests that patients and families desire and benefit from team-based, integrated care (Pomerantz, Cole, Watts, & Weeks, 2008). Moreover, research indicates that an integrated approach can reduce the use of costly, high-intensity care and produce improved patient outcomes (Alexopoulos et al., 2009). APA’s endorsement of this expanded role for the practice of psychology in health care is readily apparent in its recent choice of the term, *Health Service Psychology*, to replace the traditional term, *Professional Psychology*, in reference to psychologists who provide assessment, intervention, and consultation services within the health care system.
Unlike other competencies that are closely aligned with readily identifiable curriculum content and activities often mandated by APA-accreditation requirements (e.g., Scientific Knowledge and Methods, Evidence-Based Practice), activities considered to promoting interprofessional competencies may not be readily available in psychology training programs that reside in Colleges of Arts and Sciences or in Colleges of Education. Moreover, graduate psychology practicum and internship placements vary widely in opportunities for exposure to, and interaction with, other health professions. As a result, it is advisable that doctoral psychology training programs in clinical, counseling, and school psychology develop relationships with other health care professions to foster specific IPE experiences that facilitate training of their students in interprofessional competencies.

The remainder of this paper briefly describes activities within the Mercer University Health Sciences Center that attempt to weave collaborative experiences with other health professions into the training of doctoral students in Clinical Medical Psychology. Core competencies focused on Interprofessional Communication and Teamwork, as well as the Roles and Responsibilities, Values and Ethics of the other health care professions trained within the Mercer University Health Sciences Center are addressed in a series of five activities, each delivered annually to as many as 350 student participants per activity. In all activities, students are provided preparatory online modules containing didactic material, followed with small group experiences (typically with 6 to 8 students) in which doctoral Clinical Medical Psychology students participate with peers from Undergraduate and Master’s Nursing, Master’s Physician Assistant, Master’s Public Health, and Doctoral Pharmacy, Doctoral Physical Therapy, and Doctoral Clinical Medical Psychology programs. Depending on the subject material and activity, participants range from junior and senior year (Nursing) to fourth-year doctoral students (Clinical Medical Psychology). Based on their previous academic health sciences experience, student trainees are grouped with peers from other professions in Entry Level (i.e., first-semester), Lower Level (i.e., first- or second-year), and Upper Level (i.e., second year and beyond) activities. Descriptions of IPE activities are below.

First-Year Entry Level (Fall Semester): Roles & Responsibilities
- Students review didactic material about each profession’s educational requirements. They also view videos illustrating activities of the various professions represented in the Mercer Health Sciences Center.
- In small interdisciplinary teams, students discuss their profession’s academic and training requirements. With reference to a brief introductory case vignette, students discuss their profession’s potential role with the patient described.

Lower-Level Activity 1 (Fall Semester): Ethics & Values
- Students review material outlining each discipline’s professional code of conduct. Interdisciplinary teams review several case vignettes involving ethical decision-making on the part of each participating profession. For each case vignette, students identify the actions they might take with reference to their various professional codes.
- Students discuss commonalities and differences among professions with regard to how each ethical dilemma may be managed. Similarities are noted among professional standards and recommended actions, and any salient differences that emerge are discussed.
Lower-Level Activity 2: (Spring Semester): Communication

- Students review salient points regarding the importance of effective communication in health care. Then interdisciplinary teams complete an activity that illustrates how ineffective communication skills, coupled with professional personalities and agendas, can interfere with effective patient care.
- Students receive small group training and practice in an effective method (following the acronym, SBAR: situation, background, assessment, recommendations) used to communicate patient information to health care professionals in various clinical contexts.

Upper-Level Activity 1 & 2 (Fall & Spring Semesters): Teamwork in Clinical Care Planning

- Students review didactic material regarding integrated care teams and effective teamwork in health care. In interdisciplinary teams, students develop a care plan for a complex clinical case.
- Students discuss the advantages of the integrated care approach with the clinical case provides as well as more generally in health care environments.

The various professional training programs participating in Mercer’s IPE events enroll extremely disproportionate numbers, ranging from 12 students (Clinical Medical Psychology) to 150 students (Pharmacy) in each year’s entering class. As a result, a single Clinical Medical Psychology student often is grouped with 2 or more students per profession from other the other participating disciplines. Moreover, not every small group can include Clinical Medical Psychology student. Despite this disadvantage, the perspective of psychology often is represented by knowledgeable multidisciplinary faculty who facilitate the group activities, as well as by Clinical Medical Psychology students themselves during a large group wrap-up session attended by all participating students immediately following each IPE activity.

During the three years in which Clinical Medical Psychology has been involved in IPE events on Mercer’s Atlanta campus, student evaluations have been quite positive. Across the participating professions and activities, our most recent evaluations indicate that nearly 80% to over 95% of students agreed or strongly agreed that the IPE activities resulted in valuable interactions with other professions, allowed them to express their knowledge and opinions, and involved an atmosphere of mutual respect and support. Similar percentages of students agreed or strongly agreed that the activities increased their knowledge about other health care providers as well as their own profession’s role in health care teams, illustrated the importance of communication and teamwork, and increased their ability to engage in collaborative efforts to optimize patient care.
References


Preparing Doctoral Psychology Students for Practice in Integrated Care Settings II: A Primary Care Psychology Curriculum

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Integrated care has been increasingly embraced in the health care system internationally (Cubic et al., 2011; WHO, 2008). Moreover, large-scale organizations including the United States Military, Veterans Health Administration, and Private Health Care Organizations have increasingly focused on delivering innovative models of integrated care (Kessler & Cubic, 2009). Decades of research suggests that integrated care can improve patient access to mental health services and overcome disparities in mental health access for some minority groups (Alexopoulos et al., 2009; Ayalon et al., 2007; Unützer et al., 2002; Watts, Shiner, Pomerantz, Stender, & Weeks, 2007). Integrated care has been further shown to reduce wait times for mental health treatment, enhance treatment engagement and adherence, improve patient satisfaction, and create better clinical and functional outcomes (Alexopoulos et al., 2009; Pomerantz, Cole, Watts, & Weeks, 2008; Zanjani et al., 2008). Psychologists trained to serve in integrated health care settings reflect the goal of preparing our profession to serve as “health care providers” ready for the 21st Century (Cubic et al., 2011; DeLeon, Kenkel, & Belar, 2007).

As the demand for integrated care increases, so does the need to effectively train psychologists in the competencies that are necessary to work within these settings (Cubic et al., 2011). Interprofessional education (IPE) focuses on training a shared set of core competencies focused on roles, responsibilities, and ethics and values of health care professions, as well as on teamwork and effective communication within interdisciplinary teams (Hobbs & Stillman, 2016). In this manner, IPE addresses foundational elements that are essential skills in training students within the wide range of professions involved in integrated health care. However, beyond such foundational transdisciplinary competencies, APA’s Society for Health Psychology has recognized the need to train psychologists in profession-specific competencies for collaborative practice in integrated care settings. To this end, the Society for Health Psychology’s Integrated Primary Care Committee (IPCC) has developed a freely available introductory curriculum as a resource for graduate training programs and affiliated clinical training sites.

The Society for Health Psychology’s Integrated Primary Care Committee was formed in 2011 to address an emerging need to expose students to the burgeoning field of Integrated Primary Care (IPC) Psychology, with the ultimate goal of enhancing the role of psychologists in transforming the health care system. Since that time, the committee has...
been developing the multi-module course, *Integrated Primary Care Psychology: An Introductory Curriculum*, geared towards preparing psychology graduate students and trainees for work in primary healthcare settings. The curriculum was developed by a core group of primary care psychologists with vast experience working and training in integrated primary care. Some of the modules were written by experts in particular subject areas, in collaboration with the core team, to ensure that they retained a foundation in primary care.

One of the primary goals of the curriculum is to provide instructors in graduate programs with a course they could adapt to suit their own needs. For instance, instructors have the option to use the entire set of modules as a full-semester course, to supplement existing courses with modules of their choice, or to use selected modules for colloquia presentations. The design of the curriculum includes four 120-minute Foundation Modules (each with a 90-minute version), and eleven 90-minute Topic Modules. All modules include PowerPoint slides with notes, student exercises, references, case materials, illustrative videos and resources. The strategy in mind when developing the curriculum was to provide the instructor with all the resources needed to effectively deliver the course material. As such, each module comes with an instructor’s manual that includes key concepts, suggested teaching methods, recommended readings, handouts, discussion questions, and post-tests. Furthermore, IPCC members are available for consultation to address any questions or concerns the instructor may have.

The four foundational modules provide students with groundwork in IPC psychology. For instance, Module 1 (*Introduction to IPC*) defines the field, identifies key factors leading to integration, and discerns the role of the traditional mental health provider to the role of the psychologist in primary care. Module 2 (*Across the Continuum: Psychology’s Role in IPC*) discusses the range of patient needs presented in primary care. Modules 3 (*Primary Care Patients: Who are They and How Can Psychologists Be Helpful*) and 4 (*IPC Interventions*) describe common patient behavioral health concerns in primary care, and identify the clinical skills associated with providing interventions suited for primary care. In addition to the foundational modules, the curriculum includes 11 additional topic modules focusing on working with common diagnoses in primary care, such as *Depression*, *Anxiety*, *ADHD*, and *Chronic Pain*; as well as topics relevant to working in primary care, including *Health Promotion and Disease Prevention*, *Motivational Interviewing*, and *Working with Older Adults*. The vision of the IPC Committee is that additional topic modules will be included over time.

Several graduate and training programs have piloted the four foundation modules and more are continuing to do so. The initial feedback from pilot sites has been very positive. Mercer University’s Doctoral Program in Clinical Medical Psychology was the first national pilot of the entire curriculum. During the pilot, students were provided with feedback forms and post-tests following each module. Feedback from the pilot suggested that the modules were very easy to use and provided a platform for a breadth of cutting edge information in IPC psychology. Students found the entire curriculum engaging, and several commented that the course had inspired them to seriously consider a future career in IPC psychology. Overall, the modules were very well received, and students performed well across all modules.

Since the initial pilot, additional sites have piloted several of the revised topic modules. The feedback about the curriculum continues to remain very positive. As a result,
the IPCC plans to disseminate the final versions of the foundational modules through the APA Division 38 website by Summer, 2016. It is projected that the entire curriculum will be available for programs to use in Fall, 2016. The IPCC will provide an overview of the curriculum during a symposium, Preparing Graduate Students for the Future: Integrated Primary Care Education, at the 2016 American Psychological Association Annual Convention.
References


Learning Assessment, Treatment and Prevention of Suicidality via Role-Play

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The assessment and treatment of suicidality are important skills for clinicians to possess. The ability for a clinician to accurately detect suicide risk and intervene appropriately is key for ensuring ethical clinical practice with a suicidal patient. Traditional assessment and intervention techniques that are taught exclusively from textbooks prior to student clinical exposure may not fully prepare the therapist-in-training for the actual experience of what it is like to assess, treat, and prevent suicidality. Students may feel that they are not sure how to work with a suicidal client in real time in terms of (1) assessment of symptom severity, (2) risk, and (3) ability to formulate a proper plan of treatment/action based on the clinical presentation.

Instruction of pre-practicum clinical students may be enhanced by classroom-based techniques of role-play. Role-play is an experiential learning technique where learners and/or demonstrators take the role of specific characters in a contrived setting (Barney & Shea, 2007). Role-play may be used as a teaching-tool in practicing assessment and intervention for suicidality (Shea & Barney, 2015). This specific teaching activity may run as part of a course in a clinical program, and is conceptualized for infusion in a 15-week semester (though the activity may be modified to accommodate program-specific course timelines). Type of course(s) for the role-play activity may vary, but certainly courses focusing on the development of clinical and crisis intervention skills are fitting. The focus of the activity is for all students to conduct assessments and interventions for “patients” with varying levels of suicidality.

As part of the classroom experience prior to the role-plays (for example, the first half of select classroom meetings), the instructor should teach basic skills of suicidality assessment and intervention. Such training in assessments may include instruction on the administration of standardized instruments and clinical interviews, and such training in interventions may include instruction on techniques to treat symptoms of suicidality and other self-harm crises. These instructional preparations are necessary to equip students with basic skills. Those same students would then conduct clinical assessment and intervention during the classroom-based role-play activity (which could, for example, take place in the second half of select classroom meetings).
Prior to student teams meeting each “patient” (with the patient role-played by the course instructor), the instructor should provide all students with a basic mock background/history for each patient:

- Patient #1 should be portrayed with mild suicidality;
- Patient #2 should be portrayed with moderate suicidality; and
- Patient #3 should be portrayed with severe suicidality.

These mock histories should be distributed to all students in the course, and may be provided in vignette form or separate mock initial assessments for each "patient."

During the actual activity the instructor then role-plays these three separate "patients," each with varying levels of symptom severity. The first patient role-played has mild suicidality (with three 30-minute “treatment sessions” scheduled, one per consecutive class meeting). The second patient role-played has moderate suicidality (with three 30-minute “treatment sessions” scheduled, one per consecutive class meeting). The third patient role-played has severe suicidality (with three 30-minute “treatment sessions” scheduled, one per consecutive class meeting). This means that there will be three “patients” role-played by the instructor who are treated over a total of nine classroom meetings by the students. Each role-play occurs in the classroom setting, such that each class meeting serves as a continuation session for all three “patients” being role-played by the instructor and treated by the students: classes 1-3 for patient #1’s assessment/treatment, classes 4-6 for patient #2’s assessment/treatment, and classes 7-9 for patient #3’s assessment/treatment. Students are broken into three treatment teams (A, B, and C), and each team rotates weekly to place in treatment sessions for all three “patients”. Therefore, each student team gets to treat each “patient” once, and conducts at least one assessment. Severity of symptoms, "client" reaction to the therapeutic approaches, and course of "client" treatment are thus pre-determined by the course instructor but revealed only through the "client’s" presentation during the weekly role-plays to make the experience more realistic.

When the role-play occurs, the instructor ("client") should be seated in front of the classroom. The student treatment team should be seated and facing the instructor. Other classroom members (observers) should be placed in a semi-circle or row behind the student treatment team. The instructor may make corrections/comments either during or after the role-play, calling attention to student performance. Other opportunities for learning and reflection of students' clinical work (such as pointing out student counter-transference) may occur during and/or after the activity.

Students' feedback of the role-play is quite positive. Students report they feel it helps them develop therapy skills, learn from other students, and increase therapeutic confidence. Students who were exposed to this learning technique reported that the activity was an invaluable learning experience.

This technique may be utilized in a variety of clinical courses, and it is not meant for practice in an undergraduate classroom. Rather, it is meant for professional clinical graduate students who are matriculated in a clinical program. The instructor may modify the activity based on several specifiers. It is helpful to know the course for which the
activity is designed, and the type of training program for which the role-play will be utilized. Other considerations are students’ previous coursework, and their year within respective programs. The instructor should consider her/his own professional background before conducting a clinical role-play, and be aware of her/his qualifications as defined by ethics, scope of practice, and competency to conduct training for suicidality assessments and interventions.

The authors suggest that this technique has been qualitatively supported, yet more research is needed (McNaughton, Ravitz, Wadell, & Hodges, 2008). It is uncertain if this technique translates to enhanced clinical acumen that is quantifiable. In future research, statistical comparisons should be made for students trained via role-play versus students not trained via role-play to see if supervisors’ ratings of clinical skills, or other outcome data, differ between the two groups. Additional evaluations of clinical role-play techniques may be found in the works of King, Hill, and Gleason (2015), and Melluish, Crossley, and Tweed (2007).

References


Utilizing Standardized Patients in Psychology Training Programs

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Accrediting bodies, such as the American Psychological Association (APA), are increasingly requiring that graduate educators provide evidence that students have attained competencies that demonstrate readiness as health service providers. Moreover, with the transition to the new Standards of Accreditation (SoA), the evaluation of competencies during practica must include direct observation of students. APA has identified 15 areas of competency at three levels of psychology trainee development: readiness for practicum, readiness for internship, and readiness for entry to practice (APA, 2012). Within these competencies are essential micro-counseling skills (e.g., establishing rapport, conveying empathy; Fouad et al., 2009) providing the foundation for interacting with clients.

Traditionally, training programs in psychology have utilized role-play with peers to assist in the acquisition of micro-counseling skills. In fact, research suggests that this process provides the opportunity for the development of empathy and allows the trainee to gain insight into the experience of the client (Meier & Davis, 2011). However, these scenarios are often artificial, spontaneously created, and, therefore, quite variable (Meier & Davis, 2011). Furthermore, these exercises are frequently not taken seriously by trainees, thus diminishing objectivity (Kaslow et al., 2009). In contrast, medical schools have used standardized patients (SPs) since 1963 for training and assessment of their students (Clay, Lane, Willis, Peal, Chakravarthi, & Poehlman, 2000). SPs are actors who are trained to portray a set of symptoms consistently across clinical interactions (Barrows, 1993). They are purported to lessen the risk of possible harm to clients, to reduce the likelihood that ethical dilemmas will be handled poorly, and to provide training experiences more consistent with actual patient/client encounters. Practice with SPs has been touted as a potentially useful tool for evaluating clinical competency among psychology trainees (Kaslow et al., 2009). However, there is a paucity of research regarding the efficacy of using SPs in graduate psychology training, and there has been limited research conducted regarding measures which sufficiently evaluate beginning interviewing/counseling skills.

In addition, the few tools that do exist are extremely narrow in scope. To evaluate competency in clinical interviewing skills objectively, the Skills in Psychological Interviewing: Clinical Evaluation Scales (SPICES) was developed. SPICES is a 26-item measure rated on a four-point Likert scale. Behavioral anchors are provided to allow for clear differentiation among scale points.

The goals of the study were 1) To evaluate the effectiveness of utilizing SPs as a teaching tool in graduate education; and 2) To continue to evaluate the reliability and validity of SPICES. The researchers hypothesized that 1) Regardless of condition, all trainees’ basic clinical interviewing skills, as measured by SPICES, would increase from pre-test to post-test; and 2) Role-play with SPs would lead to greater attainment of basic clinical interviewing skills, as assessed by SPICES, than that gained from role-play with peers.
Eighty-six first-year doctoral students in psychology enrolled in multiple sections of an introductory counseling course completed The Simulated Patient Assessment Demographic Evaluation Survey (SPADES), Fear of Negative Evaluation Scale (FNE), State-Trait Anxiety Scale (STAI), Counseling Self-Estimate Inventory (COSE), Suicide Intervention Response Inventory (SIRI-2), and Clance Imposter Phenomenon Scale (CIPS) at the beginning of the semester. The following week, all trainees participated in a 15-minute, videotaped, simulated session with a SP which provided a baseline (pre-test) of micro-counseling skills. Each trainee was then rated by two raters (either interns or post-doctoral residents) utilizing SPICES, and were also rated by SPs using SPACES to measure the ability to effectively engage the client.

Trainees were then randomly assigned to one of two conditions: Control condition (five lab groups), which consisted of traditional role-play with peers; and experimental condition (five lab groups), which consisted of role-play with a SP. Prior to participating in each role-play case, SPs attended a 1.5-hour training to engage in role-play practice and to obtain feedback regarding the portrayal, and to address questions and concerns. Trainees attended 11 laboratory sessions in their assigned condition, during which time they practiced basic interviewing skills with six different cases. The first two cases, trainees participated in 10 minutes of role-play, followed by five minutes of feedback. For the last four cases, trainees participated in 20 minutes of role-play, followed by 10 minutes of feedback. Identical case study scenarios were employed in both groups. Each week, the 10 facilitators were randomly assigned to one of ten course sections. For each case, five SPs were randomly assigned to the experimental groups.

At the end of the semester, all trainees again completed the FNE, STAI, COSE, and CIPS. Additionally, trainees participated in a 15-minute, videotaped, simulated session post-test with a SP and received feedback on SPICES and SPACES. Trainees who were randomly assigned to the control condition were given an opportunity to participate in role-play sessions with a SP over the summer.

A one-way ANOVA was conducted to compare all trainees’ SPICES scores at pre- and post-test to determine whether their level of efficacy improved in utilizing basic clinical interviewing skills. The results of the one-way ANOVA indicate that there was a statistically significant difference between trainees’ basic clinical interviewing skills at pre-test versus post-test $F(3, 334) = 119.30, p = .00$. Basic clinical interviewing skills increased between pre-test and post-test for all students, regardless of whether they practiced with SPs (Pre $M=76, SD=7.35$; Post $M=88.68, SD=5.32$) or with peers (Pre $M=77.26, SD=5.90$; Post $M=88.73, SD=4.56$). An ANCOVA was conducted to determine if there was any significant difference between the post-test scores of the experimental versus the control group after correcting for pre-test scores, using the pre-test scores as covariates. The results of the ANCOVA indicate that at post-test, trainees’ performances did not differ between the experimental and the control group as predicted, even when pre-test results were used as covariates.

Overall, SPICES appears to be a reliable and valid measure of assessing competency in basic clinical interviewing skills and is sensitive to changes in skills based upon didactic exposure and practice. While the current results fail to demonstrate significant differences between the experimental and control conditions, future analyses of the other instruments employed will compare whether differences in other areas emerged based upon interviewing practice with a standardized patient compared to traditional role play.
analyses will include the evaluation of counseling self-efficacy, self-reflective anxiety surrounding negative appraisal, general anxiety, state anxiety, appropriateness of response to suicidal clients, and the “Imposter Phenomenon.”

References


Section V
Cognitive Psychology/Learning


2. Attention Improves Free-Recall: A General Psychology Demonstration

3. Cognitive Psychology Project: Applying Cognitive Psychology to Help Others


5. Rubric for Critical Thinking

6. Title: A Sense of Belonging: How Important is it for Learning about Race and Gender?
A Critical Evaluation of the Use of Operant Conditioning in the Show “Lucky Dog”

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ABSTRACT

The Widener University Critical Thinking Scoring Rubric (WUCTR) was used to assess the quality of thinking employed during completion of a writing assignment in sections of Introductory Psychology. Two episodes of the show “Lucky Dog” were analyzed for detailed examples of operant conditioning. Students effectively identified and deconstructed examples of the application in multiple scenes of dog training.

BACKGROUND

The discussion of classical and operant conditioning techniques and their associated phenomena are often hard for Introductory Psychology students to differentiate. The vision of salivating dogs and bar-pressing rats can often turn students off to the basic understanding of how such procedures work on all of us across varied situations throughout the day. The popular television show “Lucky Dog,” hosted by Brandon McMillan, offers excellent examples of how operant conditioning helps to train rescue dogs to become valuable members of adoptive families. This study showed how viewing functional examples of operant conditioning within a humanistic context could assist in students’ understanding and critical analysis of the concept.

PROCEDURE

Participants & Materials
- 120 Undergraduate Intro Psych Students
- 120 analyses of the episode “Robo”
  http://www.tvtorrents.com/shows/lucky-dog/robotes-307222
- 120 analyses of the episode “Lily”
  http://www.tvtorrents.com/shows/lucky-dog/lily-277347
- The Widener University Critical Thinking Scoring Rubric (WUCTR)

Assignment Instructions for each TV Segment
- Summarize the backstory: describe the animal and the animal’s future family, as well as any problems that need to be overcome.
- Identify at least 6 examples of the use of operant conditioning. For each example identify:
  1) the target behavior.
  2) the consequence—whether it was a reinforcer or punisher, the type of reinforcer/punisher.
  3) the changes in behavior—increase or decrease.
  4) the discriminative cues used to signal the target behavior.
  5) any procedure that was used to gradually shape the behavior to the proper or desired form.
- Discuss the training process, costs, and questions that you might have. Answer the question, “Why are the training procedures so effective?”

Assignment Scoring with the WUCTR

Categories included:
A) Clear statement of research purpose & goals.
B) Thoughtful analysis & evaluation of segment.
C) Accurate interpretation of evidence.
D) Justification of key results & conclusions expressed.

Scoring was as follows:
1 = unacceptable  2 = developing  3 = competent  4 = expert

RESULTS & CONCLUSIONS

Table 1 shows mean ratings for scores assigned for each of the 4 WUCTR categories. Mean ratings for 3 of the 4 categories are above 3, indicating the students scored in the Competent Level for the skills assessed, with the scores for clarity of purpose approaching the level of Expert.

<table>
<thead>
<tr>
<th>Rubric Categories</th>
<th>Robo Mean</th>
<th>Robo S.D.</th>
<th>Lily Mean</th>
<th>Lily S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Purpose</td>
<td>3.13</td>
<td>.87</td>
<td>3.71</td>
<td>.67</td>
</tr>
<tr>
<td>Thoughtful Analysis</td>
<td>3.12</td>
<td>.80</td>
<td>3.35</td>
<td>.82</td>
</tr>
<tr>
<td>Accurate Interpretation</td>
<td>3.33</td>
<td>.80</td>
<td>3.36</td>
<td>.84</td>
</tr>
<tr>
<td>Justification/Arguments</td>
<td>2.6</td>
<td>1.8</td>
<td>2.7</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 2 shows the total percentage of persons scoring competent (3) and expert (4).

<table>
<thead>
<tr>
<th>Rubric Category</th>
<th>Robo</th>
<th>Lily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Purpose</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Thoughtful Analysis</td>
<td>79%</td>
<td>88%</td>
</tr>
<tr>
<td>Accurate Interpretation</td>
<td>79%</td>
<td>86%</td>
</tr>
<tr>
<td>Justification/Arguments</td>
<td>59%</td>
<td>61%</td>
</tr>
</tbody>
</table>

Thus, the humanistic context provided by the show, “Lucky Dog,” highlights the importance of operant conditioning, and validates its use as an avenue for training and rehabilitation. The touching stories and clear presentation of technique increase student interest and as a result facilitates the critical analysis of the concepts under study.

For further information, contact:

Presented at:

"Lucky Dog"
Attention Improves Free-Recall: A General Psychology Demonstration

Daniel F.A. Hitchcock
Regent University

Presented at:
For further information, contact: dhitchcock@regent.edu

Abstract
This presentation describes a simple, fun, tried-and-true method to demonstrate the well-known hypothesis that increasing focused attention improves recall. Data collected over a decade from Introduction to Psychology courses shows consistent, dramatic results. The method could be used in any course to demonstrate the impact of levels of attention during encoding and the corresponding success/failure of subsequent recall. The experiment involves wearing a very salient “crazy” Hawaiian shirt while lecturing followed by a free-recall attempt two days later, first individually and then within groups. Results show that those seeing the shirt but not having been drawn to it, recall it only 49% (M=49.4) of the time, while those to whom attention is drawn recall the shirt at a level of 88% (M=87.7). This dramatic difference has been evident consistently across over 20 classes ranging from 35 to 100 students. A control group never seeing the shirt never reports seeing it. These results suggest that increased attention facilitates later recall. Another feature of this demonstration is, given there is a group attempt at recall, it can be inferred that forgetting is due primarily to the loss of access rather than lack of encoding or decay over time. The findings will be discussed in the context of recent findings in memory research such as the Attentional Boost Effect (Swallow & Jiang, 2010, 2013) and evidence that some forgetting is due to memory trace decay (Barrouillet et al., 2011).

Introduction
The role of attention in encoding information for both working memory (WM) and long-term-memory (LTM) is well documented. Conscious attention is critical for the retention of to-be-remembered items or events. The more attention devoted to something, the better the probability that particular something will be remembered in the future. The current study offers for the classroom a simple, yet, powerful demonstration of the crucial role attention plays in the encoding of memories. It also demonstrates that the forgetting of incidental information is most likely due to loss of access to cues rather than lack of encoding or trace decay.

Method

Participants
The participants of the study were 1066 Introduction to Psychology students from three different colleges (Dordt College, IA, Geneva College, PA and, Regent University, VA) in courses taught by the author over the years 2005-2015.
**Design**
The independent variable of the study included three levels: Groups:

- **Attention** \((n=438)—\text{saw shirt with comments drawn to it} \)  
- **No Attention** \((n=427)—\text{saw shirt but no comments made} \)  
- **Control** —\text{no manipulation} \((n=201—\text{no shirt present at all}) \)

The dependent measure was the number of students remembering having seen the “crazy” shirt.

**Procedure**
Sections of *Introduction to Psychology* courses were exposed to one of three levels of the “attention” manipulation during a lecture on the topic of biopsychology. Those in the **Attention** condition saw the professor wearing a “crazy” Hawaiian shirt which was totally out of character. At both the start and end of the lecture he drew significant attention to it by bragging about dressing up in his best for a “hot date” with his wife. Those in the **No Attention** group saw the same shirt but no attention was drawn to it, while the **Control** group never saw the shirt.

Two days later at the end of a content quiz students (in small teams) responded, individually (free recall) & then collectively (cued recall) to the following question: “Did you notice anything unique about Dr. H last class?”

**Results**
Individual and team recall is plotted in Figure 1. Across classes, an average of almost **88%** \((M=87.7, SD=4.23)\) of the participants in the **Attention** group showed free-recall of seeing the “crazy” Hawaiian shirt while only about **49%** \((M=49.4, SD=5.13)\) remembered in the **No Attention** group. There was no recall of the shirt in the no manipulation control group.

However, for the cued-recall attempt all teams of students reported seeing the shirt. This evidence suggests that many of those failing the free recall attempt did remember when cued by peers during the team quiz. A one-way ANOVA revealed a significant difference between the three groups \((F(2,14) = 442.14, p<.001)\) with Tukey’s HSD used to confirm that the difference between the two attention groups was significant. (---Figure 1 goes here---)

**Overall Conclusions**
This simple in-class manipulation demonstrates the significant impact of attention upon memory processing. The results can easily be used to launch into discussions of current controversies surrounding memory phenomena such as:

- **The Attentional Boost Effect** (Swallow and Jiang, 2010, 2013). The connotation of a “hot date” may stimulate brain areas of arousal which could lead to the incidental details of what the professor was wearing during the lecture standing out and being more deeply encoded. This is similar to Swallow and Jiang’s findings which show how normally memory-impairing distractors (i.e., “crazy” shirt) can, if given increased attention, can actually overcome the distractor’s usual detrimental impact upon memory.
Temporal Decay in Working Memory (Barrouillet et al., 2011). The results here of perfect retention regardless of condition by every “team” of students argue against recent conclusions by Barrouillet who claims that forgetting of working memory tasks is due to memory-trace decay. In contrast, the current study suggests that memory traces (comments about the shirt) briefly in working memory and forgotten days later may still be accessible given the proper cues and that forgetting may be due rather to interference (see Lewandowsky and Oberauer, 2009).

References


Cognitive Psychology Project: Applying Cognitive Psychology to Help Others

Kieth A. Carlson
Valparaiso University

Presented at:

For further information, contact: Kieth.Carlson@valpo.edu

Abstract

Last Fall, I created my Cognitive Psychology Lab Course so fifty students would operate a Cognitive Psychology Consulting Firm. The was "fixed" by several instructors to solve a common problem for college freshmen, namely: "What are effective studying strategies for college courses?" Groups of students developed studying strategies supported by research. Students learned to analyze their study habits. Test-taking strategies were created. Finally, the lab environment was assessed if the intervention changed students' study habits and performance.

Introduction

- College students frequently use ineffective studying strategies like highlighting, rereading, and note-taking (Dunlosky, Rawson, Wixted, & Spiro, 2013). However, some students do not use these strategies. The use of these strategies has been shown to improve scores
- Students need to develop strategies to improve their study habits.
- After completing a Cognitive Psychology course, students can apply their newfound understanding of human cognition to help their study habits.
- "Helping others" is an effective way to learn. Students who use cognitive psychology to help others improve their study habits.
- Adopting a Cognitive Psychology course, students can apply their newfound understanding of human cognition to help others improve their study habits.

Method

- After completing a Cognitive Psychology course, students need to develop strategies to improve their study habits.
- Students need to develop strategies to improve their study habits.
- Students need to develop strategies to improve their study habits.

Results

- Working Group 1: "Working with Psychology" based recommendations on:
  - Motivation (Anderson & Dweck, 1986)
  - Self-efficacy (Bandura, 1997)
  - Elaboration (Tulving, 1983)
  - Time management (Felder, 1992)

- Working Group 2: "Introduction to Psychology" based recommendations on:
  - Elaboration (Anderson & Dweck, 1986)
  - Priming (Liben, 1983)
  - Power law of learning forgetting (Newell & Bobrow, 1976)
  - Self-efficacy (Bandura, 1997)
  - Distributed Practice (Dunlosky et al., 2013)

- Working Group 3: "Introduction, Prof. Dev." based recommendations on (Mackey, 2004):
  - Regulation of Cognition: Planning, metacognition, and elaboration organization.
  - Regulation of Behavior: Intentional planning, time management, self-regulation.

- Recommendations for next version of course:
  - Participation in a short video on the use of distributed practice.
  - Introduction to the use of self-regulation strategies.

Discussion

- Recommendations for next version of course:
  - Participation in a short video on the use of distributed practice.
  - Introduction to the use of self-regulation strategies.

Materials & References

All course materials available from: Kieth.Carlson@valpo.edu

Cognitive Psychology to Help Others

Reference on poset handout.
Operant and Classical Conditioning of Rescue Dogs.

Debra Stein
Widener University

Presented at:
For further information, contact:

Classical and operant conditioning theories have given us reliable tools to use in our attempts to facilitate learning. It is amazing to see how quickly associations between events in the environment can impact behavior: both human and animal. In fact, the use of operant conditioning techniques has become the standard of practice for training many types of animals to adapt to their environments.

This particular assignment focuses on the training of rescue dogs for adoption by loving families who have special environments or particular needs. The trainer, Brandon MacMillan, employs excellent examples of the use of conditioning procedures to shape the behaviors of these, “Lucky Dogs.” Your job is to identify within each of two 25 minute TV segments, at least 5 examples of the use of operant conditioning. For each example, you MUST identify:

a) the target behavior;
b) the consequence that is used to change the behavior AND whether it is a reinforcer or punisher AND the type of reinforcement/punishment
c) whether the behavior increases or decreases in frequency;
d) the discriminative cue (cues) that is (are) used to prompt or signal the behavior;
e) any procedure that is used (if present) to gradually shape the behavior to the proper or desired form.

Some examples that you see are simple; but some are complex. In some examples, the cues may be both hand signals and verbal prompts, and the consequences may be both food and praise. You should note why these double cues might be necessary at the beginning of training.

A) The first 25 minute segment that you will view is the Training of Kobe. The link appears below:
 http://www.tv.com/shows/lucky-dog/watch/kobe-3077228/
**Important:** The segment with Kobe contains one **classical conditioning example**. Can you identify it? Can you identify the Conditioned Stimulus and the Unconditioned Stimulus in the example and the Conditioned and Unconditioned Response? Analyze these components in your report.

B) The **second 25 minute segment** that you will view is the Training of **Lilly**. The link appears below:

http://www.tv.com/shows/lucky-dog/lily-3077227/

**Hint:** The segment is interesting as it deals with teaching behaviors opposite to what Lilly has formerly been trained to do. Start your analysis with **“shadow walking.”**

**NOTE 1:** **Each TV segment analysis** should **start with a short description** of the animal and the animal’s future family. It should also summarize the problem or problems that must be overcome for the match between the dog and the family to be successful.

**NOTE 2:** **Each TV section analysis** should **end with a discussion** of the training: the pros, cons, and questions that you might have. Answer the question, **“Why are the training procedures so effective?”**

**Scoring Rubric:** Assignment must be typed, double-spaced, 12 point type, stapled, and on time – late papers will NOT be accepted.

- Assignment is **well-organized** and clearly written. Correct grammar, punctuation, and sentence structure are used in paragraphs. (10)
- The analysis of each TV segment begins with a summary (see above) and ends with a discussion (see above). (16)
- 10 separate examples are identified (5 per segment). (10)
- All examples have clearly identified components and are correct in their analysis. (40)
- Classical conditioning example is clearly identified and analyzed. (4)

__________________________

Total === 80 points
Rubric for Critical Thinking

*Debra Stein*
*Widener University*

**Presented at:**
**For further information, contact:**

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<table>
<thead>
<tr>
<th>Rating</th>
<th>Expert (E)</th>
<th>Competent (C)</th>
<th>Developing (D)</th>
<th>Unacceptable(U)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity</strong></td>
<td>Research purpose and goals are clearly stated and/or implied and it is justifiable</td>
<td>Research purpose and goals are stated with level of detail</td>
<td>The research purpose and fundamental question are unrelated</td>
<td>Statement of purpose is not clear and devoid of detail</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamental question is clearly articulated, relevant, and significant</td>
<td>The fundamental question is articulated</td>
<td>The research purpose and fundamental question are unrelated</td>
<td>There is no fundamental question posed</td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Accurately interprets evidence, statements, graphics, questions, etc.</td>
<td>Accurately interprets evidence, statements, graphics, questions, etc.</td>
<td>Responds by retelling or graphically showing events or facts</td>
<td>Offers biased interpretations of evidence, statements, graphics, questions, information or the points of view of others</td>
</tr>
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<td></td>
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<tr>
<td>Identifies the salient arguments (reasons and claims) pro and con</td>
<td>Thinks through issues by identifying relevant arguments (pro and con)</td>
<td>Makes personal connections or identifies connections within or between sources</td>
<td>Fails to identify or hastily dismisses strong, relevant counter-arguments</td>
<td></td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td>Thoughtfully analyzes and evaluates major current and/or alternative points of view</td>
<td>Offers analysis and evaluations of obvious current and alternative points of view</td>
<td>Discusses literature, experiences, and points of view of others in terms of own experience</td>
<td>Ignores or superficially evaluates obvious alternative points of view.</td>
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<tr>
<td>Assumptions are clear, and support the point of view expressed</td>
<td>Generates alternative explanations of phenomena or event when necessary</td>
<td>Responds to sources at factual or literal level</td>
<td>Argues using fallacious or irrelevant reasons and unwarranted claims</td>
<td></td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Justifies key results and procedures, explains assumptions and reasons</td>
<td>Justifies (by using) some results or procedures, explains reasons</td>
<td>Includes little or no evidence of refinement of initial response or shift in dualistic thinking</td>
<td>Does not justify results or procedures, nor explains reasons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Makes ethical judgments</td>
<td>Fair-mindedly follow where evidence and reasons lead</td>
<td>Demonstrates difficulty with organization and thinking is uneven</td>
<td>Exhibits close-mindedness or hostility to reason</td>
<td></td>
</tr>
</tbody>
</table>
Title: A Sense of Belonging: How Important is it for Learning about Race and Gender?

Cyndi Kernahan and Melanie Ayres
University of Wisconsin-River Falls

Presented at:
For further information, contact: cynthia.kernahan@uwrf.edu, melanie.ayres@uwrf.edu

Prior research (Kernahan, Zheng, & Davis, 2014) has shown that students’ feelings of belonging can predict their learning in courses about race, including students’ perceived learning, course grades, and racial attitudes. More recently, the discussion leaders replicated these results with a second set of courses including a course on the Psychology of Gender and the Psychology of Prejudice and Racism. The results, though still preliminary, seem to indicate that belonging again predicted learning as measured in multiple ways and that student learning about race and/or gender generalized to other forms of oppression (e.g., improved racial attitudes in a course on gender, improved gender attitudes in a course on race).

In this roundtable discussion we described these findings as a springboard to a wider discussion on teaching about race and gender. Our finding that belonging predicts learning begs a lot of interesting questions: How can instructors develop a sense of belonging within their classrooms? Why and how does a sense of belonging matter? Furthermore, prior research (Cole, Case, Rios, & Curtain, 2011) has not always shown that students learn to apply their learning about one form of oppression (e.g., racism) to another form of oppression (e.g., sexism). We did find this, however, and we discussed these findings with the participants.

The discussion expanded into one primarily centered on how to instill a sense of belonging. Participants from various institution-types (small private liberal arts, public community college) described their own efforts to create a sense of belonging in their students, with an extended discussion of first-year courses.

References:


Section VI
Critical Thinking

1. A within-instructor evaluation of three scientific thinking modules: Description of activities and evaluation

2. Improve with Metacognition: A Collaborative Website Resource

3. Measuring APA Goal 2: Critical Thinking and the Psychology Major

4. 69 Mind Blowing Ways to Peer Review the Internet!

5. A pre-test/post-test evaluation of scientific thinking modules for Introductory Psychology in two distinct college environments
A within-instructor evaluation of three scientific thinking modules: Description of activities and evaluation

Courtney Stevens, Melissa R. Witkow, Rick Laughlin, Rachelle L. Yankelevitz
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Improve with Metacognition: A Collaborative Website Resource

Lauren Scharff
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For further information, contact: lauren.scharff@usafa.edu; DRAEGEJD@BUFFALOSTATE.EDU; arichmo3@msudenver.edu

Metacognition refers to an intentional focusing of attention on the development of a process, so that one becomes aware of one’s current state of accomplishment, along with the situational influences and strategy choices that are currently, or have previously, influenced accomplishment of that process. Through metacognition, one should become better able to accurately judge one’s progress, self-regulate and select strategies that will lead to success. Metacognition enables students to learn how to learn (Wirth & Perkins, 2007) and contributes to their success (Dunlosky et. al., 2013; Isaacson & Fujita, 2006). It is through metacognition that students and instructors are able to articulate their goals, select effective strategies, accurately judge progress towards those goals, and fine-tune those strategies along the way. The poster shares an online teaching commons (Huber & Hutchings, 2005) that fosters the collaborative investigation of the role of metacognition in teaching and learning.

The website resource (http://www.improvewithmetacognition.com) was created almost two years ago, prompted by a metacognition presentation at the Southwestern Psychological Association annual convention. During this session, attendees indicated strong interest in forming a multi-institutional community focused on metacognition. Thus, the site was created with several goals in mind: (1) Provide a collection of resources for individuals who might be interested in learning about metacognition research (e.g. links to articles; books; video clips), applying metacognition research (e.g. in-class activities, tips for students), and engaging in metacognition research (e.g. advice for carrying out a Scholarship of Teaching and Learning project, feedback questionnaires, types of variables and data to consider); (2) Share instructor and research experiences related to metacognition via a weekly blog. Contributors to this blog include instructors from across the United States and Canada, but we are interested in broadening our list of contributors. Some are committed to regular postings and others share their experiences with the group on a more ad hoc basis. (3) Establish an online faculty learning community to foster collegial support and collaborative research opportunities. To date, our site has facilitated a five-institution research project on metacognitive instruction and provided support to new
metacognition researchers at several institutions. Periodic email updates are sent to an opt-in list of site followers, and Twitter and Facebook options for updates are also available.

For instructors, the site provides resources for those engaged in reflective teaching, scholarly teaching, and the scholarship of teaching and learning (Richlin, 2001). For students, metacognition not only promotes more effective learning now, but it can also put students on the path of lifelong learning. The site asks all of us to reflect upon how metacognition figures into our learning processes. As communities in higher-education, it encourages us to investigate how metacognitive strategies might need to be altered to account for class size, general education courses or majors courses, online courses, or differences between various disciplines. Our site promotes the ongoing and systematic investigation of metacognition as it contributes to teaching and learning, and provides a means by which faculty and students can exchange ideas and create collaborations around the topic of metacognition.

References
Measuring APA Goal 2: Critical Thinking and the Psychology Major

Kinsey Bolinder, Eric Barlow, Talegria Brown, R. Eric Landrum
Boise State University

Presented at:
For further information, contact: elandru@boisestate.edu

We studied 21 junior-level psychology majors and their critical thinking and statistical reasoning skills. Modifying the Lawson et al. (2015) scoring rubric, we measured both critical thinking ability and developed a new measure of statistical reasoning. These methods may help psychology educators assess student competence within APA Goal 2.

The American Psychological Association (2013) named scientific inquiry and critical thinking as one of their five learning goals for psychology undergraduates. Many researchers have assessed critical thinking skills in psychology undergrads (Butler, 2012; Lawson, 1999; Lawson, Jordan-Fleming, & Bodle, 2015; Stark, 2012). One of the assessments created to evaluate psychology specific critical thinking skills is the Psychological Critical Thinking Exam (PCTE), developed by Lawson (1999; 2015). This exam consists of 14 claims in which students are instructed to identify the problem that occurs (if any) in each scenario. The problems that appear in the claims are common principles that psychology students should be able to identify fairly quickly (Lawson, 2015). For this study, we selected 4 items from the PCTE and also created new questions requiring the participants to interpret statistical findings and identify any problems that appeared in the data presented to them. One goal was to develop an efficient method of scoring the level of critical thinking skills and applied statistical knowledge in psychology undergraduate students. Second, can junior-level psychology majors apply the knowledge and skills we expect them to possess with realistic statistical scenarios presented online.

Method

Twenty-one junior-level psychology students participated in the survey. The survey was administered online by Qualtrics and was completely voluntary. Participants answered 4 questions drawn from Lawson’s (1999; 2015) Psychological Critical Thinking Exam, and ten questions regarding their understanding of applied statistical skills. The rubric for Lawson’s (2015) PCTE was reviewed and modified to appropriately score the new statistical questions that appeared on the exam. The results of all participants were then scored. A sample of an applied statistics item is presented below.

Results

The rubric we created scored participants with (a) either a 0, 1, or 2 for each question or (b) a 0-1 scale. All of the participants are junior-level psychology majors, with an average GPA = 3.29 (SD = 0.45) and average number of credits earned = 79.02 (SD = 8.86). For the four critical thinking items, there were a total of 7 possible rubric points available; participants earned $M = 3.52$ ($SD = 1.36$) rubric points, ranging from 1 to 6 rubric points earned. For the nine statistical reasoning items, there was a total of 13 possible rubric
points available; participants earned $M = 5.52$ ($SD = 2.80$) rubric points, ranging from 0 to 12. For the item included above, no participants answered this item correctly. In this sample, there were 11 students who had completed the Research Methods course and 5 students were transfer students. For the critical thinking rubric score total, there was not a significant difference between participants who had completed Research Methods ($M = 4.09$, $SD = 0.83$) and those who had not completed Research Methods ($M = 3.20$, $SD = 1.10$), $t(14) = 1.81$, $p = .092$. For the statistical reasoning rubric score total, there was not a significant difference between participants who had completed Research Methods ($M = 6.64$, $SD = 2.33$) and those who had not completed Research Methods ($M = 5.80$, $SD = 1.92$), $t(14) = 0.70$, $p = .497$.

Discussion
The new rubric created from this study was easy to use and provided a clear explanation for the scoring of each question. In the future we hope to test this rubric further for areas such as inter-rater reliability. With a sample size of only 21 participants, it is difficult to determine the validity of this rubric. In addition to having a small sample size, not all participants completed all items on the survey, thus resulting in their overall scores perhaps not reflecting their true skills in critical thinking and applied statistics. This trend, if it were to hold true with expanded data collection and replication, would not be promising. Psychology educators should expect that a group of junior-level psychology majors should be able to complete these critical thinking and statistical reasoning tasks more successfully. Furthermore, it would be beneficial to observe an advantage for those completing the Research Methods course; although the trend here is encouraging, perhaps a low $n$ may account for non-significant differences. We will continue data collection on this important topic during the Spring 2016 semester. Overall, we are still in the process of establishing the validity of the scores yielded by our rubrics, but we believe that this is a good starting point and further research may help strengthen it.

References
Background

Here, I present an assignment, “Peer Review the Internet!” that I designed to use in a majors course, titled PSY 2010: Psychology as a Science and Profession, where students learn APA format, literature review and search methods, and scientific methods and critical thinking in psychology. The assignment could easily be modified for an introductory psychology course.

This assignment was inspired by Rajiv Jhangiani’s presentation at the 2015 Stanford Psychology One conference on the APS Wikipedia Initiative (Jhangiani, 2015). The APS Wikipedia Initiative assigns students to edit lacking and problematic pages on Wikipedia that relate to psychology (Wikipedia Initiative, n.d.). The initiative aims to teach students critical thinking as it pertains to internet media while improving the content in the media. After deciding that the technical aspects of the editing platform were too cumbersome for my purposes, I searched for an alternative and came across an article (Dattaro, 2015) describing how climate scientists are publicly annotating and evaluating media articles discussing climate change using a web annotation program called Hypothes.is (Hypothes.is, n.d.). You can see the Climate Feedback Project at Climatefeedback.org (Climate Feedback, n.d.). Users of Hypothes.is can see what other users have annotated publicly on websites, as a second layer to the web address. The goal of Hypothes.is is to provide a scholarly venue for public and private group (i.e., classes) discourse about the material being consumed on the web page.

Much like climate change, the field of psychology has a plethora of media online varying greatly in quality. I was thus inspired to use Hypothes.is to craft a new assignment for my students. I chose Hypothes.is over other web annotation software available (and the Wikipedia project) because of its usability, and helpful resources on the webpage for both students and educators.

Assignment

Students selected a short “clickbait” article (meaning a bold and often misleading online headline intended to get the reader to click on it) from a list titled “69 Awesome Brain Hacks that give you Mind-Blowing Powers” from Cracked.com (Cracked.com, n.d.). Students chose any article from the list that was a minimum of a few sentences long and alluded to at least one scientific study.

After selecting their article, students found the studies mentioned in the article. While this was sometimes easy to accomplish as some of the articles linked to abstracts or mentioned authors and titles, more often articles linked to other secondary popular media sources (like Cosmopolitan or another Cracked article), or had no link or identified source. Students were required to locate, acquire, and read full texts of the
original peer reviewed research or, if unavailable, find adjacent and similar articles to draw the best possible conclusions about the validity of the article’s claim. In a post-submission feedback assignment, students’ opinions on this part of the assignment varied. Some students found it frustrating when studies were difficult to find and others described the experience as finding “rabbit holes” to fall down, each with interesting information to discover. Either way, this part of the assignment was valuable in teaching literature search skills.

After reading the original research described in the article, students then wrote a short annotation to attach to the article using Hypothes.is. Annotations were to be written academically but accessible to the intended audience of Cracked.com readers, and include APA formatted references of the original research (with hyperlinks when possible). The final annotations were typically one to two short paragraphs that explained the validity of the popular article as it relates to the original research.

As might be expected, most of the short Cracked articles made claims that went well beyond the findings of the original research. Claiming causation from correlational studies, confusing individual diagnostic ability from group averaging, and oversimplification were the most commonly noticed issues. Outright falsehoods and errors (such as flipping a negative correlation into a positive one) occurred but were not very common.

Learning Outcomes
Through this assignment, students were able to:

1. Practice literature search skills. Rather than a traditional literature review (students did one of those also in the course), the assignment mimics ways students might research claims outside the classroom under messy, real-world circumstances. Students had to actively problem-solve to find original scientific studies.

2. Critically analyze psychological and scientific claims made online, particularly when the articles are simple, short and bold for the sake of attracting online views. Students were completing this project in tandem with reading Keith Stanovich’s How to Think Straight about Psychology (Stanovich, 2013), which is an excellent introduction to critical thinking and the scientific method as it pertains to psychology.

3. Learn to write for their audience. By having to write a short critique of the article that was intended for public readers, they learned how their rhetoric would need to be different than the traditional literature review for a professor to read. The short writing component also kept their focus on the importance of properly presenting the research while balancing brevity in writing.

Assessment and Challenges
The assignment was worth approximately 10% of students’ overall grade in the course and was completed over one month. Students were graded on meeting deadlines for scaffolded subparts of the assignment (signing up for Hypothes.is, completing research, posting annotations, etc.) and meeting the criteria for the final annotations (written well, including APA references). If students were motivated and put effort into researching their claim, then they did well.

Although the program is fairly straightforward to use, there are technology barriers for some students. Although most students have access to computer labs on campus, those
without access to computers at home may be at a disadvantage. Additionally, students may lack the technological skills required to install and use the program on a computer. While this program was chosen for its relative simplicity, I would recommend an instructor build in a component early in the assignment to ensure students can use the program successfully and catch technology issues before they become a problem for students.

Conclusion

_Hypothes.is_ is an excellent program for annotating online content and I would recommend using it in any course where literature search skills, research methods, or deep reading occurs. Although there are potential drawbacks, namely that technological skills and access pose barriers for some, using _Hypothes.is_ was an engaging and enjoyable assignment for students.
References


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A pre-test/post-test evaluation of scientific thinking modules for Introductory Psychology in two distinct college environments

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Abstract

In previous research, students in Introductory Psychology courses that included a scientific thinking module scored higher on MCAT-style scientific thinking questions relative to students in comparison courses (Stevens & Witkow, 2014, ToP; Stevens et al., 2016, NITOP). The current study addresses limitations in these earlier studies by using a pre-test/post-test design to examine differences between students in classes taught as usual and those in classes in which instructors implemented a series of scientific thinking modules, across two college settings. At the liberal arts college, results indicated that students in a course including the modules increased in their scientific thinking abilities significantly more than students in sections taught “as usual.” Significant differences were not found at the larger research university. These data provide additional support that scientific thinking skills can be improved through targeted in-class activities in small college classes, but additional modifications are necessary for implementation in large classes.

References
A pre-test/post-test evaluation of scientific thinking modules for Introductory Psychology in two distinct college environments

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Introduction

- Scientific literacy skills are increasingly important for students of psychology as well as non-psychology majors.
- Introductory psychology courses provide a good opportunity for aligning foundational skills with current content mastery (APA, 2007-2011).
- In earlier work, we have shown that inclusion of targeted scientific thinking modules in introductory psychology courses is associated with higher student scores on questions testing scientific process skills (Stevens & Witkow, 2014, RAP; Stevens, Witkow, & Yanai-Weisz 2016. NIJDF).
- In the current study, we address two limitations of our earlier work:
  - Both earlier studies used a post-test only design. Here we use a pre-test/post-test design to limit the role of individual differences between students.
  - Both earlier studies were conducted at a single liberal arts college. Here we test the modules in both a liberal arts college and a larger research university.

Description of Activities

- Eight metrics were used to design and engage students in scientific reasoning using feedback from previous research studies in psychology. Activities required 30-45 minutes of class time and replaced traditional lecture content. Modules were originally developed for small classes, with modifications for large classes in which whole-group discussions are less practical. Each module was developed to stand on its own, so that instructors could use any or all of them at any time during the term.
  - All modules utilized the following identified best practices in the literature (e.g., APA, 2007-2011; RAP, 2011).
    - Presenting scientific content in a real-world, relevant context.
    - Engaging students as active learners through problem-solving activities and discussion.
    - Incorporating qualitative two-way feedback in the classroom, with an emphasis on providing feedback on what the students did well.
    - Linking evidence presented to decision-making, including generation and consideration of alternative explanations.
  - All modules included a student handout and/or PowerPoint slides showing key data from the study as well as an instructor lesson plan for interactive discussion using the data presented.
  - Modifications for large classes included:
    - Using modified discussion questions and worksheets for students to use with a partner or their peers.
    - Adding multiple-choice questions to test the points that are highlighted in whole class discussions in smaller sections.
    - Adding short videos to be shown in class.
    - Adding teaching tips for graduate teaching assistants.

Assessment Measure

- A final multiple-choice assessment included 3 research scenarios and/or figures and questions requiring research help to be answered, with a series of questions following each scenario.
- Two questions required students to draw from a base of content knowledge.
- Questions were grouped into four subsets:
  - Defining variables (e.g., identifying the independent and dependent variables)
  - Interpreting data presented in figures and tables
  - Answering questions about scientific research design and results
  - Reasoning about research design and appropriate conclusions

Results

- What Worked—Pre-test/Post-test Assessment of Modules in Small Classes

  - Three instructors who were uninvolved in the development of the modules administered the pre-test on the first day of class and the post-test at the end of the final exam period.
  - One instructor (N = 23 students) implemented all of the modules, those focused on (1) treatments for depression, (2) social influence, (3) an abnormally driven subject, and (4) evaluating limitations of eyewitness testimony.
  - Two instructors (N = 33 students) taught their class as usual.
  - Change scores (post-test minus pre-test) were compared between students in the experimental and control sections.
  - As shown in Fig. 1, students in the experimental class improved overall, compared to those in the control classes. Significant differences were seen in 3 of the 4 science, and effect sizes were large for all comparisons (see Hill et al., 2008. Child Dev. Res. Pamp.)

- What Still Needs Work—Modification of Modules to Large Class Settings

  - Two instructors who were uninvolved in the development of the modules administered the pre-test on the first day of class and the post-test at the end of the final exam period.
  - One instructor (N = 196 students) implemented 3 of the modules, those focused on (1) treatments for depression, (2) study strategies, and (3) personality and social interaction.
  - One instructor (N = 78 students) taught class as usual.
  - Change scores from pre-test to post-test were compared between students in the experimental and control sections.
  - As shown in Fig. 2, significant differences were still found in change from pre-test to post-test. However, for 3 of the 4 modules, the overall assessment, differences were in the predicted direction.

Conclusion

- Our earlier work showed that scientific thinking skills can be assessed in introductory psychology through the inclusion of targeted activities. These findings were replicated here in a small liberal arts setting using a pre-test/post-test design and a larger set of modules. We also evaluated the modules for demonstrating effects across a number of different subscales.
- In contrast, significant differences were not found when modified modules were tested in large classes. However, it is possible that effect sizes are smaller in larger classes and were under-powered to find significant differences.
- Future work focused on the modifications for larger classes will include taking class attendance into account, and adding questions focused on key concepts.
- Future work will also test these modules in other settings, including community colleges.

Acknowledgements

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Questions or Comments? Please email mewith@willamette.edu.
Section VII
Developmental Psychology

1. Best Toys for Babies: An Authentic Application and Assessment Activity

2. Using Experimenting with Babies for Active Learning in Developmental Psychology Course

3. Teaching Schema Theory with Hula Hoops
Best Toys for Babies: An Authentic Application and Assessment Activity

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Most faculty have a repertoire of formative techniques to evaluate classroom learning such as posing questions, exit tickets or the one minute paper, and critical-thinking individual or group exercises. These informal evaluations allow instructors to review material if the responses reflect confusion or misunderstandings. Formative assessments are designed to inform teaching and enhance learning rather than to assign grades. Classroom (formative) assessment techniques are specific procedures or activities designed to provide immediate and useful feedback on how much and how well students have learned about a specific topic. The most lasting and important knowledge and skills that students learn in college are those they apply in real life situations (Angelo & Cross, 1993), and authentic assessment of student knowledge and skills typically involves presenting a real-world problem to solve. Students are learning in the process of developing a solution, instructors are facilitating the process, and the students’ solutions to the problem become an assessment of how well the students can meaningfully apply the concepts. Authentic assessments that are also active learning strategies engage students in interactive activities that build teamwork, develop higher-order thinking ability, and provide students with immediate feedback from the instructor (Southerland & Bonwell, 1996).

My child psychology course typically consists of approximately 30 students who are primarily first semester freshmen. Any student with an interest in child psychology (or who needs three more semester hours) can take the class. This authentic assessment activity was designed to engage students in a hands-on critical-thinking challenge that applies as well as assesses their knowledge of infant physical and perceptual development. For prior preparation, students complete assignments and discuss infant/toddler physical development and research findings from classic and recent studies of infant perceptual preferences (Fantz & Yeh, 1979; Jadva, Hines & Golombok, 2010). To introduce the topic in class, I display the materials used to conduct these studies in the same pairs as the original designs and ask the students to predict what they think 3-month-old babies would look at for a longer time. This interactive activity is followed by content reporting the actual research findings. To assess learning, I ask students to analyze a toy I bring to class according to the research findings (Part I). The students then group themselves into teams of 2-3 students and select one of approximately 20 toys (borrowed from a child care center) and each team indicates whether or not the toy provides developmentally appropriate gross and fine motor development, sensory stimulation, perceptual development, and problem-solving opportunities (Part II). After sharing their evaluation of
the toy, teams are asked to change or improve the toy by adding a gross or fine motor activity, greater sensory stimulation, enhanced perceptual development or a problem-solving task, and present their modification to the entire class (Part III). A more detailed description of this activity is provided below.

Part I: What decisions did psychologists make?

I hold up an infant toy that demonstrates most of the perceptual preferences explained and illustrated in class. As a group, the students are asked to analyze the toy by responding to the following questions:

- What research findings for infants’ visual (pattern) preferences were used to create each of these designs?
- According to what we now know about infants’ visual preferences, how was this infant toy improved to increase an infant’s perceptual development?

Part II: How developmentally appropriate and stimulating is your selected toy?

What abilities does this toy develop? Look for:

- What gross motor abilities (rolling, crawling, kicking, etc.) are involved?
- What fine motor activities (touching, feeling, holding, reaching, etc.) are involved?
- What senses are stimulated? – sound; vision; smell; touch; taste.
- Does the toy provide age-appropriate perceptual development (moderate complexity, contrast sensitivity)?
- Is there problem-solving - figuring out how to do something or make something happen?

Part III: How would you improve the toy so that the toy would develop a child’s abilities more effectively?

Change/improve the toy by enhancing at least one of the following:

- Gross motor ability
- Fine motor ability
- Sensory stimulation – sound; vision; smell; touch; taste.
- Perceptual development – complexity, shapes, sizes, contrasts, faces, etc.
- Problem-solving skills (cognitive) - figuring out how to do something or make something happen.
- Social development – sharing; cooperative play

This activity generates lively team collaboration, excitement in the classroom, and feedback on the students’ ability to apply physical and perceptual concepts to an authentic personal and/or professional problem. Variations include students bringing a toy to class, locating a toy online for analysis, or designing an original toy.
Using Experimenting with Babies for Active Learning in Developmental Psychology Course

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All child development instructors seek compelling ways to teach students the principles and methods of developmental psychology (Katz, Vacha-Haase, Sugar, & Livosky, 2000). The book Experimenting with Babies (Gallagher, 2013), offers a novel resource for creating such a compelling experience. Although intended for parents of infants from 0 to 24 months of age, the short (200 page) text includes 50 chapters, each of which briefly describes an “experiment” that parents (or undergraduates) could perform with an infant. The “experiments,” many of which are simplified versions of experiments published in refereed journals within the last decade, provide an opportunity for active learning in college-level child psychology courses. Recreating a real experiment goes far beyond the traditional classroom demonstrations of reflexes and conservation tasks because it allows for the direct experience of interacting with infants in order to understand their minds, rather than playing with or being entertained by them by them. Students actually experience some of the basic methods used in infant research, such as looking time and reaching. They acquire a personal experience of the challenges of doing research with infants, such as getting and keeping their attention.

The book includes several very useful features for college-level class projects: 1) two appendices that organize the experiments by complexity and by research area (social, cognitive, motor, etc.); 2) two references for each experiment, one of which is the original study upon which the simplified experiment is based; and 3) the appropriate infant age range for conducting the experiment. The current poster describes a class assignment in which students chose one of the studies to conduct with a single infant.

Method

Class Demographics

The members of the class were 33 students, including 4 males, 28 students of junior or senior class standing, and 29 psychology majors. All students reside in communities in northwest Indiana, as the campus does not have residence halls.

Assignment Details

Students were responsible for obtaining permission from a parent, usually a friend or relative, of a child under the age of 24 months who could serve as the “subject” for their experiment. The assignment required students to read the corresponding original published study, conduct and video record the experiment (usually on their smartphones), and make a ten-minute PPT presentations to the class. The talk followed the format of a conference talk that included a summary of the original study, procedures, the video
recording of their “results,” and a discussion that compared their results to those of the original study.

**Results**

Students were anonymously surveyed to learn how many attempts they needed to complete the video recording, which parts of the project they found challenging, what they found most valuable, what advice they would give to future students who chose their experiments, and whether or not they would suggest this project for future classes. Twenty-eight students returned surveys. Figure 1 shows responses to questions about how difficult components of the assignment were for students.

![Bar chart showing difficulty of project components](chart)

The modal number of attempts needed to conduct and record the experiment was 5, and students rated this component of the assignment as the most challenging component. Reflections on the most valuable aspect of the experiment include such comments as “I found it interesting how the baby in my experiment looked to mom for reassurance;” “It gave me hands-on experience and what it may be like to run experiments;” “I would’ve never learned about babies in such a hands-on way if it weren’t for this experiment.” Responses to the overall project were uniformly positive: Ninety-six percent of the students recommended this project for future classes, and students offered many valuable suggestions for improving this assignment.

**Discussion**

Developmental Psychology students learned how research is conducted with infants, enjoyed the project and felt they had learned from it, and offered valuable suggestions to future students. The assignment led to some remarkable videos and high levels of student effort. Locating an infant subject was very feasible on a commuter campus where students typically live in the community and have extensive networks of family and friends. It may be a bigger challenge at a residential college.
Based on student feedback and my observations, improvements would include: 1) scheduling a maximum of two presentations per class period; 2) shortening the time in the presentation that students devote to the discussion of the original study details; 3) resolving challenges of lost lecture time; and 4) devoting some time to helping students understand the original publication, design the tweak or variation, and contrast their results with the original study. Future iterations of this assignment will include the measurement of learning goals. I would welcome collaborators.
Teaching Schema Theory with Hula Hoops

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Class Objective: This activity teaches students to conceptually grasp the abstract Piagetian terms assimilation, accommodation, equilibrium and disequilibrium.

Time: This hands-on class activity lasts about 10 minutes.

Materials needed: Instructors need 2-5 hula hoops and a stack of labelled index cards per group of 8-10 students. Note: They sell hula hoops at the dollar store!

When to do this activity: I do this activity after students have already learned the terms assimilation, accommodation, equilibrium and disequilibrium. This activity should not introduce the topic but instead help to solidify understanding.

How to do the activity: Each hula hoop represents a schema. Place the hula hoops on the ground and label the inside of them with the names of the schemas that the hula hoops represents (see Figure 1). If you do this activity outside, you can label the inside of the hula hoops with sidewalk chalk. Tell the students that they will each get a piece of new information on an index cards. Their job is to either assimilate the new information by placing it into the existing schema (i.e., hula hoop) or they need to accommodate the information by making a new schema (i.e., the blank hula hoop).

For example, take an index card that says “cat” then you demonstrate assimilation by jumping into the pet schema. If a card says “unicorn” then you run around the hula hoops yelling or other versions of freaking out which demonstrates experiencing disequilibrium. The class then “creates” a new schema by giving a title to the blank hula hoop so that you can assimilate the information. For example, the class might say, “mythical creatures” at which point you can jump into the black schema which is now the mythical creatures’ schema and you now feel equilibrium.

Each student then takes turns getting a card and either assimilating the information (e.g. rose, swimming, dogs, hamsters, tulips, or hot) or accommodating the information (e.g. milkshake, cars, chairs). I usually have students get a chance to draw two cards each.
Figure 1. Sample hula hoop placement.
Section VIII
Ethics

1. Psychology Education: A Path to Human Rights and Social Responsibility

2. Ethical Reasoning as an Instructional Objective
Psychology Education: A Path to Human Rights and Social Responsibility

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Psychological science has long been driven by a commitment to the wellbeing of individuals, groups, and communities. Many individuals choose to study psychology not only because of their fascination with what makes people tick but also their caring for friends, family, and concern for human welfare. In recent years, psychology increasingly has endeavored to codify elements of fundamental human rights, social responsibility, and social justice into the curriculum, learning goals, and policies.

In 2013, the Guidelines for the Undergraduate Major: Version 2.0 was adopted by the American Psychological Association (APA). Goal 3 focused on the development of students' ethical thinking and social responsibility in a diverse and changing world. For example, goal 3.3d asserted that students will be able to “describe psychology-related issues of global concern (e.g., poverty, health, migration, human rights, rights of children, international conflict, sustainability)” (p. 27). Most importantly, in 2010, the APA Ethics Code was changed to include the inviolate nature of human rights. Other psychological associations hold similar positions (e.g., Australian Psychological Society Code of Ethics, 2007; British Psychological Society Code of Ethics and Conduct, 2009). As such, it is imperative that we, as teachers of psychology, infuse human rights and social responsibility into our courses.

What are Human Rights?

In 1948, the Universal Declaration of Human Rights (UDHR) was ratified by the nations of the world. In the shadow of World War II and the atrocities of the Holocaust, the United Nations (UN) recognized the need for international human rights policy and law. Comprised of 30 Articles, the UDHR focuses on economic, social, cultural, civil, and political rights—inherent and fundamental rights, freedoms, and protections entitled to all humankind regardless of gender, ethnicity, national origin, race, religion, or other classification.

Since 1948, additional UN international human rights treaties have been ratified (UN, 2015a). The International Covenant on Civil and Political Rights (1966), International Covenant on Economic, Social and Cultural Rights (1966) and UDHR together make up the International Bill of Human Rights. An easily accessible introduction to this International Bill can be found at https://www.youtube.com/watch?v=O8kP3pr6XPU. The UN has drafted other international law documents such as the Convention on the Rights of the Child (CRC:1989); Convention on the Elimination of All Forms of Discrimination against Women (CEDAW: 1979); and Convention on the Rights of Persons with Disabilities (2006), as well as protocols concerning additional populations (e.g., older persons; lesbian, gay, bisexual, and transgendered (LGBT) individuals; indigenous communities). The Office of
the UN High Commissioner for Human Rights (UN, 2015b) has compiled extensive resources that can be used to learn more about various human rights treaties as well as issues.

Within psychology, the International Union of Psychological Science adopted the Universal Declaration of Ethical Principles for Psychologists in 2008. This Declaration parallels elements of the UDHR with an eye towards psychological science and practice. This document provides a nice framework for the ideas contained in Goal 3 of the 2013 APA Guidelines for the Undergraduate Major.

Methods of Integration

Although special lectures and courses can be developed to teach human rights to psychology students, it is important that this material be integrated throughout the curriculum. An introductory psychology course is an excellent starting point for such integration. Although teachers worry about adding material to an already packed term, generally human rights topics can be interwoven into existing lectures. Such integration can not only pique student’s interest but also provide a real world context for psychological science. For example, when teaching basic operant and classical conditioning, teachers can introduce students to “hero rats”—rats trained to sniff out landmines and detect the presence of tuberculosis (Frantz, 2016). Such integration highlights the value of psychology, infuses human rights and social responsibility into the conversation, and makes psychology topics memorable. Additional suggestions include:

Research ethics
Teachers can discuss the origins of informed consent in the Nuremberg Code (1948) following the Holocaust and relate it to U.S. human rights violations such as the Tuskegee studies (Jones, 1993), Cold War testing of chemicals on U.S. cities (see e.g., CBS News, 2012), or studies conducted by the U.S. from 1945-1947, which involved intentionally infecting individuals in Guatemala with sexually transmitted diseases (Presidential Commission for the Study of Bioethical Issues, 2011).

Careers
Special issues of the APA Monitor provide excellent career examples connecting psychology to human rights. For example, the December 2007 edition (see http://www.apa.org/monitor/dec07/) includes vignettes about psychology’s “Humanitarian Heroes,” such as Michael Wessells who works with child soldiers or Kathryn Norsworthy’s grassroots efforts around the globe addressing sexual violence. The July/August 2012 Monitor highlights psychology’s peacebuilders (see http://www.apa.org/monitor/2012/07-08/peace-builders.aspx), such as Ervin Staub, a clinical psychologist and Holocaust survivor’s work on healing and reconciliation in the wake of the Rwandan genocide. Students can also be introduced to opportunities within the Peace Corps or Americorps.

Social Psychology
A host of studies can be framed from a human rights perspectives such as Asch’s conformity studies, Milgram’s obedience studies, and Zimbardo’s prison study. Topics such as prejudice, discrimination, privilege, deindividuation, group polarization, attitude formation, bystander behavior, moral disengagement, realistic conflict theory, etc. can all be springboards to a discussion of specific social justice and human rights issues (e.g., torture, hate groups, terrorism).

Abnormal/Treatment
The rights of the mentally ill and human rights make for rich fodder for discussion in the classroom. Students can examine and discuss the *Mental Health Declaration of Human Rights* (Citizens Commission on Human Rights, n.d.). Students can also discuss the issue of forced medication/treatment as well as the impact of extreme trauma (e.g., genocide, torture, trafficking) on survivors.

The various Conventions, whether on the rights of older adults, children, women, LGBT individuals, disabled individuals, or indigenous populations, can easily be integrated into class lecture/discussion. Students may be interested to know that only the U.S. and Somalia have not signed onto the Convention on the Rights of the Child (UNICEF, 2016) or that the U.S. is also one of a handful of countries that has not signed and/or ratified the Convention to End all Forms of Discrimination Against Women (Amnesty International, 2016).

Activities and Assignments

In addition to lecture/discussion topics, activities can be introduced into the class to highlight human rights and social responsibility. For example, role-playing exercises can enable instructors to teach about prejudice as well as enable participants to address prejudiced comments (Lawson, McDounough, & Bodle, 2010; Plous, 2000). Kite and colleagues (2013) as well as Plous (2016) provide additional activities related to teaching prejudice and discrimination. The SNAP challenge can be used when discussing developmental psychology to introduce students to the reality of food insecurity and its potential impact on learning (see [http://frac.org/pdf/frac_101_snap_challenge_toolkit.pdf](http://frac.org/pdf/frac_101_snap_challenge_toolkit.pdf)). Hulsizer and Woolf (2012) is another good resource for teaching ideas and activities related to human rights. Finally, service learning projects are useful as these activities can move students from the possibility of potential despair, psychophysical numbing, and bystander inaction to involvement and the recognition that they possess the tools to make a difference in the world.

Other Resources

Various APA offices provide material that can be used to integrate human rights into one’s teaching. For example, the Public Interest Directorate ([http://www.apa.org/pi/index.aspx](http://www.apa.org/pi/index.aspx)) has extensive information on a range of topics from aging to women’s issues. The *Council Policy Manual* ([http://www.apa.org/about/policy/index.aspx](http://www.apa.org/about/policy/index.aspx)) provides access to a number of Resolutions with references on topics such as homelessness, marriage equality, racial profiling, and torture. APA has also recently developed a Human Rights page ([http://www.apa.org/topics/human-rights/index.aspx](http://www.apa.org/topics/human-rights/index.aspx)) that includes links and teaching resources.

In 1984, Psychologist Carolyn Payton, the first woman and the first African-American Director of the United States Peace Corps, in an address to the APA asked, “Who must do the hard things?” It was her belief that psychology should play a fundamental role in understanding and confronting social inequalities, social justice, and human rights. Her call for action is just as vital to today—we must do the hard things. As psychology teachers, it is imperative that we provide our students the necessary tools so that they can become a voice for human rights and social justice in the 21st century—a voice grounded in the science of human behavior.
Ethical Reasoning as an Instructional Objective

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This study of ethical reasoning, as an instructional objective, is aligned with a recent initiative by James Madison University (JMU) and Goal 3, Ethical and Social Responsibility in a Diverse World, of the APA Guidelines for the Undergraduate Psychology Major 2.0. Outcome 3.2, Build and enhance interpersonal relationships, includes the foundational indicator, 3.2d, for students to maintain high standards for academic integrity, including honor code requirements, and the baccalaureate indicator, 3.2D, for students to describe, explain, and uphold academic integrity within the context of psychology as a discipline and an academic profession.

Beginning with the 2013-2014 academic year, JMU implemented the Madison Collaborative: Ethical Reasoning in Action, http://www.jmu.edu/mc, as an educational program designed to facilitate the development and implementation of students’ ethical reasoning. The Mission Statement of the Madison Collaborative reads, the Madison Collaborative prepares enlightened citizens who apply ethical reasoning in their personal, professional, and civic lives. Individual and collective compliance with and support of the JMU Honor Code, students shall observe complete honesty in all academic matter, is essential for the success of this innovative program. The Madison Collaborative is operationalized within a flexible and open framework of eight key questions that are associated with eight core values: liberty, rights, responsibilities, character, authority, empathy, fairness, and outcomes.

Data supporting the rationale for a program to facilitate the development and implementation of ethical reasoning are extracted from JMU’s Annual Continuing Student Survey of approximately 20 percent of the undergraduate population. In the most recent survey, 91 percent of respondents agreed or strongly agreed that the Honor Code and honor system had been clearly explained. Additionally, 93 percent of respondents agreed or strongly agreed that they understood what actions are considered to be academic misconduct at JMU. However, when asked the number of times they had knowingly engaged in academic misconduct, 38 percent of respondents acknowledged that they had done so between 1 and 10 times; three percent had done so between 11 and 20 times. And, when asked their probable reaction to observing a student cheating, 45 percent responded that they would do nothing. Only 22 percent indicated that they would speak either to the student who cheated or to the instructor.

In order to establish a baseline for continuing study, we chose to assess the efficacy of a one-trial experiment for effecting incremental change toward an increase of applied ethical reasoning. We implemented the Solomon-Four-Group design with first-year students enrolled in four 80-member sections of an introductory psychology course. No significant differences among the four groups were found for the SAT total scores, $F (3,$
By paralleling the pretest-posttest control group design with experimental and control groups lacking the pretest, it would be possible to control for both internal and external validity. The independent variable was a message from the instructor in a scenario that featured plagiarism by an unidentified member of a group of five students who collaborated to write a paper. The instructor’s message conveyed knowledge of plagiarized content in the paper and the instructor’s decision to delay for 48 hours the assignment of a grade in order to allow time for the plagiarist to confess or to be identified. Participants in our study were informed that they were to think from the perspective of being a student in that course but not being one of the five members of the group that included the plagiarist. Therefore, their grades would not be affected by the plagiarism. The dependent variable was the participant’s selection of one of five responses after learning the identity of the student who committed the plagiarism. Participants who selected either of the first two responses, A or B, indicated that they would do nothing. Participants who selected the third response, C, indicated that any action on their part would depend on the identity of the student who committed the academic misconduct. Participants who selected either of the remaining two responses, D or E, indicated that they would act in concert with the Honor Code and the Honor System. Acting out the fourth response, D, would involve speaking directly to the student who committed the plagiarism. Acting out the fifth response, E, would involve reporting the identity of the student who committed the plagiarism.

Data analysis reveals no main effect between pretests and posttests. However, the analysis reveals significant interaction between the tests and the two groups comprising the pretest-posttest control group design, $F(1, 88) = 5.179, p < 0.05$). Posttest data reveal that the experimental group indicated significantly greater probability of acting ethically in accordance with the Honor System than did the control group. A comparison of response patterns by the experimental and control groups reveals that responses A or B, indicating no action, were selected by only 9.1% of the experimental group but by 23.1% of the control group. Response C, indicating contingent action, was selected similarly by both groups, 22.7% of the experimental group and 21.2% of the control group. Responses D and E, indicating deliberate ethical action, were selected by 68.2% of the experimental group but by only 55.8% of the control group. A comparison of our results with responses to observed academic misconduct as reported in the Annual Continuing Student Survey provides additional support for our interpretation of significant incremental change toward an increase of applied ethical reasoning that is in concert with the University’s Honor Code. Of the 3,230 who students participated in the Annual Continuing Student Survey, 45% reported that they would do nothing in response to observing academic misconduct; 33% reported that any action would depend on the identity of the student who committed the academic misconduct; and only 22% reported that they would act in concert with the University Honor Code.

As a baseline for further study, we are pleased that the results of our one-trial experiment support an interpretation of significant incremental change toward an increase of applied ethical reasoning. Future investigations will implement multiple interventions over extended periods of time.
Section IX
Gender

1. Collaborative Research: An Outgrowth of Active Learning

2. Computer Programming Instruction: Usability and Attitudes as a Function of Gender
Collaborative Research: An Outgrowth of Active Learning

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During an activity in Susan’s Gender Studies course, Cameron, one of her students, posed a question to his female peers: “Do you believe women will ever reach equality with men?” Their responses intrigued us and led to our implementing a study to explore the young adult perspective on attaining gender equality. Our completed research was published (Howell & Schatt, 2015) and became an assigned reading in Susan’s next Gender Studies course. Our presentation demonstrates faculty-student collaboration which arose organically from one class activity, culminated in a research project and publication, and ultimately provided a model of student initiative for other students on our campus.

Active Learning Assignment

Susan asked her students to write a question – anything they would like answered by the opposite sex – on a 3 x 5 notecard. Questions were read by Susan during class, with the men answering the women’s questions and the women answering those of the men. Cameron’s question was: “Do you believe women will ever reach equality with men?” The women answered unanimously: “No!”

For the next several months, Cameron and Susan discussed the following: Would students who had not had Gender Studies feel the same way? Would men have answered the question differently? Would students who were younger or older feel the same? Did they believe any areas of life were, or would become, equal?

Our Study

To explore these questions, we conducted a study among Campbellsville University students and alumni of former Gender Studies classes. Cameron and Susan worked together to recruit participants, create survey questions, code responses, enter data, run statistics, and write a report. Their research culminated in a publication in a professional journal, Priscilla Papers, which is published monthly by the organization, Christians for Biblical Equality.

Benefits of Faculty-Student Collaborative Research

Skills gained through faculty-student research collaboration (e.g., teamwork;
communication, analytical, and critical thinking skills) are cited as important learning outcome for students in higher education (Association of American Colleges & Universities [AAC&U]). In fact, undergraduate research has specifically been identified by the AAC&U (n.d.) as a high-impact educational practice.

On a practical level, Cameron and Susan each benefitted in numerous ways from our collaborative research project. Cameron first explored his question in the classroom, later with Susan, and finally to its completion through the scientific process. He acquired his first professional publication in *Priscilla Papers* and presented at the Southeastern Conference on the Teaching of Psychology.

Susan, likewise, benefitted. She learned more about the value of student engagement in the education process. She mentored a student researcher and gained material for use in future Gender Studies classes. She was published in a professional journal and presented at the Southeastern Conference on the Teaching of Psychology.

Benefits ensued as well for other students at Campbellsville University. Students in Susan’s subsequent Gender Studies class saw the contribution made by research in which many of them had participated. They witnessed a peer’s success and began asking about collaborating with faculty as well. In addition, they saw the value of conducting research in developing professional skills and building an application for graduate school.

**Conclusion**

Collaborative learning is well established as a way to enrich the educational experience for students (Laal & Ghodsi, 2012; Umbach & Wawrzynski, 2005). Our presentation specifically shows how collaborative research provided one student the opportunity to explore an interest leading to scholarly achievements while providing professional growth for the faculty member. Additionally, an environment of intellectual curiosity was created for other students of our institution.

For a brief summary of the results from Susan and Cameron’s research, see the Appendix.

**Appendix**

Definitions for equality centered on men and women being treated equally, enjoying the same opportunities, and being held to the same expectations. The fact that only women mentioned equal value and respect in their definitions might indicate that women are sensing an underlying attitude in society that is going unnoticed among men.

The terms “feminism” and “egalitarianism” were misunderstood among the first year participants in this sample. Upper-division students and those who had graduated had more accurate and positive feelings about these terms, many of whom had taken Gender Studies.

Overall this sample was evenly divided on whether they saw gender equality as a future reality. The fact that those expecting equality to happen within the next 5-10 years were first year students majoring in the natural sciences who had not taken Gender Studies suggests that very young adults who have yet to become educated on issues of gender hold great optimism regarding the ease with which it will happen. Even with hope that equality
would happen, participants in this subsample were not blind to several areas of inequality which still exist. They readily cited the workforce, government and military, sports, and religion as arenas still perpetuating gender inequality. Yet these participants cited progress that has already taken place as one reason for their hope that equality will eventually come to pass.

While many looked toward education and effort as solutions, a sizeable minority seemed to expect change to happen without anything in particular being done. Responses such as “society will just change over time” or “sexist people will have to change their ways” indicate that some of these students are expecting change to come about almost magically without realizing the struggle and sacrifices required for change to occur.

Among those not expecting equality to become a reality, obstacles cited were gendered expectations, a lack of education or awareness, the need to think differently, attitude, and the belief by some in male superiority. Social science majors more often identified the need to think differently as an obstacle, which is likely due to the emphasis in these disciplines on social interaction, the value of diversity, and the importance of critical thinking in correcting social injustice.


1This assignment could be modified for those students who do not identify in the usual binary. For instance, depending on their identification as male or female, students might be allowed to write questions to either group and/or answer questions from either group.
Computer Programming Instruction: Usability and Attitudes as a Function of Gender

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Free online visualization computer programming education is an evolving technology with promise to support students by providing easily accessible, self-paced instruction to improve technical skills, supplement classroom learning, and increase confidence in students’ ability to understand programming concepts. This study compared men and women’s attitudes towards programming and assessments of tutorial usability as a function of online computer programming tutorials (traditional “black box tools” vs. visualization “glass box tools”). Glass box tools allow users to visualize and understand the consequences of each unit of code as it is processed by the computer; black box tools do not. Students completed a survey measuring attitudes towards computer science before and after completing one of the tutorials and then completed a survey measuring usability of the method to which they were assigned. Contrary to predictions, the glass box method did not increase positive attitudes towards computer science. However, men did report higher levels of usability, regardless of method.

Research in programming education documents declining enrollment in computer science programs, high drop-out rates, and a gender gap in the field (men earn more degrees and occupy more industry jobs than women) (National Science Foundation, 2012). Furthermore, many students perceive programming as boring and difficult (Schulte & Knobelsdorff, 2007).

Attitudes toward programming are correlated with success in undergraduate coursework and preparing students for computer science jobs (Cantwell Wilson, 2002; Pendergast, 2006). Men typically hold more favorable attitudes toward programming than women (Baser, 2013). Improving attitudes toward programming, particularly among women, should promote success. One way to potentially impact attitudes is to transition away from traditional coding software used in programming education, known as black box tools, that does not allow users to see the sequence of steps a computer goes through in executing the code and therefore does not offer users a visual report of the outcome of each line of code.

Tools allowing users to visualize and understand the consequences of each unit of code as it is processed by the computer (glass box tools) are increasingly offered as
alternatives to traditional tools, and they support positive attitudes toward programming (Mayer, 1981; Nevalainen & Sajaniemi, 2008).

This study evaluated the efficacy of one glass box educational tool, Khan Academy’s online computer programming tutorials (Khan Academy, 2014), to enhance attitudes toward the JavaScript programming language, particularly among women, and to assess student perceptions of the tutorials’ usability. It was predicted that those who used the glass box tool would have more positive attitudes toward computer science and higher usability ratings than the traditional method. It was expected that men would have more favorable attitudes than women and that women would show greater increase in positive attitudes with the glass box tool.

One-hundred undergraduate psychology students (n = 55 female) completed the Computer Science Attitude Survey (CSAS; Williams, Wiebe, Yang, & Miller, 2003) which includes 47 items measuring confidence in ability and motivation to learn, perceptions of success and utility of the field. Participants were randomly assigned to spend 20 minutes completing the Khan Academy visualization tutorials or the text tutorials from the W3Schools website, a popular educational resource offering instruction in programming languages (W3Schools, 2014). All tutorials focused on introductory concepts in JavaScript. Participants completed the CSAS for a second time, followed by the System Usability Scale (SUS) which includes ten questions prompting ratings of the technology’s simplicity, ease of use, likeliness of future use, etc. (United States Department of Health & Human Services, 2014).

A two-way independent-groups MANOVA revealed a significant gender difference on a combination of the dependent variables (p = .009), but neither the effect of tutorial type nor the interaction between gender and tutorial type on the dependent variables was significant. A subsequent univariate ANOVA revealed a significant effect of gender on perceived usability (p = .004). Men reported significantly higher satisfaction with website usability (M = 62.08) than women (M = 50.05). Participants who completed the visualization tutorials experienced a smaller (nonsignificant) decline in attitudes toward programming pretest to posttest than those who completed the text tutorials (p = .055). The hypothesis that the use of glass box visualization tutorials would result in attitude improvement was not supported. Men reported higher perceived website usability than women, regardless of tutorial type. The slight (though non-significant) decline in attitudes after experience with both tutorials may be a result of the limited time in which students had to experience the tutorials, which may have been overwhelming to some. The sample in this study included introductory psychology students who may be fundamentally different in technical capabilities from those choosing to major in computer science. Moor and Deek (2006) found that students in introductory programming classes typically experience challenges in understanding and frustration with computing concepts. Educators should introduce new programming concepts slowly and carefully to avoid overwhelming or discouraging new learners.

Computer science is seen as a masculine field and is a male-dominated industry (Lagesen, 2008; Mahmod & Dahalin, 2012). Weinberger (2004) found that women college students described information technology as unenjoyable, difficult, and time-consuming. Designers of educational tools for computer programming need to be aware of potential gender differences in attitudes towards computer science and develop systems that are
equally appealing for both men and women. Furthermore, educators in general, need to work towards reducing negative stereotypes towards the computer science industry.

Visualization tools may help cultivate awareness of and interest in coding concepts and applications among students, whether or not they are formally studying computing concepts, as technology and code are increasingly integrated into all fields of work. By providing diagrammatic representations of the flow of program logic and opportunities to view pictorial outcomes of one’s manipulation of code units, visualization tools have the potential to make complex programming topics more comprehensible and rewarding. These resources should continue to be empirically investigated to determine ways they can be utilized to provide the most benefits to different groups of users and to optimize the user experience.
1. The Interplay Between Psychology and Society: Using *Psychology Today* as a Teaching Tool in the History of Psychology
The Interplay Between Psychology and Society: Using *Psychology Today* as a Teaching Tool in the History of Psychology

Jean E. Giebenhain, Erica Zimmerman, Kayla Null-Gracia, Lauren Taylor-Sharp, Johanna Younce, Elizabeth Dorow, Danielle Freetly, Ashley Bauman, Michaela Schleinz, Ellen Musser, and Eliza Samuelson
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Abstract:

In our capstone course, *The History of Psychology in Social Context*, we place a strong emphasis on investigating the history of our discipline through the lens of historical context, looking closely at the interplay between psychology and society. We also highlight ways our discipline has/has not promoted social justice concerns. There may be no better place to investigate that interplay between psychology and American society than in the pages of *Psychology Today*, which was first published in 1967. In this poster we outline two rigorous, unique, and engaging ways to use it as a teaching tool. The first is to utilize content (such as published interviews with noteworthy psychologists or excerpts from books, etc.). These assignments encourage critical thinking and supplement material from a more traditional textbook. The second is to use articles, interviews, etc., as data for a qualitative research project.

Suggested resources: *Psychology Today*
The Interplay Between Psychology and Society: Using Psychology Today as a Teaching Tool in the History of Psychology

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Background

• In our capstone course, The History of Psychology in Social Context, we place a strong emphasis on investigating the history of our discipline through the lens of historical context, looking closely at the interplay between psychology and society.

• We also highlight ways our discipline has and has not promoted social justice concerns.

• There may be no better place to investigate the interplay between psychology and American society than the pages of Psychology Today (first published in 1967).

• In this poster, we outline two rigorous, unique, and engaging ways to use Psychology Today as a useful teaching tool for the course

Activities:

1. Supplemental Readings
2. Qualitative Research Project

Activity 1: Supplemental Readings

Psychology Today has many interviews with noteworthy psychologists (e.g., Kenneth Clark, Evelyn Hooker, Skinner, Frankl, Rogers, etc.) and excerpts from books (e.g., Clark’s Dark Ghetto, Beyond Freedom & Dignity, etc.) that are very useful as supplements to material in history textbooks or as important material that the instructor may believe is lacking in the text. These interviews (i.e., Hooker) seem to be conducted considering what the public might want to ask, contributing to our understanding of the social context.

Activity 2: Qualitative Research Project

This project requires students to conduct a qualitative archival research project, investigating the coverage of issues related to race in Psychology Today during its first ten years of publication, the turbulent 1960s and 70s. Students worked through the issues of Psychology Today, identifying articles related to race. Using qualitative content analysis, students extracted quotes and identified themes that arose in the articles from 1967-1976.

Discussion

• We found that the content of Psychology Today had value in raising awareness of our discipline’s role in attempting to educate the general public about important social problems as well as possible solutions.

• Looking at material from the 60s and 70s, helped students clearly understand and appreciate the interplay between psychology and society and the importance of historical context in what we choose to study within our discipline.

• Using Psychology Today as a teaching tool had an impact on students’ broad understanding of the discipline and their own commitment to promoting social justice through their chosen field

Sample Articles & Student Reflection on Activities

Activity 1: Supplemental Readings

On Facts that Liberated the Gay Community: A conversation with Evelyn Hooker:

• I think it is interesting how the interviewer asked her how a “nice straight woman” like Hooker got “mixed up in” the topic of homosexuality. The wording he uses is somewhat offensive and I believe if it were worded like this in 2015, he would have gotten a lot of backlash. I am surprised the interviewee being the one passionate about the subject wasn’t offended for those she researches who are homosexual. As a person studying history however; this forces me to keep in mind the context of the time, so perhaps this description is not considered offensive at the time. I also thought it was interesting that homosexuality in men was considered earlier than female homosexuality.

• I found Chance’s bluntness and his questions really “interesting.” He wasn’t afraid to ask anything and didn’t try use more respectful words in his questions. Granted, he was interviewing Hooker to get answers that society is questioning so this was somewhat necessary but it was still shocking to read because no one would talk like that in today’s society.

• The thing that I found most interesting reading this article was the historical context compared to today. Page 56 states, “what we need is understanding and acceptance. If the number of openly gay men and women increases it will mean we are becoming more accepting, more understanding, more free, a better society.” I found this quote to be intriguing because while we have become more accepting and understanding we still have a long way to go. I think it is interesting how complex topics like this take many decades to make changes, if any at all.

• I read her comment about assuming heterosexuality is the normal thing and I did not even see that in the questions he was asking. What I mean is, I was thinking in that way, and she basically called me out, 40 years later.

On A Conversation with Kenneth Clark:

• What I found most interesting was that, while the interview was laden with many different statistics and historical facts, Clark’s pessimism still rose through. While Mary was trying to bring him back up to a more optimistic view, Clark went on about how he had failed as a social psychologist and that the “disease has metastasized.” He says, “even with the evidence being overwhelmingly negative, as long as the patient is alive you look for signs of potential health. You look for remedies and you do the necessary research to try to control the disease.”

• It must be so hard, when people refuse to see what you’re telling them. When you’ve been working so hard for so long, but so many problems still persist and you don’t seem to see much progress anymore. It takes a special person not to give up, and Clark was really special.

Activity 2: Qualitative Research Project on Race (1967-1976)

• By doing this project I’ve learned more than just how to conduct qualitative research. By reading articles in Psychology Today, written by some of the psychology “gurus” (i.e., Kenneth Clark, Stanley Milgram, Philip Zimbardo), I became curious to see what was prompting these authors to write on such topics regarding race and discrimination during those times. I realized that prior to this project, I knew little of what was going on during the civil rights era, especially in the field of psychology. The project was an eye-opening experience and I have realized how little has changed regarding the topic of race over the last 50 years.
Section XI
Interdisciplinary Studies

1. Distributive Justice: Engaging Students with a Story About Scientific Research, an Appealing Activity, and an Animated Discussion of Psychology’s Relevance to Social Justice

2. Teaching Introductory Psychology Case Studies with a Social Justice Application

3. One Course is Not Enough: Integrating Sociocultural Learning Across the Psychology Curriculum

4. Using Psychology to Explore the Intersection of Science and Art

5. Bridging the gaps: An Ecuadorian adventure that built interdisciplinary connections

6. Teaching at the Intersections of Psychology and Other Fields

7. Interdisciplinary Course on "The Good Life" (ψυχή): Combining Psychological Inquiry and Philosophical Ethics for Psychological Science and Philosophy Majors
Distributive Justice: Engaging Students with a Story About Scientific Research, an Appealing Activity, and an Animated Discussion of Psychology’s Relevance to Social Justice

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Presented at: Psychology ONE Conference
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At the dawn of the Industrial Revolution and the ensuing concentration of wealth, Catholic Jesuit priest Luigi Taparelli D’Azeglio (1857/2011) coined the term “social justice” to suggest a new moral relationship between nations and persons. How could societal benefits and burdens be distributed fairly? In a thought experiment, political philosopher John Rawls (1971) suggested that when designed behind a “veil of ignorance” everyone’s intrinsic worth is clear. Specifically, if society were designed with each member blind to the future elements of their identities (income, gender, ethnicity), everyone would be motivated to be fair. Practical questions about social justice continue to drive politics, as explicated in the slogan “We are the 99%” (Kain, 2011). But what does an on-going political, religious, and moral drama have to do with teaching psychology, especially for those who emphasize psychology’s scientific core? Here I describe how distributive justice has been studied empirically in psychology. I share an activity to augment curriculum on moral development.

Introductory Psychology classes typically cover Lawrence Kohlberg’s model of moral development, which proposes that moral reasoning advances through increasingly sophisticated stages (e.g., Colby et al., 1983). To parallel advances through Piaget’s stages, Kohlberg typically studied individuals from 10 years of age into early adulthood (Figure 1). When William Damon (1977a) began studying pre-operational children using Kohlberg’s vignettes, he faced his own dilemma and I share the vivid story with my students. Not one child under six years answered in a manner that could be scored, and not one under 10 reasoned beyond stage 1 (Damon, 1977a). How could he study the origins of children’s moral reasoning and its relationship to other aspects of development? Considering Kohlberg’s Heinz dilemma, he stepped back and contemplated:

Why, after all, should we expect an elementary school child to have rich or organized thoughts on the problems of a man deciding whether to steal a life-saving drug for his wife? At this point I began my research from a different direction, asking first of all what are the central features of a young child’s social life, and then designing problems and dilemmas accordingly (Damon, 1977b, pg. 13).

Damon turned Rawls’s thought experiment into a child-friendly measure. A school in need of supplies has a fair to sell children’s artwork. It is so successful that the art teacher gets to decide how to divide the extra money (or ice cream) among her students. To begin class discussion, I created a quantitative version for high school or college students to consider prior to class (Figure 2).
What is the fairest way to divide up the extra money among students? Though characters differ in their need and merit, most of my students divide the money equally (Figure 3). Damon examined children’s reasoning further by asking questions like, “How much should the child who worked the hardest get?” He scored a progression of six developmental stages where four-year-olds typically consider a single dimension, and eight-year-olds wrestle with multiple dimensions (Damon, 1994). Four- to five-year-old children’s reasoning in Damon’s task is strikingly correlated ($r = .71$) with their sharing behavior in naturalistic observations (McNamee & Peterson, 2001).

Is equality always the fairest basis for distributing benefits (or costs)? A real-world example I discuss in class is tax policy; what is the fairest way for Americans to pay taxes? Should we each pay equally (as we do with sales taxes)? Should those with greater need pay less (as we do with income taxes)? Should those who engage in conduct with less merit pay more (as we do with sin taxes)?

I also ask students to estimate the wealth of different quintiles of the US population along with their ideal distribution of wealth. During the discussion, I show students the estimated and idealized distributions of wealth by democratic and republican voters, along with the actual distribution of wealth (Figure 4). Though the figure shows expected differences between voter orientations (e.g., democrats prefer more equality than republicans), both democrats and republicans dramatically err in their estimates of American society, and both consider the ideal distribution of wealth far more equal than it is in reality. Discussions of distributive justice can go beyond money. For example, is affirmative action inherently unfair because of unequal treatment in the present, or is it a moral remedy for a need created through historical injustice?

Equality as fairness in considering moral dilemmas seems to be a cross-cultural universal, but how to incorporate merit varies. Children in Germany distributed rewards based on merit more often than children in an African hunter-gatherer culture (Schafer et al., 2015). When forced to choose between equality or merit, 37% of college students from the most prestigious Japanese universities distributed by merit, whereas only 17% from less prestigious universities did so (Kameda et al., 2010).

A quick addition of distributive justice to the introductory psychology curriculum provides many opportunities for students. Through vivid storytelling, we can enhance student learning (Grobman, 2015). Students understand the scientific method from the perspective of a researcher’s struggles, experience an engaging activity, and have animated discussions about the relevance of psychology to the social world. Rather than memorizing isolated concepts, students experience the best of the science of psychology.

References


**Figure 1.** Kohlberg’s Stages of Moral Development within Piaget’s Stages of Development

<table>
<thead>
<tr>
<th>Kohlberg's Stages of Moral Development</th>
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</thead>
<tbody>
<tr>
<td><strong>Pre-Conventional Moral Level</strong></td>
</tr>
<tr>
<td>Stage 0: The good is what I like and what I want it to be.</td>
</tr>
<tr>
<td>Stage 1: Punishment &amp; Obedience Orientation</td>
</tr>
<tr>
<td>Stage 2: Instrumental Hedonism &amp; Concrete Reciprocity</td>
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<tr>
<td><strong>Conventional Moral Level</strong></td>
</tr>
<tr>
<td>Stage 3: Orientation to Interpersonal Relations and Mutuality</td>
</tr>
<tr>
<td>Stage 4: Maintenance of Social Order, Fixedness of Authority</td>
</tr>
<tr>
<td><strong>Post-Conventional Moral Level</strong></td>
</tr>
<tr>
<td>Stage 5a: Social Contract, Utilitarian Law-Making Perspective</td>
</tr>
<tr>
<td>Stage 5b: Higher Law and Conscience Orientation</td>
</tr>
<tr>
<td>Stage 6: Universal Ethical Principal Orientation</td>
</tr>
</tbody>
</table>

Adapted from Colby et al., 1983
The art budget was cut in a school district and four enthusiastic high school seniors, along with their art teacher Dr. Smith, decide to raise money for the elementary school's art supplies. They make artwork to sell at a fair in town. It's a wonderful success! The elementary school children will have more art supplies than ever. The four students are off to four different colleges and Dr. Smith prepares to send them thank you notes. Dr. Smith realizes there's still $72 left in the budget and it could be used to provide thank you gifts too, like gift cards for things students could use for college.

**How much should Dr. Smith give to each student as a thank you gift?**

- **Bay** comes from the middle class side of town. Bay produced some artwork that raised some money.
- **Dale** comes from the very poor side of town and doesn't have much money. Dale produced some artwork that raised some money.
- **Hayden** comes from the middle class side of town. Hayden produced a lot of especially good artwork that raised a very large amount of money.
- **Riley** comes from the very poor side of town and doesn't have much money. Riley produced a lot of especially good artwork that raised a very large amount of money.
Figure 4. Estimated & Ideal Distribution of Wealth by Voter Orientation

Note. Adapted from Norton & Ariely, 201
Teaching Introductory Psychology Case Studies with a Social Justice Application

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Teaching Introductory Psychology Case Studies with a Social Justice Application
The American Psychological Association (2010) emphasizes the importance of ensuring fairness and justice for all people and this recommendation can be widely implemented through teaching introductory psychology. Meyers (2007) offered several suggestions for integrating social justice themes into the teaching of psychology and reminded us that interactive activities which promote student engagement can powerfully raise awareness of societal inequities. A teaching case study, generally defined as “a story, describing or based on actual events and circumstances told with a definite teaching purpose in mind (Lynn, 1999, p.42),” easily lends itself to active student engagement. Barnes, Christiansen, & Hansen (1994) recommended and explicat...
spirit -- leaving the Bronx to look for a job in Wisconsin “where he went to graduate school.” Because of the caring support and action of his community, Gene no longer viewed himself as “homeless” (“I’m on the other side now…”); community members were also transformed for making the effort to know and help Gene.

The format for teaching the case was a facilitated face-to-face classroom discussion led by the instructor. Parts of the protagonist’s (Gene’s) story were presented on a screen or read. Time was allowed for discussion and integration of teaching points. Some of the terms and concepts included Fundamental Attribution Error, stereotypes, in-and-out groups, Bystander Effect, implicit bias, “culture of poverty,” trauma, strengths-based clinical treatment, altruism, social facilitation, compassion, empathy, and Maslow’s Hierarchy of Needs.

Using Gene’s own words when telling his story helped students connect to Gene and understand his perspective. Allowing silence between questions increased opportunities for students to pause and reflect upon their own experiences. When students share their own stories, discussion can be raised to another level of understanding. One of the authors (KFL) taught this case in a small class of re-entry adult learners and found it successful in bringing out a thoughtful and heartfelt discussion. One learner commented, “I felt the terms were easier to understand than reading them in a textbook, and felt like the story came alive.”

This case was prepared for a class of up to 30 students using facilitated discussion. It could be adapted for larger classes with students working in groups to analyze the case and then present it to the class; online using discussion formats; or in a flipped-class design. In any class size, the assessment of learning outcomes can include students defining the connected psychological terms in their own words and reflecting on challenges presented in the case. Written Classroom Assessment Techniques (CATs) at different break points can identify the student’s thought processes as the learner reflects, synthesizes, and considers possible solutions. A reflection assignment may prove useful in helping the student empathetically connect with the protagonist of the story.

Case studies presented with a social justice framework not only reinforce content but provide students with opportunities to question and formulate their own values and world view. When told in a compelling storytelling format, case studies engage even the most reluctant students. Students learn how to work with others, use critical thinking skills, analyze data, ask questions, write, and present information – all helpful skills in the workplace and life. Further case studies are being developed by Laity and Beyer (2016) for other subtopics of introductory psychology with a social justice application in mind.

References


One Course is Not Enough: Integrating Sociocultural Learning Across the Psychology Curriculum

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Paulo Freire (1973) was one of the first social educators to challenge the “banking” (p. 20) model of education in which knowledge is deposited and later regurgitated without the need for critical thinking. In contrast, Freire encouraged educators to foster students’ critical consciousness which “hinges on people's ability to step back and critically examine the illogical and irrational beliefs prescribed by the dominant social forces and recognize their own contribution and passive consent in the dehumanization process of oppressed groups” (p. 14). These educational priorities focusing on global learning, equity and citizenship have been recently reflected by the AAC&U (2012) and APA Board of Educational Affairs Task Force on Psychology Major Competencies whose 2013 revision of the APA Guidelines for Undergraduate Education (Version 2.0) transferred sociocultural learning outcomes from an independent goal to an embedded feature across the curriculum.

Moving Beyond “One and Done”

The APA’s call for cultural infusion across the psychology curriculum is necessary to disabuse the notion that a one-semester course will provide sufficient cultural transformation and competence for majors. Semester-long courses such as cultural or cross-cultural psychology (Goldstein, 2005) and psychology of oppression or prejudice (Case, 2007; Kernahan & Davis, 2007, 2010; Pettijohn & Walzer, 2008; Probst, 2003) have been successful in reducing negative attitudes towards stigmatized groups, but may be relied on too heavily to shoulder the responsibility of cultural training. This presentation described pedagogical approaches to integrating sociocultural learning throughout the curriculum and reviewed methods of addressing students’ attitudes towards cultural difference based on social, cognitive, developmental, and narrative/intergroup principles.

Developmental Psychology

Courses on childhood, adolescent, and/or lifespan development enable personal exploration of racial identity development, particularly for White students. Ponterotto, Utsey, and Pedersen (2006) provide a review of White racial identity typologies that students can use to understand their role in sustaining racism and white privilege (Tatum, 1997). For example, Janet Helms’s (1990) model delineates how White individuals’ responses to the anxiety and guilt created by the awareness of white privilege—by either
justifying their privilege or accepting responsibility—will result in a developmental pathway of racism or anti-racism, respectively (Helms & Cook, 1998).

**Peace, Conflict, and Violence Studies**

Division 48 of the APA is dedicated to *The Society for the Study of Peace, Conflict, and Violence* which takes a global and multidisciplinary perspective to address cultural conflict and promote positive intergroup relations. Their website offers resources for course syllabi on Peace Psychology courses and curriculum resources (see [http://www.peacepsych.org/peace-education.htm](http://www.peacepsych.org/peace-education.htm)). Another useful resource is a 24-volume *Peace Psychology Book Series* edited by Dan Christie and published by Springer.

**Narrative Approaches**

The subfield of Social Psychology is the natural home for exploration of stereotypes and prejudice, but these concepts can be seamlessly embedded in other Psychology courses. Using stories as a medium for students to identify their own biases can reduce cognitive and emotional barriers such as defensiveness, guilt, and rationalization. Foundational readings such as *White Privilege: Unpacking the Invisible Knapsack* (McIntosh, 1989), *Why are All the Black Kids Sitting Together in the Cafeteria* (Tatum, 1997), and *Why I Burned My Book and Other Essays on Disability* (Longmore, 2003) combine theory with real-life stories of privilege and prejudice to facilitate student empathy and identification.

**The Voices Project**

Instructors can raise the impact of narrative approaches even further by incorporating an experiential component of uniting students with individuals from stigmatized social groups. *The Voices Project* (TVP; Nordstrom, 2015) models an adaptable framework that directly connects students with diverse populations both domestically and internationally. The purpose of the assignment is to enhance students’ critical thinking and cultural competency and reduce stereotypes and prejudice towards victimized and misunderstood groups. TVP applies principles of *contact theory* that direct intergroup contact reduces stereotypes and prejudice based on 50 years of empirical support (Allport, 1954; Dovidio, Gaertner & Kawakami, 2003; Hewstone & Smart, 2011; Pettigrew & Tropp, 2011), even in countries with high levels of cultural and ethnic conflict (Tausch et al., 2010).

In the first version of TVP, 28 students interviewed people from a variety of racial, ethnic, religious, sexual orientation, and social class groups as well as people with obesity and AIDS/HIV. Based on these interviews, students wrote memoirs of their interviewee’s lives in the first person perspective. These stories were read by faculty, staff, students, administrators, and community members to an audience of over 300 people at the end of the semester. Students in a TVP class—compared to a control class who did not complete this assignment—showed significant reductions in racism towards Blacks, Hispanics, Asian Americans and Muslims across the semester and one-year later (Nordstrom, 2015).

The second version of TVP focused on physical disability. Fifteen Teacher Education Department majors interviewed teenagers, college students, and adults with disabilities -- and their family members -- to learn about how having a disability has affected their lives. The individuals who were interviewed had conditions including deafness, blindness, stroke, spinal cord injury, stuttering, spina bifida, dwarfism, arthrogryposis, femoral
hypoplasia, cerebral palsy, and more. Like before, students wrote stories of the lives of their interviewees which were integrated into a staged reading program presented by 24 readers to an audience of over 400 people. The program was both professionally recorded and televised by a regional PBS station and aired to a 17-county audience across Pennsylvania. The Voices Project: Disability video and project resources can be found at www.misericordia.edu/voicesproject

The US/UK Voices Project was the first international version to connect students in the United States with students in northwestern England. The students used Skype, Facebook, and email to dialogue and interview each other during the semester.

TVP framework can be adjusted across the Psychology curriculum to match learning objectives across a wide range of courses and topics such as gender, personality (e.g., love, happiness, forgiveness), psychological disorders, health psychology, police-community relations, peace and violence, intimate relationships (e.g., marriage, parenting, friendships), social issues (e.g., poverty, immigration) and more.

References:


Using Psychology to Explore the Intersection of Science and Art

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Bridging the gaps:  
An Ecuadorian adventure that built interdisciplinary connections

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Students face an ever-expanding world where professional development often involves working with colleagues from different disciplines. These interactions clearly enrich our science and own perspectives, but rarely find a way to exist in the current academic structure. It is this concern that compelled us to find a way around these boundaries, so we created a strategy for building a coherent set of courses that crossed disciplines and took the learning experience off campus. This technique is illustrated by the 12-credit-hour program we designed, where coursework from Psychology, Sociology, and Biology were integrated into a travel abroad program that focused on an 11-day trip to South America. Courses included studies in environmental psychology, the culture and people of Ecuador, advanced field methods, and flora/fauna of the Galapagos. The coursework combined with international travel challenged students to examine the world through several lenses. It also provided an opportunity to bridge academic theory with practice. Drawing on a strong academic framework that included substantive research projects in each course, they applied a variety of scientific methodologies to examine behavior. For example, students were challenged to experience a wide-range of cultural activities such as shopping in the markets, working in the fields, and eating regional foods such as llama and guinea pig. In these interactions, students utilized participant observation methods by recording experiences using journaling. They also applied their skill in observational field methods to record the variety of plant and animal life observed along with analyzing animal behaviors in specific environmental conditions. They were also asked to draw upon a variety of methods to contrast the environmental challenges faced by people in Ecuador and the Galapagos Islands with those observed in cities and small towns where they live. By designing a selection of courses that built bridges across different domains, we not only expanded the knowledge base of students, but we also modeled productive ways to work with colleagues outside our specific disciplines. We actively demonstrated the ways that our own expertise is broadly applied, offered creative insights into a variety problems, and reached outside what is often an increasingly narrow scope of practice.

Additionally, our work includes a discussion on the logistics of planning interdisciplinary travel abroad programs. One of the first decisions a team needs to make is on the location for their project. Each region of the world offers a unique experience that travel teams should capitalize upon. For example, in our travels to Ecuador, we took advantage of the diversity of animal life and ecological focus in the Galapagos Islands. We also explored the culture and daily lives of indigenous groups in the Andes Mountains. Our travel decisions also took into consideration the time of year that we wanted to travel because we wanted to travel during the dry season. Trip length is another variable to consider when planning travel abroad. In our experience, trips lasting about two weeks seem to provide the best balance of travel opportunity
with other commitments such as family, jobs, etc. We selected a tour that gave us 11 days. Using the tour company also made the travel plans easier as they provided daily transportation, local guides, and expertise in the languages and areas that we traveled in. Some travel teams may also elect to have longer trips, multiple destinations, or travel without a tour company. Finally, we shared the plans for our next interdisciplinary adventure. In the Summer 2017, we are making plans for another 12-hour interdisciplinary semester. Travel plans center around a trip to Cuba and our goal is to take full advantage of the uniqueness of this location. Coursework will again include environmental psychology. We are working with the tour company to include interaction with local environmental groups. We are also building classes on the culture of Cuba (Sociology), understanding the politics of Cuba (Political Science), and exploring fiction of the Caribbean Islands (English). Again, our intent is to pull together different disciplines, highlight the unique nature of the destination, and build new bridges of understanding.
Teaching at the Intersections of Psychology and Other Fields

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The undergraduate psychology curriculum is typically defined by a set of required and elective courses within the psychology department. Indeed, the structure of the major has been recommended at the national level by the APA (i.e., APA Guidelines for the Undergraduate Psychology Major). So most psychology instructors have a clear idea how the discipline is defined in terms of the list of courses in the major. Each course stands a “unit of currency” that must be successfully amassed for the psychology student to earn enough units to get a degree.

Unfortunately, this sort of definition by list has limitations. The APA Guidelines 2.0 acknowledged this limitation by defining the major in terms of five general goals, rather than a list of courses. It has been said that one should always look at a psychology course in the context of the rest of the psychology major curriculum. Even so, it is a difficult task to change the views of psychology Ph.D. instructors (mired deep in their specialization) away from the course as the educational “standard unit of currency.”

The development and assessment of students from a perspective larger than the major has been a concern for many higher education institutions. For example, the University of Nebraska at Kearney (UNK) attempted to meet more general writing and diversity goals by requiring a set number of writing intensive (WI) courses and cultural diversity (CD) courses, independent of the substantive content of the courses. However, those goals were passed to the individual departments so they could be met within the context of the major program.

More recently, interdisciplinary courses at the beginning and end of the bachelors sequence have become fashionable in many institutions. Two variants of such courses are the portal course, taken at the beginning of the first year, and the capstone course taken in the junior year. The intents of these courses are to introduce the students to intellectual values and processes; and interdisciplinary problem solving and critical thinking;
respectively. UNK has attempted to implement these courses by establishing only very general qualifying criteria for the courses and encouraging topic-centered course content relatively independent of the department major curriculum.

There is no doubt that the psychology has many links to other disciplines. The present presentations will offer descriptions of courses that play a role within the context of the overall bachelor’s degree curriculum. Given the departmental turf wars over intellectual areas and student enrollments, developing and teaching these courses require a different strategy than teaching a course within one’s area of expertise.

We hope to describe our unique approaches and experiences in developing and teaching these types of courses.
Interdisciplinary Course on "The Good Life" (ψυχή): Combining Psychological Inquiry and Philosophical Ethics for Psychological Science and Philosophy Majors

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Increasingly, university psychology departments are encouraged to provide students with hands-on opportunities to practice important statistics and research methods skills. Our course, “The Good Life”, combined senior psychology students (N = 12) with advanced philosophy majors (N = 18) to learn about how psychological sciences empirically examine hypotheses closely related to the ideas of eudaimonic well-being. The main course project was designed to provide both philosophy and psychological science students to work together in small groups to test a research hypothesis derived from the literature in philosophy and psychology, analyze empirical data, produce and present results in class and at end-of-the-semester research symposium. This poster presents a pedagogical outline of this course and includes the strengths and weaknesses of this approach.

Given the class focus on “The Good Life”, students read original (translated) philosophic writings that form the underpinnings of our understanding of what constitutes human flourishing and about contemporary psychological measurements of related constructs. Taken together, this course provided students with opportunities to combine an understanding of core philosophical thought about eudaimonic well-being with an understanding of how issues related to the good life are empirically examined in the psychological sciences. For psychology majors, the final, culminating project was designed to strengthen the following learning goals: 1. Demonstrate fundamental knowledge and comprehension of how concepts related to eudaimonic well-being are measured and studied in psychological research; 2. Improved interdisciplinary understanding and integrative learning with philosophy students; 3. Demonstrate ability to design, conduct and interpret basic psychological research and to use scientific reasoning to interpret psychological phenomena; and 4. Increase competence in writing and in oral and interpersonal communication skills (including reporting and disseminating information).

The course was team taught—both instructors came to every class meeting, with each taking the lead an equivalent number of times. Beginning the third week of class, students were placed into interdisciplinary teams based upon interest paragraphs submitted by each class
member at the end of the second week (paragraph topic: what do you think the “good life” means?). There were nine ideas for predictors of the “good life”: knowledge of personal strengths, evaluative thinking, attachment to friends, romantic relationships, religion, materialism, pleasures, pragmatism vs. optimism, and quiet ego characteristics and resilience. For the remainder of the semester, students were introduced to philosophical readings relevant to these topics.

**Structure of Semester**

Prior to the beginning of the semester, the instructor put together a questionnaire with measures of eudaimonic and hedonic well-being, as well as measures of many predictors that she thought students could possibly take interest. Approval for the questionnaire was gained from the university’s institutional review board and data collection began in the first week of the semester. In the third week, students reviewed this questionnaire to determine if there were questions they could use to test their ideas. An amendment was submitted to the IRB, with the original questionnaire remaining open to students (N = 257) until approval for the amended changes was approved (N = 480). With survey instruments in hand, student groups began to develop a data analysis plan. The instructor worked closely with each group and then provided each group with their own de-identified SPSS data set and the final approved data plan for them to follow. Students were also provided with a sample SPSS syntax file for students to adapt as needed.

During the 7 and 8th weeks of the course (and beyond), the instructor met with each group for at least 2 hours to work through the data analytic plan. There were at least three class periods where students could work in class. During week 7 the groups presented their hypothesis, the philosophical ideas supporting the hypothesis and data analytic plan for feedback. During week 12 the groups presented their preliminary findings. These were low stakes presentations where the goal was to receive feedback from the class, using an anonymous evaluation form. Week 13 included Thanksgiving. The final powerpoint presentations were made during week 14 and 15. In lieu of a final exam, student groups attended and presented their research findings at the college’s end-of-semester Research Symposium (requiring a 250-word abstract).

**Lessons Learned**

It should be noted that a 15-week semester is relatively a short amount of time to conceptualize a research project, collect data, analyze the data, and prepare multiple presentations and a poster. Thus, prior Informal (in class) and formal (end of semester evaluations) feedback from students revealed both positive and not-so-positive outcomes. Given that this was the first semester the course was taught, there were some aspects of the class that could be improved. First, the manner in which the course was advertised was inadequate. The course description was brief, but it may not have really been clear to some students about how two courses would be co-convened. On the first day of the course the complexity of the course was described for a more detailed description of expectations (none of the students dropped the course). However, the nature of the course was difficult and despite the hours spent with one-on-one out of class time on statistical analyses, some
of the students did not appear to find the research focus of the course appealing. Thus, one recommendation is to advertise the course in more detail and seek students who are interested in the research application of course material (e.g., honors students). Students were encouraged to begin their data analyses after receiving the data sets and sample syntax files in week 7, but without a required and graded assignments, students put this off until meeting one-on-one with the instructor. Students asked that there be more data analysis assignments and earlier in the semester. Feedback from students indicated that early in the semester students should have some class time in a computer lab to review SPSS procedures. A third recommendation is for students to read good examples in the literature of a philosophical idea tested using psychological constructs and methods. A great example (found too late for using in this class) is Helzer and Jayawickreme (2015). Students also would have benefitted from more readings at the intersection of philosophical and psychological thought, like Frankl and James. Finally, some of the groups were imbalanced (e.g., 1 philosophy semester and 3 psychology majors or reverse). In the future, the groups should be balanced (2 from each major). In one case a group only had 2 members. This group was too small, and was adversely affected when one group member became ill.

References


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Section XII
Multiculturalism & Diversity

1. From College to the Community: Best Methods for Teaching Diversity to Undergraduate, Graduate, and Lifelong Learners
2. I Am Because We Are: Effective Mentoring for African American Graduate Students
3. Social Justice via Multicultural Teaching In-Context
4. From the Micro to the Macro: Training Psychologists to Be Multiculturally Competent through the Application of Faculty Research Expertise
5. “Helping You Helps Me” –Targeting APA’s Diversity & Communication Goals through Undergraduate Teaching Assistantships
6. Recognizing Diversity: Veterans in Classrooms
7. Challenging Social Categorization While Building Classroom Trust
8. Training for Multicultural Competence and Social Justice Advocacy: Past and Present Strategies and Implications for Educators
9. Using The “Values Walk” To Set a Tone During the First Week of Class
10. The Power of Memoirs and Autobiographies: Enhancing Perspective-Taking in Diversity Courses
From College to the Community: Best Methods for Teaching Diversity to Undergraduate, Graduate, and Lifelong Learners

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In contemporary psychology education, practice, and research, the emphasis on sociocultural diversity is necessary. However, the implementation of teaching about diversity varies widely based on setting and training. Although approximately 40% of university professors believe diverse classrooms raise new perspectives and issues and 55% note diversity broadens the perspectives shared, some universities report only approximately 30% of university professors believe their department highly prioritizes a diverse campus environment (American Council on Education and American Association of University Professors, 2000). Fortunately, there are useful resources available to guide educators in teaching about diversity in various settings. We must go beyond simple recognition of sociocultural differences to rich discussions of the values of these differences (APA, 2013) and the complexity of identities. In this presentation, we explored the importance and implications of attending to multiculturalism and diversity in the classroom, from undergraduate instruction through post-licensure continuing education for practicing psychologists. We provided an evidence-based approach to the discussion of best practices in multicultural teaching, highlighting empirical research directly applicable to teaching. We also integrated experiential elements that attendees may use in their own settings.

Infusing and Expanding: Best Practices in Undergraduate and Graduate Teaching about Diversity

APA’s revised guidelines for the undergraduate psychology major recommend the integration of diversity issues throughout the curriculum (APA, 2013). This recommendation to infuse diversity throughout educational programming, rather than in a standalone course or module, carries forward to graduate, postgraduate, and lifelong learning. The 2002 APA Guidelines on Multicultural Education, Training, Research, Practice and Organizational Change for Psychologists suggest including statements of principles in course syllabi and descriptions that will set the stage for the integration of multicultural content (APA, 2003).

From undergraduate classrooms to continuing education offerings, Sue and colleagues’ (1992) tripartite model of multicultural competency continues to serve as a useful framework for teaching about sociocultural diversity. From a curricular and instructional perspective, we should consider activities that achieve the following: (1) increase students’/trainees’ awareness of their own worldview; (2) increase knowledge about other cultural perspectives; and (3) encourage students/trainees to intentionally select and develop culturally appropriate interventions. Furthermore, educators should receive training to moderate difficult dialogues in classrooms, and
should be willing to acknowledge their own biases and fallibility (Sue, Lin, Torino, Capodilupo, & Rivera, 2009).

In this symposium we offered strategies for integrating best practices in multicultural education across the education spectrum, with a particular focus on integrating diversity activities in lifelong learning. Examples include the Power Flower activity, self-reflection assignments, and the invisible knapsack.

**Best Practices in Diversity-Infused Lifelong Learning**

Every classroom offers the opportunity for a cultural experience. Students and instructors alike represent many intersecting identities, and it remains a critical consideration for effective teaching (see Hachfeld, Hahn, Schroeder, Anders, & Kunter, 2015; Pope-Davis, Reynolds, Dings, & Nielson, 1995). Currently, 44 states and the District of Columbia mandate some amount of continuing education for renewal of their professional license, but only three states require coursework specifically in the area of cultural diversity (Taylor & Neimeyer, in press-a, in press-b). Thus, instructors must consider ways to infuse the topics of multiculturalism and diversity in course material on a variety of professional topics. Research supports the “more is better” approach when it comes to diversity training, and CE programs that promote multicultural awareness, knowledge, and skillful practice support psychologists in their multicultural work with clients. In fact, researchers found that clinical and counseling students who took more coursework in the topic of diversity also displayed greater multicultural competence (Pope-Davis, Reynolds, Dings, & Nielson, 1995), supporting the notion that greater exposure to diversity and multicultural training enhances a psychologist’s effectiveness with diverse clients.

Fortunately, many CE instructors attend to diversity during their trainings. According to a recent study, attention to diversity is estimated to occur in approximately 75% of continuing education workshops (Taylor et al., 2016), but what are effective ways to include culture in the classroom? In this presentation, we explored best practices in multiculturally-infused continuing education, utilizing the cultural competence framework, awareness, knowledge, and skills (see Arredondo et al., 1996) to conceptualize the ingredients that foster multicultural competence and professional growth.

Awareness represents the first important component of supporting multicultural competence among CE learners. This involves providing a safe space for psychologists to explore their own cultural backgrounds, in addition to exploring their assumptions and biases about other cultures. Continuing education instructors can support this initiative by modeling self-reflection and sharing their own cultural background and their assumptions and values. Reynolds (2011) found that most (85%) faculty members who teach multicultural courses include self-disclosure. This may, in turn, foster exploration among learners.

Knowledge represents the second component of multicultural competence. In a CE classroom, cultural knowledge could come in many forms. CE workshops in ethics, for example, could provide social policy articles and articles addressing the needs of specific cultures, in an effort to facilitate a discussion on advocacy and outreach among psychologists (see Reynolds, 2001). Multicultural theories could be infused into theoretical frameworks, and research relevant for minority groups should also be incorporated into class content.

Skills represent the final component of multicultural competence. Continuing education instructors can support the development and enhancement of psychologists’ cultural skills by providing specific, culturally-appropriate interventions (e.g., case studies, demonstrations, and
mock sessions). Both experiential and reflective activities have also been shown to increase multicultural competence (Sammons & Speight, 2008). In this presentation, we focused on ways to introduce self-reflection activities (see Byars-Winston & Fouad, 2006; Ward & Bingham, 1993) and recognition of biases and privilege (Helms, 1990; McIntosh, 2012) into the lifelong learner’s classroom.

We also emphasized the importance of learner engagement in the process of multicultural competence. As one example, quality continuing education workshops should address diversity beyond a statement or module on applying the technique or theory to clients of different ethnic backgrounds. Continuing education programs might instead ask the learner to self-reflect, facilitate a discussion on assumptions, biases, and privilege, and discuss special considerations for the unique needs of diverse cultural groups.

And while the content within continuing professional development programs should reflect attention to diversity, research also suggests that the very presentation of that content should reflect various learning methods (e.g., case studies, demonstrations, stories, discussions, exposure, in-workshop exercises, attending to the classroom climate, fostering introspection), as learners from different cultures may respond differentially to various learning modalities (Valiente, 2008; see also Reynolds, 2011 for responses from instructors who teach on multiculturalism). The presentation concluded with the Power Flower demonstration, an exercise designed to explore power and privilege.

For additional information in this area, we recommend the following resources:

- Teaching for Change Teaching Black Lives Matters: [http://www.teachingforchange.org/teaching-blacklivesmatter](http://www.teachingforchange.org/teaching-blacklivesmatter)
- A Ferguson Syllabus—Reading a Movement: [https://mic.com/articles/123509/best-articles-on-ferguson-unrest-and-michael-brown-shooting#.IUmNsVbHo](https://mic.com/articles/123509/best-articles-on-ferguson-unrest-and-michael-brown-shooting#.IUmNsVbHo)
- #PulseOrlandoSyllabus and #CharlestonSyllabus: [https://www.diglib.org/archives/12064/](https://www.diglib.org/archives/12064/)
- Toolkit for Beyond the Knapsack: [http://www.tolerance.org/meaningful-discussions](http://www.tolerance.org/meaningful-discussions)
- APA Division 44 100+ resources for coping after Orlando massacre: [http://www.apadivisions.org/division-44/resources/orlando-massacre.pdf](http://www.apadivisions.org/division-44/resources/orlando-massacre.pdf)
- Society for the Teaching of Psychology: [http://teachpsych.org/page-1588340](http://teachpsych.org/page-1588340)
References


I Am Because We Are: Effective Mentoring for African American Graduate Students

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African American graduate students in practitioner/scholar training programs are likely to have difficulty finding culturally relevant mentors. This is partially due to the low percentage of African Americans, which is less than 5% of the professorate (Lee, 1999). It is also due to the ambivalence of White professors to serve as authentic mentors to ethnic minority students. Finding an effective mentor who can provide guidance through the array of academic experiences of African American students can be challenging. What can be done to prepare a diverse cadre of professors to mentor African American students? What are the expectancies/expectations of African American students desirous of an effective mentor?

This paper created an opportunity to discuss the hard work involved in mentoring African American graduate students and finding mentorship with African American faculty. This paper drew from personal experiences of African American students, as well as empirical studies about mentoring. We outlined what mentoring is, as defined by APA, discussed the benefits of mentorship, and summarized the need for mentoring among diverse African American students. Additionally, we explored the impact of fostering mentoring relationships with African American faculty. By utilizing a multicultural perspective, we discussed clinical implications to assist faculty with mentoring African American students at Predominantly White Institutions. Additionally, implications for effective, culturally sensitive mentoring relationships with faculty for African American students at PWIs were explored.

**Role of Mentorship Among African American Graduate Students**

The academic experiences and outcomes of African American students have become an area of great interest over the past years. African American students represent a small portion of higher-level education students (i.e., graduate level). And when entering into practitioner/scholar
training programs, African American graduate students are likely to have difficulty finding culturally relevant mentors. This is partially due to the low percentage of African Americans in academia. According to Adams in 1998, mentoring is a “process of an integrated approach to advising, coaching, and nurturing, focused on creating a viable relationship to enhance individual career/personal/professional growth and development” (Young & Wright, 2001). Similarly, APA (2006) defines mentoring as “a process by which a mentor and mentee establishes a relationship to enhance the mentee’s professional performance and development” (p. 5). Mentoring has an impact on the academic experiences and outcomes of African American students (Ishiyama, 2007).

African American students who attend Predominantly White Institutions often experience a conflict between their own personal culture and the institution’s culture (Lee, 1999). Mentorship assists African American students in adjusting to college, and provides academic career support and future career guidance (Ishiyama, 2007). When in an effective mentoring relationship, African American students are also able to receive ethical and moral guidance (APA, 2006), which becomes of great importance when working with clients or when personally faced with discrimination and microaggressions. Unfortunately, minorities experience unique chronic stressors at both interpersonal and institutional levels, such as discrimination and prejudice, which negatively impact one’s mental health and way of coping with stress and limit opportunities. Mentors help African American students cope with minority stress (e.g., strain experienced from minority and dominant values, and subsequent conflict with the social environment experienced by minorities; Meyer, 1995).

Additionally, in a mentoring relationship, it is important to understand a student’s culture. A mentorship based on similar characteristics (e.g., race, gender, religion) aids as a foundation for developing effective communication and trust for the relationship to thrive over time. This sheds light on another potential benefit of mentoring for African American students. It is well documented the impact mentorship has on students’ future endeavors. Students who were mentored are more likely to be satisfied and committed to their profession when compared to non-mentored students (Wanberg, Welsh, & Hezlett, 2003). Hence, mentoring is viewed as an essential strategy for retaining African American students to degree attainment and satisfaction (Strayhorn & Terrell, 2007).

**Navigating mentorship relationships with African American faculty mentors**

Pursuing higher education as an African American student can be challenging. Research suggests that the challenges that African American students face in pursuit of their education can serve as holes in the pipeline to education (Grant-Thompson & Atkinson, 1997). These holes can lead to low retention rates among African American graduate students. The current climate of our country demands that we nurture all of our students to become culturally responsive professionals. This especially reigns true for our African American graduate students who can grow into living, breathing proof to combat existing narratives of African American success in academia.

Many students encounter challenges based on the limited availability of other African American students and faculty that they can relate with (Felder, 2010). Previous research suggests that for African American students, involvement of faculty mentors and self-efficacy were related to higher levels of academic achievement (DeFreitas & Bravo, 2012). Self-efficacy is defined as the belief that one can obtain a specific goal (Bandura, 1994). African American students may lack self-efficacy in academic endeavors as a result of being targets of
microaggressions that suggest that being African American means they cannot achieve academically (Kohli & Solorzano, 2012; Mendenhall & Lewis, 2010). The presence of African American faculty on campus and having mentoring relationships with them can begin to break down the effects of those microaggressions.

For students coming from Predominantly White Institutions (PWIs) approaching African American faculty for mentorship opportunities can be intimidating. Additionally, feedback from African American students seems to suggest that if students are not familiar with interacting with African Americans within professional or academic settings, they may not understand how to navigate those relationships. This ambivalence toward seeking mentorship from African American faculty could be another result of being the target of macroaggressions and of stereotypes of African Americans (Sue, 2010). By showing the students that achieving academically as an African American is possible, faculty members can help to increase student’s self-efficacy and eventually increase degree completion rates of African Americans (DeFreitas & Bravo, 2012).

References


University coursework and programming efforts designed to promote social justice, critical thinking, and intergroup contact and understanding are critical in fostering a more democratically cohesive and diverse society. When working with college students, social justice can be conceptualized as both the content and process of equity, in which all individuals are treated with dignity and have equitable and equal rights and opportunities (Broido, 2000). In this interactive symposium, presenters highlighted the successes, challenges, and unique aspects of programming that infuses social justice into the curriculum (e.g., Johnson, 2013; Zúñiga, 2013). The presenters offered distinctive and seasoned viewpoints, ranging from understanding discrimination and Nazi ideology from study abroad coursework, to classroom-based strategies at predominantly White institutions, to creating awareness and interventions regarding sexualized violence and conflict-related resources in the Democratic Republic of Congo. Each presenter outlined her/his thought process for constructing coursework designed to inspire and facilitate students’ involvement in social justice matters, student learning goals and outcomes, corresponding aspects of program design, and future challenges, goals, and directions for her/his work. Attendees learned about several different approaches to incorporating social justice into curricular and extracurricular efforts with students in the contexts where they are, as well as considered ways in which to enhance or create their own coursework with social justice goals in mind.
Learning about Oppression and Nazism via Study Abroad in Germany and Poland (Lee)

Study abroad coursework’s successes in reducing ethnocentrism (e.g., Hannigan, 1990) and improving intercultural proficiency and open-mindedness (e.g., Clark, Flaherty, Wright, & McMillen, 2009) offer a fundamental basis on which instructors can develop intricate coursework tackling complex issues. More recent research on study abroad reveals many students become more globally engaged, as evidenced in increased civic participation, international knowledge, and philanthropic efforts upon return to their country of origin (Paige et al., 2009). This presentation framed a discussion of incorporating social justice into a unique short-term study abroad course about the psychology of ethnic identity, conflict, and the Holocaust, conducted in Germany and Poland.

Writing assignments and guest lectures focus on issues such as ethnic majority and minority groups in Germany and Poland (e.g., Roma, Silesian Polish), heterosexual privilege and the gay rights movement in Berlin, the new Syrian immigration movement, the Turkish and Afro-German minorities in Germany, the seeming lack of ethnic and religious diversity in Poland, the resurgent Jewish identity and culture movement in Kraków, how concentration camp sites should be memorialized, and whether “tragedy tourism” is warranted. Structured discussions and intergroup dialogue (e.g., Stephan & Stephan, 2001) are also designed to foster students’ perspective-taking, empathy, and understanding toward ethnic and religious minority groups in Europe.

From Discomfort to Empathy: Social Justice Education at a Predominantly White Context (Kim)

This presentation contributed to exploring social justice education at Predominantly White Institutions (PWIs), in which students often have limited pre-college exposure to diversity. The following questions focused the presentation:

1) How can we create course structures to manage and modulate challenging emotions exploring social justice topics at PWIs? Drawing from an empirical study on first-year students’ understanding of diversity at a PWI (Kim & Durand, In preparation) and theoretical work on privileged identities (e.g., Goodman, 2001), this presentation argued for significance of making new meaning of discomfort, as a tool to engage students.

2) How can we create equitable process in the classroom? Critical pedagogy research suggests that whiteness, along with other intersecting privileges, is often at the center of classroom dynamics, as whiteness is perceived as normative in both the classrooms and the cultures of many PWIs (Gusa, 2010). Social justice education involves problematizing the inequitable processes; hence, a seemingly “democratic” perspective on how all voices matter in the same way poses problems (Allen & Rossatto, 2009). Strategies for inviting marginalized voices, and teaching how to listen deeply and share power equitably were discussed (Davis & Steyn, 2012).
3) How can we help students move from discomfort to gain empathy toward others who are different from themselves? Utilizing readings, experiential activities, and interracial dialogues that move beyond the individual-level dimensions to systemic and intersectional levels of social justice topics may be particularly helpful. The presenter also discussed the significance of ally development (Broido & Reason, 2005) as an effective frame for teaching social justice and cultural competence.

Empowering Students to Affect Local and Global Change: The Case of Conflict-Free Minerals (Tauriac)

Education has the capacity to be an empowering and transformative experience, allowing students to expand their own capacity to challenge and develop ideas, apply what they are learning to issues related to social justice, and emerge with a clearer understanding of their own power to affect change and navigate bureaucracies at campus, local, and national levels (Freire, 2000). This presentation described approaches to fostering students’ core structural competencies by applying the tenets of Hansen and Metzl’s (2014) structural competency model, using the conflict-mineral crisis in DR Congo as the topic of interest. The presentation detailed the process of educating students, starting a student club to raise awareness, creating testimonial and educational videos, forming non-paternalistic partnerships with local community activist organizations, leading student trips to the local State House to lobby for legislation to promote conflict free minerals, prompting the College to take a stance on conflict-free electronics procurement, and fundraising for international relief foundations. The presenter also described approaches to educate community members without reinforcing negative stereotypes about stigmatized populations, through educating students about sexual violence and structural oppression within local societies.

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The long-term impact of mobility experiences. *Intercultural Education, 20, Supplement 1*, S29-S44. doi: 10.1080/14675980903370847


There have been increasing calls for psychologists to be multiculturally competent. Faculty are often called to provide this training without the resources, methods, and activities needed to be successful. However, faculty conduct and are familiar with research, which can be applied to increase students’ diversity awareness, cultural sensitivity, and multicultural competence.

The application of social justice in teaching, which has been called the next stage of multiculturalism (Chung & Bemak, 2012; Ratts, Toporek, & Lewis, 2010), often presents particular challenges to faculty. However, psychologists study and engage in the process of change, which requires an awareness of the history and context matter at the individual, group, and societal/systems levels. Furthermore, most psychologists are also aware that silence and therefore inaction promotes the status quo, leading to benefits for some, but not for most. Faculty members’ silence also dissuades student discussion of important topics. Conversely, faculty who model and promote respectful discussion about social justice in and beyond the classroom promote student development (Brady-Amoong, Makhija, Dixit, & Dator, 2012; Society for Teaching Psychology, 2016). For example, faculty openness and modeling with a process-oriented research team examining at-risk middle school students’ self-efficacy and other protective factors promoted a parallel process that enhanced graduate students’ self-efficacy and multicultural and social justice competence. Consequently and as a primary gain, graduate counseling students’ were able to learn with and from the research work they were conducting.

Another area where research can be used to promote multicultural competence is in teaching statistics. Despite a common assumption that multicultural issues do not affect statistics, infusing multicultural and social justice issues into classroom examples is quite possible. First, examples and class exercises can include cultural variables in sample
analyses or project data sets to highlight both historical and modern examples of inappropriate statistical analyses that disadvantaged many groups. Two examples of this type of inclusion are discussing *The Bell Curve*, or the economic effects of real estate redlining on minority communities (Wise, 2005). Two possible sources of data for classroom exercises and examples are the Resource Center for Minority Data (http://www.icpsr.umich.edu/icpsrweb/RCMD/) and the APA List of Data Resources (http://www.apa.org/research/responsible/data-links.aspx). Second, because graduate psychology students come from increasingly diverse backgrounds, it is also increasingly important to make instruction accessible to all members of the class. Those who may be disadvantaged in a statistics classroom include women and students of color (due to stereotype threat), as well as those with disabilities. It may be helpful to monitor classrooms for social comparison issues with small group learning exercises (Micari & Pazos, 2014); engage in a flipped classroom (Peterson, 2016); and provide extra support (McGrath, 2014). Accommodation for students with disabilities, particularly visual disabilities, can be challenging for a subject that is highly dependent on computer applications and graphics. Instructors may find it helpful to face students with hearing impairments when speaking. Instructors may also engage in the use of multiple formats in presenting (visual, auditory, and experiential). Finally, counter to popular presentation advice, instructors should take care to avoid going too far "off script" from slides.

As the world has become more connected and diverse, there is an increasing need for psychologists to understand the influence of diversity and differences. For example, research has found that employers value an understanding of cultures as an important skill of employees (Fischer, 2007). In reality, students are often not aware or tolerant of diversity (Shaules, 2007). Additionally, privilege may prevent students from discussing diversity and even create barriers to the awareness of diversity (Accapadi, 2007; Watt, 2007). One strategy that can be used to bring about awareness is to connect students’ training experience to the developmental process experienced by international students. International students face challenges adjusting to cultural expectations, new norms, language barriers, and communication style differences (e.g., Sherry, Thomas, & Chui, 2009; Yeh & Inose, 2003). Also, they experience difficulty understanding the host culture’s worldview (Pritchard & Skinner, 2002). These transitional challenges are similar to the developmental challenges psychologists experience when they become aware of diversity and must navigate diversity in their work. Instructors can draw from findings on research with international students (e.g., Yakunina, Weigold, & Weigold, 2013; Zhang & Goodson, 2011). Videos showing cultural differences can be a great way to engage awareness of cultural differences (e.g., https://www.ted.com/talks/derek_sivers_weird_or_just_different). An activity that can be used to bring awareness to students own culture is to ask students to think about if a group of extra-terrestrials were to arrive. For the group, students can be encouraged to consider some of the challenges they and the extra-terrestrials would face living together. Student ideas can then be paralleled with research on the acculturation process of international students.

An additional tool for addressing social justice issues in the classroom is to use an example of a study involving current trends showing differences based on educational, SES, and racial/ethnic identity. One example involves the use of smart devices. The use of digital media has greatly increased within the preschool population. However, usage may hamper
later visual spatial achievement. Indeed, children who are poorer or of minority status have higher usage rates daily (Rideout, 2013), as do children whose mothers have less maternal education (Keefe-Cooperman, 2016). Moreover the visual spatial problem related to touch screen technology is compounded with other at-risk behaviors found for disadvantaged preschoolers, such as sleep health (Keefe-Cooperman & Brady-Amoon, 2014). Given that science, technology, engineering and math fields (STEM) build upon those early years of motor development (Uttal, Meadow, Tipton, et al., 2013), touch screen usage becomes a potential downfall for at-risk children. This example ties digital media to multicultural information and maternal education so as to illustrate how differences in early upbringing opportunities later impacts academic achievement (Keefe-Cooperman, 2016). Students then work together to discuss possible interventions aimed at reducing educational disparities that can be conducted in various counseling settings.

References


"Helping You Helps Me" – Targeting APA's Diversity & Communication Goals through Undergraduate Teaching Assistantships

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Recognizing Diversity: Veterans in Classrooms

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This interactive workshop included four presenters with interests in veterans’ issues. The presenters discussed creation of a veteran-friendly campus, the needs of veterans with PTSD or other psychological challenges, practical skills for instructors who work with student veterans, and support for students’ transitions from military to non-military environments.

Some media outlets have reported that fewer than 15% of student veterans stay in college, university, and vocational programs for more than one year, but these numbers remain difficult or impossible to verify (Cate, 2014). Although observers raise important questions about this claim and the methods of verification, according to Cate, “evidence suggests that student veterans share similar characteristics with both nontraditional students and students with disabilities or mental health diagnoses . . . [including] high post-secondary dropout rates” (2014, p. 7). This interactive symposium included four panelists with deep interests in veterans’ issues, and we provided attendees with theoretical inspiration as well as practical steps to incorporate into their classrooms and institutions. Each panelist discussed a related aspect of working with veterans in classrooms, and each panelist presented for approximately 10-12 minutes, and we reserved the final minutes of the session for questions.

The first presenter (Sullivan) discussed creating a veteran-friendly campus environment. The presenter examined how to integrate veterans and active duty service members into feeling they are important to the classroom mix of students. Her experiences have led her to believe that all students need to feel they belong to the classroom community, regardless of if they are veterans/active duty, non-traditional, traditional college age, or students with
ADA accommodations. The belief that they are members of a cadre is especially important to veterans/active duty students. Yet, these students also need a dedicated space to interact with other veterans/active duty students as a means to transition into a new environment (American Council on Education, 2013). This presenter addressed how campus based veterans’ centers can accomplish this.

The second presenter (Becker) focused on the needs of veterans with Post Traumatic Stress Disorder (PTSD) in campus environments, and how these challenges affect problems of retention and success. Emotional issues and suicidality also present unique problems for veterans in a college environment (Montgomery, 2009). Classroom adaptations and suggestions to increase veteran academic performance were presented, including ADA compliance recommendations for the college environment.

The third presenter (Heath), a university professor and a licensed psychologist in private practice who has worked with many combat veterans over the last decade, reflected on what college teachers can learn from the treatment process. Often professors feel nervous and/or ill prepared to work with a student who has been diagnosed with PTSD or has otherwise experienced complex trauma. The presenter sought to demystify the treatment process and provide professors with practical skills and ways of being with students still healing from the adverse effects of trauma.

The fourth presenter (Woody) addressed questions of military culture and fit, particularly the difficult cultural transitions from primary or extensive time in the military to non-military environments. These transitions present soldiers and veterans with challenges about instruction styles and expectations in class as well as challenges developing appropriate expectations for social and professional interactions. This presenter evaluated language-related conventions as well as social expectations related to appropriate humor, public social interactions, and classroom behaviors. This presenter concluded with recommendations to help faculty reach out to soldiers and veterans as they manage the complex transitions from military to nonmilitary environments.

References
Impression formation emphasizes the idea that we form the opinions that we have of a person from very limited information and over a very short time, often in a matter of seconds (DeCoster & Claypool, 2004). Here, I present a classroom exercise in which students make guesses about the personal characteristics of their professor, as a way to both introduce the idea of impression formation and create a connection between the students and instructor. One objective of this exercise is to challenge impression formation and confirmation bias as well as potentially reveal hidden stereotypes that can lead to cross-cultural challenges of intolerance and discrimination.

To begin the exercise, students should have as little information about the educator as possible; the exercise model is most useful when students make decisions about their instructor based on observable characteristics such as voice, appearance, mannerisms, etc. Any information that is gleaned by the students beforehand can potentially cloud the results of this exercise/game. Therefore, it is important that the professor or other educator minimize their communication, both verbal and non-verbal, with the class before the activity begins. This activity should be conducted at the very beginning of the first class of the semester (quarter, term, etc.). It is recommended that this exercise be conducted before attendance is taken and before going over the syllabus or any other formal work on the first day. The instructor should make no comment other than to explain the exercise. Limited eye contact with the students as they come in and a neutral demeanor are both recommended.

It should be noted that some students use Google, Facebook, LinkedIn and RateMyProfessors to gather information about their professors before their first class (Brown, Baillie & Fraser, 2010). For this reason, I prefer to use questions that capture information that isn’t publically available. The questions should be self revealing but require students to guess based on sensate resources (sight, smell, hearing) and critical thinking to draw logical (though most likely incorrect) conclusions.

Examples of questions that I ask students are listed in Table 1, along with aspects of impression formation that can be discussed for each question. Instructors can tailor these questions to their own characteristics. These questions are meant to expose impression formation, stereotyping and bias, reveal something of the instructor to the students, and in some cases just be fun. The willingness of the instructor to reveal personal information and the joking and laughter that follows serves to build a strong trust connection between the instructor and the students. The more the instructor reveals about him or herself, and (at least for me) the more self-deprecating the tone, the more successful the exercise.
In my class, students complete all of the questions in the quiz on their own. Then, clickers or show of hands are used to reveal student data for each answer choice followed by giving correct answer. I discuss each question individually rather than waiting until the end to have the discussion.

One objective of this exercise, building trust, is met by follow-up questions that provide an easy transition to discussions of critical thinking, stereotyping, selective perception, and other topics. I like to use the classic counseling technique of asking "who, what, where, when, why, how" to reveal students’ reasoning. For example, if, in response to the question about home state, a student answers "Massachusetts" (I’m from Hawaii), I will ask "what made you think that?" or how did you come to that conclusion?" The answer to this question may lead to other, clarifying questions meant to reveal unconscious bias. Other students may be asked to offer their perspectives and expand the conversation. As students express their ideas, it is critical that I express a non-threatening, welcoming curiosity, paying attention to nurturing egos and respecting opinions. Many of my students are in their first year and may be uncertain about how well they belong in an academic environment. My goal is to create an inclusive environment in which students can examine their own thinking with friendly guidance.

In summary, this non-traditional class introduction serves several goals. Primarily, it can establish a more comfortable and trusting working environment for both professor and students. This activity can allow the students to see the instructor as a relatable person, not just a subject matter expert and authority figure. Second, the exercise engages students in critical analysis of their own thinking and specifically, how they form impressions of others.

Finally, through this exercise and diligent follow-up in mindful behavior I set the tone for the class environment. I have noted diminished classroom difficulties, increased participation and have also noted students making the necessary preparation (reading and watching the multimedia choices) and participation effort (volunteering in classroom discussions and group exercises) in the learning modules going forward.

References


Table 1
Sample Questions and Discussion Tips

<table>
<thead>
<tr>
<th>Question</th>
<th>Discussion Tips</th>
</tr>
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<tbody>
<tr>
<td>Which state do you think I am from? (Give four choices)</td>
<td>Students often make this judgment based on skin color, accent, mannerisms, hair color, speaking style, tempo and timber. This is one of my favorite questions for examining stereotypes and building trust.</td>
</tr>
<tr>
<td>Am I married, single or in a relationship?</td>
<td>This question can address preconceptions based on body language, physical presence, hair style, shoe choices, etc. I hide my wedding ring for comedic.</td>
</tr>
<tr>
<td>How old am I? (Give a range - 30's, 40's, etc.)</td>
<td>This question can identify individual differences in perceptions of age and ageism, i.e. &quot;You don't look...&quot;</td>
</tr>
<tr>
<td>Am I a progressive or conservative?</td>
<td>This question can lead to discussion about political stereotypes as students' answers are often based on clothing, hair style, facial hair, and physical presence. The instructor can wear clothes that are neutral (no tie-dies or suits,) or revealing of the answer.</td>
</tr>
<tr>
<td>What is my favorite movie? (give 4 choices)</td>
<td>This question taps into stereotypes about gender, age, and sexual orientation. The question also provides a bonding opportunity with follow-up questions.</td>
</tr>
<tr>
<td>Desktop, laptop, tablet or handheld?</td>
<td>Students love their technology, so this question helps me build rapport. I use this question to lead into a story about my first experience with computers, which usually gets a laugh.</td>
</tr>
<tr>
<td>What did I do for a living before I started teaching? (I give several choices)</td>
<td>For me, this is a trick question (I actually did all the things on my list of options) that allows for further conversation about future careers.</td>
</tr>
<tr>
<td>Which do I like better, to play sports or to watch sports?</td>
<td>This question allows for the perception of the professor as a person. It speaks to age, sex, body language and presence.</td>
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Training for Multicultural Competence and Social Justice Advocacy: Past and Present Strategies and Implications for Educators

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Multicultural competency (MCC) and social justice advocacy (SJA) are fundamental to the values and missions of higher education institutions, which include attracting and retaining a diverse range of learners from varying contexts and backgrounds and preparing students to engage within an increasingly interconnected international community. In recent years MCC and SJA have become foundational to many fields, including applied psychology and counselor education. Pedagogical and training approaches that foster MCC are particularly present in programs that emphasize applied clinical practice. A commitment to MCC and SJA can be observed in professional ethical codes, flagship journal publications, training standards, and best practice recommendations for culturally relevant pedagogical and supervision practices (ACA, 2014; APA, 2010; CACREP, 2009).

Over the last decade multicultural education has evolved from a narrow consideration of single identity dimensions toward an intersectional approach, which illuminates the interrelatedness of cultural identity variables such as privilege, oppression, sexual orientation, spirituality, gender identity, gender expression, SES, ethnicity, ability, career, lifespan development, and personal values in relation to one’s changing contexts (Ratts & Pedersen, 2014). Despite substantial progress and ongoing effort by educators and mental health professionals to become more socially just and multiculturally competent, discordant experiences, gaps, and blind spots remain (e.g., Archenbach & Arthur, 2002; Luke, Goodrich, & Gilbride, 2013; Haskins et. al, 2013; Jang, Woo, & Henfield, 2014; Seward, 2014; Shin, Goodrich, & LaRosa, 2011). The presenters hope to provide educators with information and experiences that aid in the process of shifting their own and their students’ conceptualizations of culture from a linear conceptualization to a dynamic multi-systemic perspective.
Each of the presenters has experience using experiential approaches to multicultural training within university settings. The presenters used experiential and didactic approaches to examine historic and present challenges to and means for implementing social justice and diversity education within university settings. The first presenter emphasized historical challenges in the introduction of SJA into universities in the late 1960s. The next two presenters emphasized areas in which pedagogical practices have progressed in recent years, such as intersectional conceptualizations of cultural identities. All presenters discussed examples of classroom activities that encourage students to consider not only diverse identities, but also how multiple cultural identities intersect with one another. These activities can be used across a wide range of courses to foster awareness of self and others as well as cognitive complexity development (Perry, 1970). The symposium concluded with an interactive demonstration of classroom techniques and activities to inspire students to engage meaningfully by questioning their own social and cultural identities across multiple contexts in relation others. Audience members provided informed consent before engaging in experiential activities.

Audience members departed this presentation with an awareness of the importance of educating students who are multiculturally competent social justice advocates, information on historic and current challenges, barriers, and practices to multiculturally aware pedagogical practices, and experience with activities that have been designed to encourage students to explore intersecting cultural identities held by themselves and others to foster social justice advocacy practices across multiple settings and systems.

References


Using The “Values Walk” To Set a Tone During the First Week of Class

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The “values walk” is a classroom discussion technique that involves students walking to different locations in the classroom to express their level of agreement with a statement read by the instructor. I began incorporating it into classes about six years ago, having attended a teaching-related psychology conference where Karen Huffman, of Palomar College, offered a wonderful session on it. Since then, I have noticed similar activities by different names – for example, one comparable activity circulating online among historians is called “Philosophical Chairs.” In step with contemporary teaching interests in active learning, the “values walk” has legs. Although I’ve used it at different points in the semester, to serve a few purposes, I find that I most prefer it as an opening exercise that helps me set an implicit educational tone of fairness and respect.

How It Works

I typically introduce the activity as one that reflects the kind and tenor of exchanges that we will have in this discussion-based course. I then explain that the students will be standing together in a central location, listening to me read a statement, taking 10-15 seconds to thoughtfully and independently decide how much they agree or disagree with the statement, and then, all at once, on cue, walking to the designated area of the classroom that represents their position.

The designated areas can either be the four corners of the classroom, where you can place signs (agree, strongly agree, disagree, and strongly disagree), or, for less of a forced-choice approach, you can use a likert-scale model, and direct students to arrange themselves in a horseshoe shape, with one end representing a 1 (strongly agree) and the other end representing a 5 (strongly disagree).

I have borrowed and written a variety of statements for this activity over the past several years. I find I can often quickly tell if a statement I come across is a good fit for my own class and teaching style. For ideas, I often draw upon current events, or a lively discussion that occurred the previous semester. Below are a few sample statements for you to use verbatim, or as inspiration to write your own.
• I would rather have a high-paying, high-stress job than a low-paying, low-stress job.
• If I had my life to live over, I would come back identifying as another gender.
• Using animals for research is inhumane.
• School-age children should be required to participate in some form of sports - intramural or competitive.
• Prejudice may be unlearned.

Once students have decided where to position themselves in response to the statement that’s been read, I ask one person from each corner (or from each point along the horseshoe) to explain their position within a given time frame (one minute works well). If you have time, you can ask for a second person at each point to express their view, and/or allow for rebuttals. After this, the students come back to the central location, and another statement is read. The procedure is repeated for as many topics as you’d like to explore. At the beginning of the course I typically use two to three statements.

I find it’s important to leave time at the end for the students to reflect on the activity. One approach is to give students a response form to fill out anonymously. Mine is simple. I use a half-sheet of paper and four open-ended prompts: “I learned that....”; “I was surprised that....”; “I was disappointed that....”; and “I was pleased that....” As was originally suggested to me, I like to collect the completed forms and redistribute them, so everyone is handed someone else’s response form. To close out the activity, each student selects one of the open-ended responses on the form they received, and reads it to the class. I then collect the forms and review them, sometimes starting the following class by reading a statement that serves as a good reminder or segue for us to begin our next class meeting.

**The Tone-Setting Ingredients**

There are several things I appreciate about the way this exercise helps establish an accepting and fair-minded tone for a course. First, I would argue that indicating nothing about my own point of view on the statements is useful for my purpose. I modulate my voice and facial expressions as each student speaks, striving for neutrality and consistency from position to position. Students might enjoy guessing where I stand, and very occasionally they will ask (and I decline to share), but the goal is impartiality. I also like to begin the discussion of a specific statement with the corner or point along the horseshoe that is in the minority, deliberately saying “Let’s hear first from a person representing the least common point of view this time.”

Over the years, I’ve learned to increase my role during the activity, from saying very little, to asking a follow-up question of most students who speak. By showing that I’ve listened carefully enough to ask questions, I hope to model further interest and respect for positions that span the spectrum. Establishing this foundation is particularly helpful in preparing the class for discussions that will come later in the semester, particularly those that center around subjects related to social justice and responsibility, where respect for all points of view, especially from those whose voices are less dominant, is crucial to a satisfying and more authentic discussion.
Conclusion

The “values walk” activity is a great way to begin a psychology course because it signals to the class that you as the instructor are interested in their individual points of view, and welcoming of all views, even those they may personally disagree with quite strongly. It also demonstrates that you will be engaging them in discussions and activities that will move them, both physically, cognitively, and emotionally.
Diversity has been identified by the American Psychological Association (APA) as an important component in the undergraduate education of psychology majors (APA, 2013). Many programs include courses that highlight sociocultural factors, diverse groups, or social identity (e.g., cross-cultural, psychology of gender, human sexuality). Research suggests that diversity courses can have a positive impact on students. For example, in a psychology of race and gender course, Case (2007) found that students indicated greater awareness of White privilege and racism as well as reduced prejudice and fear of other races at the end of the semester. In another study, students in diversity courses reported an increased awareness of heterosexual privilege compared to students in non-diversity courses (Case & Stewart, 2010).

Although many students believe that they would benefit from exposure to diversity content, a number also report feeling some fear associated with this content (Littleford, 2013). Courses that focus on sociocultural differences may challenge existing worldviews and feel threatening to students. Raising awareness, acceptance, and appreciation of the differences among individuals requires students to engage in perspective-taking, as well as an examination of their own personal beliefs and a consideration of where these beliefs originated. A book-club approach offers an opportunity for students to have these experiences.

The use of stories, narratives, case studies, and books (both fiction and non-fiction) as teaching tools is not novel. They have been used in developmental psychology (Boyatzis, 1992), sensation and perception (Gunther, 2011), and within teacher-education courses (Hollander, 2001; Poirier, Colarusso, Bischoff, & Robertson, 2006). Research suggests that there are several positive benefits associated with their use. For example, students report greater empathy from autobiographical accounts of mental illness than textbook descriptions (Banyard, 2000), greater enjoyment while reading chapters using a narrative approach than a traditional approach (Fernald, 1989), and greater interest in learning about the topics introduced in the course (Banyard, 2000; Gunther, 2011). There is also some evidence to indicate that students have better recall of information through storytelling (Janit, Hammock, & Richardson, 2011). The use of memoirs, case studies, and
other narratives has been identified as a best practice for teaching psychology (Stoddart & McKinley, 2005).

Over the past three years, I have been using memoirs, autobiographies, and anthologies in a Psychology of Gender course. Books are selected that not only examine gender issues, but also intersect with other sociocultural identity factors (e.g., race, ethnicity, socioeconomic status, culture). The book-club approach outlined in the following section provides a framework for reading these books as way to enhance student learning.

At the beginning of the semester, students are given a list of books and provided time to learn about the books. The instructor provides a short survey for students to complete in which they indicate their interest in each of the books, rank order their preference, and express any concerns or issues associated with reading specific books. The instructor assigns books to small groups of students of four to five students, such that each group reads a different book. The groups meet to assign page numbers and assign rotating roles for four to five meetings that take place throughout the semester. Roles include a) a leader, who is responsible for creating discussion questions prior to the meeting and leading the meeting, b) a note-taker, who keeps track of important points made during the meetings and submits a summary of these points, c) a connector, who is responsible for finding recent information in the news, on the internet, in journals, etc. that connect to relevant issues raised by the book, and d) a devil’s advocate, who guards against social pressure and group polarization. After groups have finished their respective books, each student submits an individual paper that includes several elements. These elements include a) a summary of the book; b) an analytical critique and evaluation of the book; c) a personal reaction and reflection of experience; and d) a research paper in which students identify a course-related topic or theme raised in the book, read scholarly sources on that topic/theme, and write a paper reporting their research. Finally, each group gives an oral presentation in which they briefly summarize their book and discuss some of the research identified in their papers.

Overwhelmingly, students report that the book club is one of their favorite aspects of the course. Additionally, some students indicate a renewed interest in reading books for pleasure. During the session, attendees discussed pros and cons of this approach, ways to modify aspects of the approach to fit their own courses, and how the creation of an external product could be incorporated within this approach. Although the preliminary self-report feedback is positive, research regarding the effectiveness of this approach using objective measures is needed. Interested persons may request a list of prescreened book, as well as book club instructional materials and rubrics.
References


Section XIII
Neuroscience

1. Teaching Neuroscience

2. Ataxic Neurodegenerative Satiety Deficiency Syndrome (ANSDS):

3. Using Zombies to Make Neuropsychology Palatable!

4. The Use of Portable Physiological Equipment in Psychological Teaching

5. Bringing the Brain in the Classroom: Evaluations of Budget-Friendly Approaches to Neuroscience in Liberal Arts Classrooms
Teaching Neuroscience

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Biological psychology and neuroscience courses contain topics and material that may be especially challenging to convey to students. In our experience, this is often compounded by student reluctance to embrace the biological aspects of psychology and recognize their importance to behavioral and mental processes. During this interactive session, we facilitated a discussion of ways to actively engage students in these courses by including demonstrations of activities we recently contributed to the e-book, Teaching Neuroscience: Practical Activities for an Engaged Classroom (Birkett, 2015).

Dr. Leaver began with an explanation of her Freezer Neglect assignment. This activity is an individual homework assignment designed to help students better understand the psychological underpinnings of Spatial Neglect. Students really struggle with wrapping their heads around why a person cannot just be reminded to "look left." In this mini-experiment, the goal is to recreate the psychological parameters involved in spatial neglect. Toward this goal, students attempt to induce "Freezer Neglect" in a friend or family member. They do this by repeatedly hiding the target's belongings in the freezer. The point of the exercise is to see how people respond to repeatedly losing their items and finding them in the freezer. Half of the time people end up refusing (almost belligerently) to look in the freezer even after repeated lost-found episodes suggesting that the best strategy would be to check the freezer. Students are required to think critically about their strategy, to consider ethical implications involved (they are hiding people's belongings!), record their observations, and debrief their targets. After students complete the assignment, we discuss the results in class. This is imperative, because only half of the students will have succeeded in inducing the Freezer Neglect syndrome. During the class discussion, we relate the target's unwillingness to look in the freezer for their lost items with a Spatial Neglect patient's intense reactions when forced to attend to the neglected side of space.

Dr. Prunty presented her Amygdala and Personal Space classroom demonstration. This activity uses our sense of personal space to demonstrate the function of the amygdala in
fear and aggression. After an introduction into the amygdala and its functions, ask the students to stand and create pairs that are not familiar with each other. Ask students to stand a comfortable distance apart and measure that distance. Have the students engage in a conversation. After these conversations, discuss why certain groups are standing closer than others. Most students share information about their personal space bubbles and how some are more open with their bubbles than others. Factors to investigate include different gender pairings, ethnicity, or culture. Ask each student to take a step toward their partner. Once settled, provide a new conversation prompt. Continue to have students move closer until conversation becomes an impossibility for some of the groups. For several groups, the levels of discomfort typically grows as they talk, and the students are less likely to engage in a full discussion. After this conversation, discussion can center on why these conversations were difficult to engage in. After allowing students to sit back down, introduce the story of a patient who has bilateral lesions of the amygdala who no longer has a sense of personal space. She can stand “nose-to-nose with direct eye contact” with no discomfort (Kennedy, Glascher, Tyszka, & Adolphs, 2009). Ask students to explain why it makes sense that the amygdala governs our sense of personal space.

Dr. Sable shared his *The Quad is a Neuron* classroom activity. The quad of his campus has a large central area with numerous sidewalks entering/exiting. This is similar to the cell body of a neuron with numerous dendrites, making it an excellent theater for demonstrating properties of post-synaptic potentials (PSPs). PSPs are the result of input signals from other neurons and can be inhibitory (IPSP) or excitatory (EPSP). Ideally, this activity follows coverage of the neuron resting potential and how neurotransmitter release activates receptors, which often produces PSPs. Before the exercise, each student chooses whether she or he will be an EPSP (“Yes!”) or an IPSP (“No!”). The instructor stands at the axon hillock of the neuron. Students then spread out and each takes a place at the edge of the cell body or a dendrite. In effect, they become embedded in the cell membrane as receptors would be. At least one IPSP should stay close to the axon hillock. Students then shout at will. The shouts of “yes” and “no” have characteristics that resemble the inside of a neuron. Like the shouts, PSPs degrade with distance, so not all are equal in the “ears” of the axon hillock. PSPs closer to the axon hillock have greater influence. For example, the single IPSP adjacent to the axon hillock may override many EPSPs that are farther away. In addition, PSP patterns may enhance the incoming signals. One student may shout “Nonononono” in rapid succession, demonstrating temporal summation of PSPs. Several students may shout their PSPs in unison, demonstrating spatial summation of PSPs across several receptors.

Dr. Walsh wrapped up the interactive session with a rowing demonstration of *The Brain Game*. Having grown weary of her tour-through-the-brain lecture, she decided to make her students responsible for taking the tour themselves by reading the text and assigned websites while completing a functional neuroanatomy assignment (http://www.uni.edu/walsh/brgamephys.html). They then use their completed assignments while competing for points by identifying the likely location of brain damage given particular symptoms in a PowerPoint-based game (http://www.uni.edu/walsh/samplecases.pdf). Students compete individually in her 150 student Introductory Psychology class and in groups in her 45 student Biopsychology class. In the Introductory Psychology she has students individually raise their hands to volunteer
an answer once a slide has been revealed. Teaching Assistants (TAs) identify whose hand was raised first. For the smaller Biopsychology class Dr. Walsh places the students into groups who compete as teams. Biopsychology students also locate regions on poster-size brain diagrams. Although not part of the game, she often rewards enthusiastic participation by “rapping up the nervous system” at the close of the game class period (https://faculty.washington.edu/chudler/songs.html).

References:


Ataxic Neurodegenerative Satiety Deficiency Syndrome (ANSDS): Using Zombies to Make Neuropsychology Palatable!

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Presented at: Rocky Mountain Psychological Association, 2016
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For those not innately inclined, learning about the workings of the brain can be a fascinating, but arduous task. Memorizing neuroanatomical features can be difficult, and understanding the complex interplay between systems and subsystems is often overwhelming for undergraduate students. I am always looking for angles or perspectives that I can take to facilitate learning, and make the material more palatable.

I (first author) have found exploring neuropsychology using clinical cases to be of value. Students seem to resonate with case studies that exemplify the neuropsychological processes being disrupted and those left intact by various disorders. As a practitioner, I use my own cases, clinical case studies found on the internet, and accounts published in books with great success. With the recent popularity of zombie culture, largely due to the overwhelming success of AMC’s The Walking Dead, and my own self-professed obsession, I decided zombies could become a learning platform for my class. After all, they manifest myriad signs and symptoms of a neurological condition that affects multiple neural circuits, while leaving others operating quite normally. In searching for resource materials, I encountered a kindred zombiphillic soul in higher education, Dr. Steven Schlozman who discovered the condition Ataxic Neurodegenerative Satiety Deficiency Syndrome…the zombie disease.

I incorporated Schlozman’s book, The Zombie Autopsies: Secret Notebooks from the Apocalypse as a supplemental text for my Clinical Neuropsychology course. It turns out, relating the content of the class to the ever-popular undead “zombie” creatures seemed to help inspire students to learn and remember neuroanatomy and systemic processes. Schlozman’s creative scientific-based fiction book served as a wonderful adjunct to this approach.

I introduce the class with a clip from The Walking Dead episode TS-19, where a physician from the CDC is explaining the “disease” to a group of survivors, using dynamic radiological imagery. He explains how the presumed virus attacks various components of the central nervous system, then revitalizes the key survival centers of the brainstem. From that point, class includes several active activities and contests (e.g., the zombie stagger, the zombie moan, zombie sensations, the Neuroanatomical Olympics-Zombie Style, etc.) that engaged
students and seemed to maintain their interest. We discuss the role of the cerebellum in fine motor coordination and procedural learning, the impact of the basal ganglia on gross motor control, the primal survival work of the amygdala and the hypothalamus, and the absence of the regulatory frontal and prefrontal cerebral cortex. The majority of quiz and exam questions are “zombie” related, and students even earn points in their group presentations for including ANDSD-like explanations.

Several members of our Southern Utah University campus community exhibit signs of zombie-philia, including professors from biology, psychology, English, and mathematics. Interest in zombifying course content was so prevalent that in the Fall Semester of 2015 we invited Schlozman to our campus for two days of dialogue and pedagogical training. My students sat through a brain dissection lab with students in an anatomy lab course. We coordinated a community K-12 teaching workshop where we discussed how to incorporate zombies into course content (dissection of sheep brains, algorithmic strategies for calculating permutation rates of zombie infections, etc.) for students in public education. Schlozman also presented a standing-room only campus-wide convocation detailing how he went about melding his passion with his professional activities, and he invited students to find ways to do the same. Finally, he and Dr. Kyle Bishop, a zombie-scholar from SUU’s Creative Writing program gave a formal reading of their respective works.

Interest in zombies and efforts to make my Clinical Neuropsychology course more zombie-centric seemed to be as “contagious” as the zombie virus itself. For a time, the entire campus was excited by these foul, undead, insatiable beings. Students from across myriad academic disciplines were asking questions like “what is the hypothalamus?” and “what does the amygdala have to do with aggression and threat detection?” My heart was full and my mission was accomplished.

References
The Use of Portable Physiological Equipment in Psychological Teaching

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Presented at: Rocky Mountain Psychological Association, 2016
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Psychology has an inherently strong physiological foundation. Classroom demonstrations in many psychology courses are commonly limited to surveys or anecdotes and do not show students the richness of the field (Benjamin, 1991). As a result of recent advancements in technology, non-invasive psychophysiological equipment has become readily available and relatively inexpensive. Such equipment can be effective in showcasing psychological phenomena in a way that is both engaging and applicable to several areas of psychology. We have found that live demonstrations enhance student engagement and bolster interest in psychological research while providing them with visual and hands-on learning opportunities. The demonstrations have been applicable to both psychological and psychophysiological courses and can be moderated depending on the depth of discussion the instructor sees appropriate.

Here we detail the use of psychophysiological equipment as an objective index of stress for a single demonstration that could be applicable for many courses. Distress from cognitive tasks brings about a change in the autonomic balance of the sympathetic (SNS) and parasympathetic (PSNS) nervous systems. Analysis of heart rate variability (HRV) has emerged as a promising psychophysiological tool in the non-invasive assessment of stress. Using the free Kubios HRV software to analyze HRV (Version 2.2), the time between heart beats (interbeat intervals) is shown to reflect cardiac autonomic balance during cognitive load and help identify factors which mediate stress responses (Peng, Havlin, Stanley, & Goldberger, 1995).

To perform this HRV demonstration, the authors’ research lab invested in an eight-channel physiological data logger (BioInfinity) by Thought Technology Ltd. capable of recording several physiological events including electromyography, electroencephalography, skin conductance, blood volume pulse, respiration, and electrocardiography. The data logger was purchased for $3995 and each sensor was purchased for about $295. The lab also purchased a portable 11-inch tablet to display live information from the data logger for $600, though less expensive tablets or desktop configurations are also a viable option. To record HRV, the system used photoplethysmography to index interbeat interval from a single blood volume pulse oximeter (BVP) sensor on the finger. The small sensor (20mm x 34mm x 10mm) was attached to the fingertip using an adjustable Velcro band and recorded at 2048 times per second throughout the demonstration. Supplementary information on common recording procedures and demonstration ideas were found in literature and text (Stern, Ray, & Quigley, 2001). The demonstrations were developed for a senior level Applied Psychophysiology course in the Clemson University Psychology Department. The
class met for fifty minutes three times a week with the length of the demonstrations varying depending on the topic being discussed.

When performing a demonstration, a period from a typical lecture day is set aside for lab when a section would particularly benefit from a physiological demonstration. The first time psychophysiological recording is demonstrated the role of the Institutional Review Board (IRB) is also discussed. On a demonstration day the data logger, the tablet, and the equipment needed for preparation are brought to the class and set up ahead of time. A student volunteer plays the role of a participant in a research study while the rest of the class writes what are referred to as clinical notes. Clinical notes consist of a detailed first person write-up of the demonstration as though they were the experimental researcher. For the purpose of this demonstration the instructor acts as the experimental researcher, prepares the volunteer for a BVP recording, and gives verbal explanation of all actions to the rest of the class. In this case, an alcohol wipe is used to prep the area.

Once prepared, a BVP sensor is placed on the participant's middle finger and the volunteer relaxes while the rest of the class observes a live display of heart rate, blood pulse volume, respiratory sinus arrhythmia, and autonomic balance as indexed through interbeat intervals. The volunteer then performs a difficult task which will alter cardiac activity and the class has a discussion on the observed change in heart rate variability. Traditionally, a mental math stress test has been used, though any number of tasks would be effective. The class discusses the role of heart rate variability in the body and what information we gain from having an objective tracer of psychological and physiological activity. Students then turn in a typed version of their clinical notes during the next class period.

Several other psychophysiological demonstrations have been designed to show students proper recording procedure and demonstrate basic principles of the mind-body interaction. Psychophysiological recordings are common place in psychology text and research, but without hands-on exposure many principals of arousal, reaction, stress and performance are not understood and quickly forgotten. Furthermore, these demonstrations emphasize safety and ethical practices that should be fully understood prior to students’ own research in psychophysiological experimentation. Departments who do not already have physiological recording equipment as part of their labs may wish to invest in it for classroom and research use. Equipment functionally similar to the elements described here can be obtained for under $6000.

References

Kubios HRV (Version 2.2). Kuopio, Finland: Biosignal Analysis and Medical Imaging Group.
Bringing the Brain in the Classroom: Evaluations of Budget-Friendly Approaches to Neuroscience in Liberal Arts Classrooms

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Presented at: Rocky Mountain Psychological Association, 2016
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Introduction

- Exposing undergraduate students to neuroscience techniques, such as EEG, helps students to:
  - Become more engaged and interested in neuroscience
  - Learn about how neuroscience techniques work, including the assumptions and limitations of neuroimaging
  - Increases attentiveness, interest, and retention in related lectures (Stewart, 2015)

- However, bringing this technique in the classroom is difficult for several reasons
  - Expense: most neuroscience techniques cost several thousands of dollars
  - Time: most neuroimaging techniques take 15-45 minutes of prep time

- These limitations make it difficult for students to see their own brain in action

The Neurosky Mindwave System

Advantages

- $100 single channel EEG headset
- No preparation time required for electrode placement
- Headset can be worn between individuals in under a minute
- Bluetooth connection to iOS, Android, PC and Mac, allowing several students to use the system simultaneously
- Software gives raw EEG signal, standard frequency bands (alpha, beta, theta, delta waves), and proprietary meditation and attention scores
- Other apps available to show raw data and biofeedback
- Many apps linked to headsets allow students to complete projects, such as playing games or linking brain waves to music

Disadvantages

- System is susceptible to physiological noise, making it difficult to see changes over time
- Bluetooth makes it difficult to pair many headsets in the same environment

Activity

- Two classrooms of 9 individuals completed EEG lab exercise in conjunction with lecture on neuroscience methods
- Students divided in groups of 3 completed activity involving:
  - Reading
  - Cognitive load (counting backward by 7s)
  - Relaxing

- One group member wore the headset and did a task while other group members examined brain waves
- Students then completed a “guessing” assignment where students tried to guess what the person wearing the headset was doing (e.g., either relax or eyes closed or counting backward)

Pilot Study

- Students completed two surveys, one before and one after activity, assessing their interest in various psychological topics, including neuroscience-related topics
- Students were native to the purpose of these surveys
- Students completed feedback survey after EEG activity asking for specific feedback

Assessment

- Students completed two surveys, one before and one after activity, assessing their interest in various psychological topics, including neuroscience-related topics
- Students were native to the purpose of these surveys
- Students completed feedback survey after EEG activity asking for specific feedback

Results and Discussion

- Interest in neuroscience topics after the lab showed a nonsignificant trend toward increase (t(25) = 1.08, p = .30, d = .42) after completing the lab with no evidence of increase for non-neuroscience topics (t(31) = 33, p = .74, d = .11).
- Post-survey showed 83% of students agreed or strongly agreed that the lab would help them be more interested in neuroscience topics.
- These results show Neurosky Mindwave System is viable to increase student interest in neuroscience topics in small, lab-based class, but future research is necessary to examine whether this student interest leads to increased mastery of course material.

This research was supported by a South Carolina Independent Colleges and Universities grant. For more questions, including lab and teaching materials, please contact me at rfrankin@andersonuniversity.edu
Section XIV
Online Teaching

1. Preventing Boundaries in Online Education Through Social Connectedness and a Collaborative Spirit
2. A Retrospective of 25 Years Teaching Online: Secrets, Advice and the Future
3. Teaching Psychology 101 Online: Compatible with the Small, Liberal Arts College Environment?
4. The Impact of Communication Variation on GPA in an Online Class
5. Evidence That Psychology Labs can be Taught in Online Course Delivery
7. Students’ Reactions to Replacing Online Discussion Forums with Course Blogs
8. It’s all about the Practicum...No Brick, No Mortar
9. Performance and Perceptions Across a Traditional and Online Introductory Psychology Course
10. Enhancing Teaching Effectiveness: Flipped Classrooms, Online Instruction, and Cultural Competence
11. Gamifying an Online Classroom: Does it Enhance Student Motivation and Engagement?
12. The Essence of Being an Online Education Student
Preventing Boundaries in Online Education Through Social Connectedness and a Collaborative Spirit

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Abstract

Distance education continues to evolve since its origin in the early 1900s. Distance education is of great benefit, in that it provides a flexible and creative connection to learning that may not be accessible traditionally due to several external factors (i.e. funding, crowded classrooms, military duties, or work-life balance). Although distance education provides several benefits, there are two factors that can hinder the experience, the lack of social connectedness and a collaborative spirit. This poster presentation defines social connectedness and collaborative spirit and provides elements that can be used to increase both concepts (i.e. providing a personable instructor profile and welcome message, learning styles inventory as an ice breaker, weekly advising messages and quotes to students, incorporating movies and poll everywhere to engage student learning, and providing useful feedback) to offer the online student a more personable learning experience.
2. Welcome Message: Create an inviting environment

Creating a welcoming environment for students is crucial in online education. Here are some strategies to help:

- **Engage students:** Early interaction helps build rapport and establishes a positive tone for the course.
- **Set clear expectations:** Outline the course structure, assessment criteria, and grading policy.
- **Provide a positive first impression:** A well-designed course shell can make a strong first impression and set the stage for successful learning.

2.1. Engage students early

- ** ICE (Introduce, Clarify, Emphasize):**
- **Reveal the goal:** Introduce the course and its objectives.
- **Clarify the details:** Provide clear instructions and expectations.
- **Emphasize the importance:** Highlight the relevance and impact of the course.

2.2. Set clear expectations

- **Course outline:** Outline the course topics, assignments, and assessment.
- **Grading policy:** Explain how grades will be calculated.
- **Attendance policy:** Specify the importance of regular participation.

2.3. Provide a positive first impression

- **Course design:** Use a clean, user-friendly design.
- **Welcome message:** Include a personal message to welcome students.
- **Interactive elements:** Use multimedia and interactive content to engage students.

3. Learning Styles Inventory: Serves as an icebreaker

Learning styles inventory can be used as an icebreaker in the first class or a formative assessment. This tool helps identify how best each student learns and allows for differentiated instruction.

3.1. Learning styles inventory:

- **Visual learners:** Use diagrams, videos, and images.
- **Audiogenic learners:** Include discussions, podcasts, and audio recordings.
- **Read/write learners:** Provide reading materials and written assignments.
- **Kinaesthetic learners:** Incorporate hands-on activities and group work.

3.2. Benefits of using a learning styles inventory:

- **Increases engagement:** Activities tailored to students’ learning styles can increase participation and understanding.
- **Improves retention:** Information presented in a way that aligns with how students learn is more likely to be retained.
- **Facilitates differentiation:** Teachers can tailor their instruction to accommodate different learning preferences.

4. Advising Messages

Provide quantitative feedback (Student's Grade Averages) and qualitative information in a Personal Email to student.

Suggested email subject lines:

- “Assessment results: You’re doing a great job!”
- “Areas for improvement: Here’s what we can do to improve your grade.”

3.4. Emotional feedback:

- **Motivation:** Encourage students to reflect on their progress.
- **Encouragement:** Provide constructive feedback.
- **Suggestions:** Offer specific strategies for improvement.

5. Incorporating Real-Life Events or Movies

Incorporating real-life events, such as the movie “Deadpool” or current news articles, can help bridge the gap between real-world scenarios and classroom discussions.

5.1. Real-life example:

- **Movie clips:** Use clips from popular movies to illustrate concepts.
- **News articles:** Incorporate current events to discuss real-world impacts.

5.2. Benefits of incorporating real-life events:

- **Engagement:** Increases interest and relevance for students.
- **Critical thinking:** Encourages students to apply concepts to real-world situations.
- **Relevance:** Shows how course content is applicable in the real world.

Additional Tips

- **Instructor Engagement:** It’s essential to make students feel valued and connected. Here are some tips:
  - **Make your presence known:** Regular communication builds rapport.
  - **Connect with students:** Ask open-ended questions and listen actively.
  - **Encourage participation:** Create a safe space for students to share their thoughts.

References

A Retrospective of 25 Years Teaching Online: Secrets, Advice and the Future

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Present at: Annual Conference on Teaching, 2016
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“Online education is possibly the biggest event in American intellectual life in the past 40 years. What’s happened is that a critical mass of intellectual capital in the country has moved outside the academy.” (Heeger, 2003, p. 3)

Although many faculty and administrators think that distance and online education is new, it is actually a very old form of course delivery. I think it is important that we understand its history in order to examine its present and envisage its future. The first distance course was advertised in 1728, and by 1833, the Correspondence University of Ithaca (NY) was founded. By 1896, the University of Chicago offered university level correspondence courses. Computer-based instruction of the 1960s set the stage for online learning and in 1981, the Open University (England) used a rudimentary whiteboard system. In 1995, the first learning management system (LMS) was developed. In 1998, the Department of Education authorized the Distance Education Demonstration Project. Following the DEPD, the Department of Education produced what is known as "the No Significant Difference" report and as a result, in 2006, federal financial aid rules changed. At that point, most traditional universities and colleges began to offer online courses. In 2012, 21 million students took online courses and online education has since expanded to the K-12 system. Research from the Sloan Consortium (now Online Learning Consortium) shows online is growing 10 times faster than other modalities.

In this presentation, I will explore some secrets and some not-so-secrets about online teaching and learning. I will share my experiences from almost 25 years of teaching online and I will give my best advice to those new to teaching online.

Teaching online requires a philosophical shift for most faculty. The often stated truism is that the instructor is no longer the “sage on the stage” but the “guide on the side.” The instructor becomes more of a facilitator and needs to develop different leadership skills. However, technology does not replace the art and skill of teaching; online requires development of new skills to produce a new art. Faculty selection is key. Not all good face-to-face teachers are good online and vice versa. Faculty must like the idea of online education. Online faculty must be flexible. Online instructors must be technology literate. Online education requires a shift in administrative thinking as well. Online is not the place to dump tons of students unless the goal is a correspondence course delivered via the internet. A good online course requires lots of interaction and that is
difficult to do with more than 25-30 students. Online education also requires funding for student services delivered online.

I have learned some important lessons in my years teaching online. I use Chickering and Gamson’s Seven Principles to organize my "lessons."

1) Student-Faculty Contact
The faculty member online may actually find that they have to set limits on the contact and that they have to structure it so students do not assume they are Instant Messaging 24/7. I find that I have much more contact with more students.

2) Encourages Cooperation
Online courses facilitate student-to-student contact through a ready space for communication and the reduction of time and space obstacles. Tools such as Google Hangout facilitate that cooperation.

3) Active Learning
Online courses are tailored for active learning since students must actively engage with the material, the instructor, and other students if they are to succeed.

4) Immediate Feedback
The online environment enables the instructor to give immediate feedback on many items. There is no need to wait for the next class. There are no privacy worries.

5) Time on Task
Online courses can make time on task more efficient. Online courses make it easier for the instructor to track student time on task and to remediate when necessary.

6) High Expectations
Online courses can more easily post expectations in terms of objectives, etc. Online courses make it easier for an instructor to highlight good work, thus giving other students examples of work that meets expectations.

7) Respect Diverse Strengths
The online environment allows the instructor to tap into different learning preferences and talents. While online is primarily a text based format, it is very easy to include media and out of class experiential assignments.

Online education offers much to the future of teaching. It can enhance face-to-face classes and it means there is no stopping for weather or other institutional closings. It enables us to reach new audiences including those with disabilities, working adults and even military on the battlefield. All these bring experiences than can enrich classroom. New technologies allow much more interaction; even synchronous communication is easier. We are only beginning to tap into the hybrid mode of delivery.
We have begun to see an increase in research studies on online learning but it also presents rich opportunities for much study over the next decades. While some decry the loss of the traditional classroom and while online is not the format for everyone, it is here to stay. It offers many possibilities and expands education to new populations.

References


Teaching Psychology 101 Online: Compatible with the Small, Liberal Arts College Environment?
Erika Bagley, Muhlenberg College Psychology Department

Background
Online learning may seem incompatible with many of the core tenants of the liberal arts education. Liberal arts teaching and learning is traditionally marked by active, learner-centered pedagogies, intense faculty-student interactions, and collaboration within a residential setting. On the other hand, online learning is typically perceived as a process that happens alone, conducted at a distance unhinged from any time, place, or person. Some liberal arts colleges have taken online modalities ‘off the table’, while others are beginning to recognize the opportunities presented by the online environment. In keeping with the goals of a traditionally taught Introduction to Psychology, an online version was designed using the Blackboard LMS with McGraw Hill Connect Psychology content. The course was taught in a 5 week period over the summer.

Teaching Goals:
Goal 1: To create an online community that facilitates interactions with classmates and faculty
Goal 2: To engage students with active learning strategies
Goal 3: To support students to achieve the same level of performance on learning outcomes as those in traditionally taught face-to-face classes

Online Strategies
Making it Personal:
• Introductory video welcoming students to course
• Students created introductions for class using www.todloitable.com required to comment on each others

Simplification of Blackboard Experience:
• The Blackboard template was reworked to minimize distraction
• Created FAQ for students and video tour of online classroom

Development of Active Learning Opportunities:
• McGraw Hill’s Experience Psychology (Kling, 2nd ed) e-book was paired with this course, providing seamless integration of content and access to Connect Psychology learning materials
• Carefully curated activities chosen from Connect Psychology: www.merlot.org, TED Talks, and youtube

Evaluation
In order to evaluate the effectiveness of the Introduction to Psychology online course in meeting 3 goals, students were surveyed and involved in a focus group. In addition, performance on common questions were compared across the online and a traditionally taught face-to-face sections.

Goal 1: To create an online community that facilitates interactions with classmates and faculty

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The format facilitated a sense of community between students</td>
<td>85% agree</td>
</tr>
<tr>
<td>The format supported communication between instructor and students</td>
<td>100% agree</td>
</tr>
<tr>
<td>Frequent emails from the instructor provided support for my learning</td>
<td>100% agree</td>
</tr>
</tbody>
</table>

Goal 2: To engage students with active learning strategies

“I loved watching the 60 Minutes segments...it was really cool seeing real world examples of what I was reading about in the book.”

Goal 3: To support students to achieve the same level of performance on learning outcomes as those in traditionally taught face-to-face classes

- There was no significant difference between the performance on common questions between online and traditionally taught sections
- 100% of students agreed that the course provided a challenging learning experience

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The Impact of Communication Variation on GPA in an Online Class

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Abstract
In order to determine the impact of video-based versus text-based instructor communications, students enrolled in online sections of introductory Psychology were assigned to two conditions. In the experimental condition, students received instructor communications by video message. The same content of all communications was provided to students in the control condition, but in written form. Students who watched or read more than half of the instructor communications were compared to those who did not participate in this way. At the end of the quarter, students in the four groups were compared on measures of academic performance. An ANOVA showed no effect for the mode of communication, but did show a main effect for students who accessed the communications.

Methods
In Spring Quarter 2015, seventy-six Highline College students enrolled themselves into online sections of Introductory Psychology. They were randomly assigned to one of two course sections.

Students in the experimental condition received regular instructor correspondence by video message, including general course announcements, weekly Here’s What’s Coming Up videos, and assignment directions and illustrations. The same content of the communications was provided to the students in the control condition, but in written form, also through email correspondence.

Students who viewed more than half of the messages were considered “readers,” versus “non-readers.” Students who viewed more than half of the videos were considered “watchers,” versus “non-watchers.” This created four groups for comparison.

At the end of a 10-week quarter, data related to academic performance were collected from students in all conditions.

Introduction
Student engagement is generally understood in terms of a student’s connection (i.e., invested time and effort) to a variety of academic areas (Kuh, 2009).

Student perception of instructor warmth impacts student engagement (Marzano, Pickering, & Heflebower, 2011; Trowler, 2016).

Does video communication in an online class reflect a more personal means of instructor correspondence, increasing engagement?

In a previous study by the same author, communication variation in an online class did not have any impact on student engagement or performance.

Results
Final grades of the four groups were compared. It appeared that the mode of communication (i.e., video or text) had no effect on the groups’ final grades. There was also no interaction between variation of communication and student access of that communication (i.e., views).

There was a main effect for viewing the instructor communication (F(3, 50) = 9.237, p = 0.004) for both “readers” and “watchers.” That is, students who read or watched more than half of the instructor communications did better in the class.

Discussion
These findings indicate that information in an online classroom can be communicated with either text or video. This information will come as a relief to instructors who are feeling pressure to integrate video into online course. Instructors may also interpret these results as an opportunity to use alternative modes of communication simply for the sake of variety as they continue to help their students achieve successful academic outcomes.

The main effect of views of instructor communications should be interpreted cautiously since it is a subject variable. This indicates that students who access instructor communication are fundamentally different from students who do not in terms of academic performance. This is an interesting finding for teachers who may want to focus assignments and tests on more active learning strategies or low-stake assignments that guide students toward increased conscientiousness in the online course. Testing this finding in a true experiment would be the next step in ruling out whether there is an effect for viewing instructor correspondence.

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References

Evidence That Psychology Labs can be Taught in Online Course Delivery

Katherine Kipp and Nina Lamson, University of North Georgia

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Abstract
- Online course delivery is ubiquitous
- Core psychology courses online
- Entire psychology degrees online
- Ambivalence among psychology faculty about the veracity of online courses
- Methods or labs courses are particularly questionable (Mandernach et al., 2012)
- We confirm that psychology research methods can be taught online and students can achieve the same learning objectives as face-to-face students

Method
Research Project Instructional Unit led students through an authentic, empirical research investigation, including:
- Hypothesis
- Design
- Execution
- Analysis
- Interpretation
- Presentation

Our experiment compared the effects of the Independent Variable: course delivery method
- Face-to-face course
- Fully online course

On two levels of the Dependent Variable: research process knowledge
- Pretest knowledge
- Posttest knowledge

Research Process Learning

Data Collection
- Collect survey data and compute correlation between variables
- Create scatterplot depiction of survey results
- Interpret meaning of results

Data Analysis
- Summarize data and compute correlation between variables
- Create scatterplot depiction of survey results
- Interpret meaning of results

Discussion
- The instructional unit was successful at teaching the research process
- There was no difference between delivery methods (online vs face-to-face) in achieving learning objectives
- Research methods in psychology CAN be taught effectively in an online course delivery method.

Mandernach, B. J., Mason, K. T., Forest, K. D., & Macauley, J. (2012). Faculty views on the appropriateness of teaching undergraduate psychology courses online. Teaching of Psychology, 39, 262-266.

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Best-Practices for Teaching Introductory Psychology Online: Facilitating Student Achievement Through Due Dates

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Students' Reactions to Replacing Online Discussion Forums with Course Blogs
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Introduction
Generic Psychology is a rewarding and challenging course to teach. It is a pleasure to be the first to introduce students to the subject. The subject matter is very rich and varied, and students are often surprised and intrigued by the ways in which psychology can be applied to everyday life. However, the necessity of making a limited selection of topics to present in class is often frustrating for both students and instructors. For both of these reasons, I have included an interactive digital writing component as part of the course evaluation. This approach has been successful in engaging students and providing an opportunity for them to practice writing and thinking critically about the material. Students' Reactions to Replacing Online Discussion Forums with Course Blogs

Method
Participants
- Moodle version: 2 semesters, 4 sections, 54 students, 46% female, 54% European American
- WordPress version: 2 semesters, 2 sections, 26 students, 52% female, 48% European American

Assessment Definitions
- Moodle version: Students were responsible for determining the weekly discussion prompt that was to be used for the week. Students were asked to post at least one response and one comment each week.
- WordPress version: Students were required to post two discussion prompts each week, which were tied to course content. Students could choose to write about either topic, but they were required to write at least one comment each week.

Results (cont.)

On the 14 official student evaluations of teaching during the Moodle semester, I received 13 comments related to the digital writing assignment. Of these comments, 9 were positive, 4 were mixed, and 1 was negative. An example of a mixed comment was: “Discussions and questions were helpful but not for test preparation.” The negative comments were similar to those on the Moodle semester, such as: “The only thing I really liked were the discussions. The discussions just seemed like a busy exercise every week.”

On the 36 official student evaluations of teaching during the Moodle semester, I received 14 comments related to the digital writing assignment. Of these comments, 9 were positive, 4 were mixed, and 3 were negative. In the mixed category, the positive comment stated the language was the Moodle semester, e.g., “The blogs seemed to address interesting topics more than exploration of content. Many of them were familiar, but did not lead to discussion.” The negative comments, however, were similar to those provided in the Moodle semester, for example: “The blogs and comments were just busy work and I don’t know what my role was.”

Conclusions

Summary
While shifting from Moodle to WordPress did not eliminate negative feedback regarding digital writing assignments, it did appear to lessen the intensity of the feedback on digital assignments. In addition, students reported being more engaged and writing more frequently in the WordPress version of the course.

Limitations
- No causal arguments can be made from these data, as student enrolment is not random, the required frequency of writing differed across the two assignments, and additional minor changes were made in the course to accommodate each semester.
- Implementing this course in other courses, programs, or institutions would be necessary to further investigate the effects.

Implementation Recommendations
- I recommend implementing a series of instructional strategies, such as:
  - Introduce students to specific components of WordPress
  - Use visual tools to introduce students to specific components of WordPress
  - Introduce students to specific components of WordPress
  - Provide students with written instructions on how to use specific components of WordPress

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Online education provides students with unprecedented access to higher education. Moving academic programs from within the walls of a traditional institution to a fully online delivery method requires educators to think creatively and develop solutions for what have been routine tasks in a brick and mortar delivery venue. One such challenge is incorporating hands-on learning, such as that provided by practicum programs. These types of learning experiences facilitate opportunities for students to apply, analyze, and synthesize the theoretical knowledge gained through coursework, and, when completed in conjunction with academic coursework, allow faculty to guide professional growth and development. Implementation of program that includes a practicum component requires careful planning. Both the overall program plan and individual course curricula should be designed with careful consideration of how the practicum experiences will be implemented. Kaplan University’s Graduate Psychology program has done just this for its students. The comprehensive practicum approach developed allows for a three tiered approach. A clinical placement team supports students through a three-month orientation process and then throughout the practicum experience. A scholar practitioner faculty member supports the student through a well-developed practicum course that allows for the student to gain new knowledge and to share about their practicum experiences with other students. Finally, an onsite qualified supervisor in the student’s chosen field supporting them through their practicum experience. During this session, Kaplan’s
Graduate Psychology Academic Chair and the Director of Clinical and Practicum Programs shared the processes used to establish the practicum experiences for an online graduate psychology program. Tips for integrating program, course, and hands-on experiences with university systems, staff and faculty were provided. Discussion regarding support of students through a practicum orientation process and their practicum experience were held.
Differences between online versus traditional learning have been investigated in depth. For example, in a meta-analytic review the U.S. Department of Education (2010) examined “the effectiveness of online learning..., practices associated with more effective online learning”, and “conditions that influence the effectiveness of online learning” (p. xi) compared to the face-to-face format. The meta-analysis focused on “objective measures of student learning” (p. xi). It did not focus on student perceptions. Jesus, Cruz, and Gomes (2011) argue that the learning environment can be viewed from a “cognitive-constructivist perspective” (p. 1439), suggesting that knowledge is not merely passed on, but built. This approach emphasizes learning with others and learning by doing. They further argue that online, versus traditional, learning provides greater flexibility and encourages greater responsibility for one’s learning (Jesus et al., 2011).

Views of an effective online learning environment can be seen in the many scales that assess it. Walker and Fraser (2005) developed the Distance Education Learning Environment Survey (DELES) which contains six subscales: instructor support; student interaction and collaboration; personal relevance; authentic learning; active learning; and student autonomy. The DELES assumes that online/distance learning has a unique dynamic, social structure, and climate as compared to traditional courses (Walker & Fraser, 2005). Clayton (2007) developed the online Learning Environment Survey (OLLES). The Five OLLES subscales are: computer competence, material environment, student collaboration, tutor support, active learning, information design and appeal, and reflective thinking. These scales have been validated in online courses. However, they have not been tested in traditional courses.

Research comparing perceptions of online versus face-to-face format, for either those students who experience both or across appropriate comparison groups, seems to be relatively scarce. Maltby and Whittle (2000) compared lecture format in a face-to-face programming course. Two (out of all) semester lectures were delivered online. Fifty-eight-percent of the students preferred the face-to-face lectures. The majority of students (56%) believed that the online format was not effective when delivering challenging course concepts (Matby & Whittle, 2000). A more extensive study was conducted by Platt, Raile, & Yu (2014). Participants consisted of 289 students, the majority of whom (74%) had completed “at least one online college course” (p. 493). Participants compared online and
face-to-face classes on their equivalence, flexibility, engagement, knowledge gained, and difficulty. Findings indicated that greater exposure to online courses was associated with greater perceptions of equivalence, flexibility, engagement, and knowledge gained. Overall, online and face-to-face courses were perceived as equally difficult, online courses were perceived as less engaging, and participants perceived that less knowledge was gained in online courses (Platt et al., 2014). Platt et al. (2014) also suggest that online courses may be more appropriate for self-directed learners.

The present research focused on an examination of perceptions of the learning environment among students enrolled in an online versus traditional course; relationships between perceptions of the learning environment and performance; and performance across course type. Because some items in the host institution's readiness for online learning scale are similar to items in online learning environment scales (e.g., Personal involvement and flexibility as assessed by the Distance and Open Learning Environment Scale [DOLES] [Jegede, Fraser, & Curtin, 1995]; Computer Competence – OLLES), the relationships between readiness for online learning and performance was also examined. Participants consisted of thirty students (16-traditional, 14-online) enrolled in two sections of Introductory Psychology. The sample consisted primarily of freshmen and sophomores (76%). Majors included Chemistry (43%), Biology (30%), and Psychology (23%). Assessments included the DELES, readiness for online learning, and course/instructor evaluations. The DELES contains 34 items and six subscales (previously mentioned). The readiness for online learning scale contains 30 items that address study habits, time management, confidence in using computers, and access to reliable computers/internet. Assignments consisted of three (non-cumulative) semester exams and a cumulative final exam; module questions; and module discussions. All exams were administered online and were open book/open note. Module questions were similar to short answer/short essay questions. Students answered module questions prior to any lecture on the given topic. Discussion questions focused on how course concepts applied to students' lives. All assignments and deadlines were held constant across sections. All assignments were turned in online. The online course was taught completely online. The traditional course was a 50-minute MWF course. This section used module questions to engage in interteaching. The method of interteaching was introduced by Boyce and Hineline (2002). It requires students to develop “prep guides” for each class meeting. Class time consists of students discussing information with one another (hence “interteaching”), with the instructor serving as a resource and facilitator. Saville, Lambert, and Robertson (2011) provide further detail and a review the efficacy of this teaching method. The only significant difference in perceptions of the learning environment (DELES) occurred for student interaction and collaboration ($t_{[28]} = 3.70, p < .01$). Students in the traditional course perceived greater collaboration with their peers ($M = 21.63, SD = 5.25$) than online students ($M = 14.50, SD = 5.27$). Given that the traditional course involved interteaching, this finding was not surprising. This finding is also consistent with the Platt
et al. (2014) finding that online courses were perceived as less engaging. The lack of other significant differences suggests that students perceive the online and traditional learning environment similarly. Performance on module questions was correlated with perceptions of active learning ($r [39] = .42, p < .03$). This correlation became nonsignificant when teasing out “traditional” students (TS) ($r [13] = .359, p = .188$) and approached significance for online students (OS) ($r [11] = .529, p = .063$). There were no other significant correlations between DELES scores and performance. Overall performance and evaluations of the course/ instructor did not differ across sections.

As related to readiness for online learning, correlations indicated that ability to ignore distractions, time management, and a sense of computer confidence were related to performance on module questions (and in rare instances discussion questions). When these correlations were examined among TS and OS separately, the trend was that most correlations remained significant among TS. However, only those correlations associated with time management remained significant among OS.

This research examined whether perceptions of learning environment differed as a function of course type. It involved one online and one traditional course. All aspects of the courses, except the format and incorporation of interteaching (traditional course), were held constant. This allowed for a relatively robust non-equivalent control groups design, albeit with a small sample. It is interesting to note the overall lack of differences in perceptions of the learning environment. This could be due to the fact that most participants were freshman and sophomores and, therefore, were likely to have little experience with online courses. Greater experience with online courses is associated with increases in perceptions of flexibility, engagement, and knowledge gained (Platt et al., 2014). The lack of differences could also be a function of measures used. For instance, Platt et al. (2014) did not assess instructor support, personal relevance, or authentic learning. It might be worthwhile to continue this line of research with a larger sample, varied measures, and taking into consideration participants experience with online learning. Such research could foster better understanding of the online learning environment and how to effectively introduce appropriate assignments, interaction, and support regardless of course format.

Many colleges and universities provide an assessment of readiness for online learning. The current findings suggest that many questions on such measures do not correlate with performance. Out of 30 items on the current measure only seven correlated with performance for all students, and a mere two for online students. Items that were significantly correlated with performance focused on time management (OS and TS) and comfort in using computers (TS). For OS time management alone was significantly correlated with performance. While these findings are certainly in need of replication, they are consistent with Platt et al. (2014) and have implications for deciding whether one should enroll in an online course. For those who are planning to take online courses, the importance of time management should be emphasized and the ability to engage in time
management assessed. Those who are poor time managers should be cautioned about the potential effects on performance.

References:


How can college instructors enhance their teaching effectiveness? In order to facilitate student success, college teachers must take into account the needs of their students in their pedagogy and instructional design. A student-centered perspective takes into account the cognitive and affective needs of learners within the particular context of the class. Faculty can improve their teaching by using empirically-supported teaching techniques to foster learning, implementing effective instructional design, and developing cultural competence to create an inclusive classroom. In this symposium, we provided concrete recommendations for improved teaching from a number of different perspectives. Using insights from the flipped classroom approach and the science of teaching and learning, Deborah C. Stearns illustrated how instructors can make the most effective use of available resources to maximize student learning in face-to-face classes. Renee Galbavy discussed the unique pedagogical challenges of online instruction. Inclusion of innovative strategies in online teaching not only promotes effective and efficient approaches for facilitating student learning and success, but it also maximizes instructor presence in the classroom and creates an environment where students feel connected to both the instructor and to each other. Specific suggestions for building a solid course foundation, efficiently increasing instructor presence in the classroom, and including engaging, creative course content were covered. Given the increasingly diverse college student population, it is essential that college and university professors develop cultural competence in order to create teaching and learning experiences that are culturally responsive and promote personal and academic success. Andrea Brown provided an overview of the basic tenets of culturally responsive teaching, as well as suggestions for cultural competence development. She also explored strategies for addressing and avoiding microaggressions in the classroom and other classroom incidents that potentially compromise teaching/learning objectives and do not promote inclusivity.
Gamifying an Online Classroom: Does it Enhance Student Motivation and Engagement?

Chelsea Lovejoy and Alicia Stachowski
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Presented at: Midwestern Psychological Association, 2016
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Abstract

Gamification is the application of game-based mechanics and thinking in real world contexts to increase learning, engagement, and motivation (Kapp, 2012). The purpose of this field study was to explore the question of whether or not the minimal application of gamification (achievement badges and language regarding the point structure) would enhance overall student motivation and engagement in an online course. Participants were 56 students enrolled in 2 sections of an online human resources course. Three times during the semester, participants completed measures of interest, perceived competence, effort, and enjoyment. Results indicated that the manipulations used here did not change the experiences reported by students. Given the online nature of the course, the presence of the gamification may not have been sufficiently integrated to resonate with students. Additionally, confounding variable concerns regarding sampling method, regarding how students signed up for each section of the course may have also influenced results.
Gamifying an Online Classroom: Does it Enhance Student Motivation and Engagement?

Chelsea Lovejoy, Ph.D. & Alicia A. Stachowski, Ph.D.
University of Wisconsin-Stout

Introduction

Gamification is the application of game-based mechanics and thinking in real world contexts, such as education (Kapp, 2012). Some of the potential benefits predicted to arise from the use of gamification are an increase in engagement and motivation. As well as the promotion of learning and developing problem solving/critical thinking skills. Problem: Gamification has received a lot of media attention and interest in business and education, but it has not been well tested to date.

Current Study

Investigate gamification as a field study in a set of online college level courses. Perceptions of gamification, impact on motivation, and the impact on engagement were examined between a traditionally formatted and a gamified version of an online course.

Research Question: Does minimal applications of the gamification phenomenon enhance overall student motivation and engagement in an online course?

H1: Students in a gamified environment will report higher levels of motivation than students completing a traditional online format.

H2: Students in a gamified environment will report higher levels of engagement than students completing a traditional online format.

Method

Participants: 56 Students enrolled in 2 sections of Human Resource Management Online Course Demographics: 24 Male; 32 Female; 98.2% Caucasian; 96% upper classmen

Unique Gamified Class Elements:
- Achievement Badges
- Syllabus language regarding point system

Measures:
- Intrinsic Motivation Inventory (Deci & Ryan)
- Interest/Enjoyment (7 items)
- Perceived Competence (6 items)
- “I would describe the activities as very interesting.”
- “I think I am pretty good at these activities.”
- Goal Setting
- “How committed are you to this goal?”
- “How difficult do you perceive this goal to be?”
- “How much effort will be necessary to achieve this goal?”

Engagement/Enjoyment
- “To what extent did the (gamification feature) influence your (enjoyment/effort) in the class?”

Results & Discussion

Self Report Data:
- Findings do not lend support for H1 or H2.

Behavioral Measures:
- Extra Credit Participation:
  - 1-3 students in the traditional online class participated each week (M = 1.77, SD = 0.93).
  - Extra credit opportunity was utilized 2 times in the gamified version of the course.

Discussion Posts:

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Gamified</th>
</tr>
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<tr>
<td>Threads  3.92</td>
<td>4.44</td>
</tr>
<tr>
<td>Replies  7.64</td>
<td>8.16</td>
</tr>
<tr>
<td>Read  199.07</td>
<td>74.24</td>
</tr>
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</table>

Conclusions: The manipulations used here did not change the experiences reported by students across a traditionally offered and gamified version of the course.

Limitations: Given the online nature of the course, the presence of the gamification may not have been sufficiently integrated to resonate with students. Confounding variable concerns regarding sampling method, regarding how students signed up for each section of the course.

Future Directions: Method of integration may need to be increased to notice differences. Additionally, researchers recently suggested that gamification may not be “one size fits all.” It may be most beneficial for certain subsets of student who may be struggling (Barata, Gama, Jorge & Gonçalves, 2015).
The Essence of Being an Online Education Student

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Online education is a relatively new phenomenon that has quickly expanded in the last decade. In 2012, it is estimated that 5.5 million students in the United States took at least one online course (National Center for Education Statistics, 2014). Many of these 5.5 million students were full-time educators who were in pursuit of an advanced degree.

The purpose of this current qualitative study was to discover what it is like to be a full-time educator who was enrolled in an online program in order to earn a master’s degree. The researcher had three main questions:

- Why do educators choose online programs to further their education?
- What processes do they use to decide which program is best?
- What strategies do educators use to balance their time and responsibilities effectively while participating in an online program as a student?

This was a phenomenological study applied through a theological perspective of interpretivism. The participants included seven full-time educators who were currently enrolled in or had previously completed an online master's degree. Five were women and two were men. The average age of the purposive sample was 36. The average amount of time spent in the profession was nine years.

One-on-one interviews were conducted face-to-face and via Skype. Each interview lasted approximately one and one half hours. Interviews were transcribed and read several times in order to be analyzed and coded. Participants checked the transcriptions to ensure accuracy and to give further feedback.

Five overall themes were discovered. The first had to do with reasons for returning to school. They were varied yet strongly felt by the participants. Most participants cited a desire to advance in their careers through wage increases and promotions. Some expressed a love of learning and a desire to model that behavior for their students. One participant stated that he wanted to be informed so that he could help make effective policy decisions. Several claimed that it just felt like the right time to go back to school.

Factors in choosing a school and program were not as diverse. Cost was by far the largest consideration when deciding which program to enter. Another consideration was the kinds of programs that were offered and how well the program fit a student’s needs. Finally, flexibility of the program was a prominent factor. Since these students were also full-time professionals, they needed a program that would be flexible with the previous commitments.
Similar course structure was another theme that emerged from the research. It was surprising to the researcher just how comparable all of the various program were. All master programs in this study were 18 to 24 months in duration. Most of the students said they were part of a cohort, and average class size was between 25 to 30 students. Coursework usually consisted of weekly readings, discussion boards, and a few research or reflection papers.

Another surprising finding from this study was that many participants claimed to put forth as little effort as possible in order to pass their classes and graduate from their respective programs. Many said they just did not have enough time to be an overly diligent student. Most expressed feelings of burn out, especially toward the end of the program, and just wanted to be done. Overall, participants in this study did the bare minimum in their classes in order to complete them successfully.

Finally, feelings of isolation were a common theme found among the participants of this study. Participants felt as though they had little actual contact with fellow students or professors. Although there was communication among students and faculty, it was limited in scope and duration due to the nature of the program. This was sometimes seen as a challenge when students felt they were not receiving the support or feedback the needed in order to be successful.

This was a very interesting study to conduct. The overall findings indicate that there are several reasons for full-time teachers to return to school, cost is the first concern when selecting a program, minimal effort is often put forth into completing a course, programs are plentiful yet similarly structured, and lack of personal contact is a concern to many online students. These findings will help schools identify potential students and construct programs that will appeal to the wants and needs of full-time teachers who are looking to advance their careers through the completion of a master's program.

Reference
Section XV
Pedagogy

1. Something for Everyone: Practical Instructional Strategies and Student Learning Activities for AP Psychology using the APA National Standards for High school Psychology Curricula
2. Maybe It Isn’t In The Textbook: Strategies For Helping Students Apply Class Material
3. Blogs Help Students Engage and Apply in Introductory Psychology
4. Stereotyped Advertisements in the Digital Age: An Authentic Learning Activity
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16. Improving College Courses with the Use of Student Management Teams
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18. Sustainable Community Projects Improve Students’ Ecological Worldview
19. Experiential Extra Credit: More Than Just Making up Points
20. Beyond Databases: Psychology Information Literacy Across the Curriculum
21. Open Access Textbooks: The Good, the Bad, the Ugly
22. The Hero of Psyrule and Travels Through Developmental Earth: Gamification of Two Psychology Courses
23. Promoting Teachers’ Use of Adaptation and Differentiation: Using the 9-Grid Tool in Content Area Classrooms to Include Students with Exceptionalities
24. Putting Students in Charge of Student Learning: Creating Eye-Tracking Lab Modules for a Psychology Curriculum
25. Accessible Course Materials 101: Tips and Tricks Everyone Can Use
26. Sensitive Material in the Psychology Classroom: Trauma, Transformation, and Trigger Warnings
27. Gaming Your Classroom
28. Team Teaching
29. Experiences in Flipping the Classroom
30. Supporting Student Learning with Undergraduate Learning Assistants
31. The Syllabus Makeover: From Disregarded Document to Engaging Class Brochure
32. Navigating the Life of the Mind (Together): A Scholarly Look at Pedagogy, Relationships, and the Intersection of the Two
33. Using Student-Generated Case Studies to Teach the Psychology of Disabilities
34. Using the Jumpstart Model for Lesson Planning and Delivery
35. Using Student-Made and Feature Films to Promote Understanding in Psychology Classrooms: Perspectives from a University Professor and an Undergraduate Psychology Major
36. Making it Stick: Using Psychological Research to Improve Teaching across Campus
37. Using Stories to Teach
38. Small Group Peer Grading To Improve Free Response Writing
Something for Everyone: Practical Instructional Strategies and Student Learning Activities for AP Psychology using the APA National Standards for High School Psychology Curricula

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Teaching Introductory Psychology is a perfect opportunity to introduce active and dynamic learning activities to eager students. Many teachers often find great diversity among their Introductory Psychology students and must use a variety of instructional strategies to best meet the needs of all learners. The session will focus on sharing samples of activities, discussion of modifications, strategies for using technology to enhance both student engagement and collaboration, and developing strategies for a successful Introductory Psychology or AP psychology experience. This session will introduce several meaningful ways instructors can help students make connections among psychology’s themes, theories, and concepts and students’ personal experiences. Unit resources include samples of projects, reflective writing assignments, and collaborative classroom based activities. Presenters will discuss differentiation, course pacing, and suggestions for syllabus and scope and sequence course design. This session is designed for both the new and experienced introductory psychology instructor.

The National Standards for High School Psychology Curricula (APA, 2011) includes seven instructional domains. Presenters will share an overview of the domains contained in the Standards and present a variety of activities from each domain that both foster critical thinking and student engagement. The activities chosen are designed to be a starting point for instructional differentiation. All student samples were used with permission. The Scientific Inquiry Domain explores the following topics: the emergence of psychology as an empirical science, approaches/perspectives of modern psychology, exploration of the major subfields of psychology. Presenters have included the activity WHO AM I? as an instructional resource for this domain. Activity differentiation includes using fewer blanks, categorizing, and expanded writing. The Research Methods, Measurement, and Statistics Domain includes examination of research methods and measurements used to study behavior and mental processes, ethical issues in research with human and non-human animals, and basic concepts of data analysis. Differentiation can be obtained by exploring
some simple observations, simple correlation in class and use Excel or other program to determine the correlation coefficient, give a summary of a research study’s finding and evaluate the merits of conclusions reached by a primary versus a secondary reporter and have students identify the key elements of the study.

The Biopsychological domain includes the exploration of the biology of behavior, sensation and perceptual processes, and states of consciousness. Differentiation may be achieved through the addition or deletion of project requirements, use of technology in different forms, or making the assignment a group or independent project. Sensation and Perception resources include an online perceptual exploration and a set of reflective critical thinking questions. Differentiation can occur through modifying the quantity of questions asked from the set questions and having students create their own we based activity to share with the class. Consciousness resources include Sleep disorders identification worksheet and a consciousness capture sheet/reading guide. Differentiation strategies include identifying the sleep disorders using only primary case information, adding additional sleep disorders, and having students work in pairs to complete the reading guide.

The development and learning domain includes exploration of lifespan development, learning, and language development. Lifespan Development resources include: Story of Me, Let’s play a game, A Picture is Worth a Thousand Words. Differentiation can be achieved in many ways. Projects can be video narratives, games can be modified for different age groups. Learning resources included are a classical conditioning worksheet, social learning video capture sheet, and a set of learning theory critical thinking questions. Differentiation can occur through showing a video of classical conditioning (CC) to the class and in groups identify the elements of CC or by using different examples of social learning found in media for discussion purposes. Language Development resources include a Theorists and Language Development chart. Differentiation can be obtained by sharing students’ stories of acquiring second language or bilingualism.

The Cognition domain includes exploration of memory, thinking, and cognitive abilities & assessment. Resources for memory include a choice of 6 different memory projects. For differentiation, instructors can provide workstations that illustrate each barrier to thinking and have students rotate and identify each barrier. Instructors can have students’ journal about when they experienced specific barriers to rational thinking. Students can provide examples of advertisements or media images that illustrate psychology concepts presented in this unit of study. Intelligence & Testing resources include a film analysis and practice questions. Differentiation can be obtained through varying film used and student use of personal journals reflecting on reliability and validity in tests that students have taken.

The Individual Variations Domain explores motivation, emotion, personality, and psychological disorders. Motivation instructional resources include children’s books and film analysis. An instructor can differentiate this topics by using a children’s movie instead
of a book, alternate film choice for motivation film prompt, and personal study of motivation with application of concepts. Differentiation for emotion can be done by creating a video/photo project illustrating theories of emotion and universal emotions. For personality, instructors can differentiate by having students create a defense mechanism skits or by creating personality boxes instead of masks. Differentiation for disorders can occur by selecting one film to view in class and applying proper psychological terminology to the criteria for abnormality.

The final domain for introductory study is Applications of Psychological Sciences. Topics for study include the treatment of psychological disorders, health, and vocational applications. Resources for the treatment of psychological disorders includes Fairy Tale Therapy. An instructor can differentiation this activity by providing specific cases to students for examination from different perspectives or have students interview mental health practitioners. Resources for the topic of health include keeping a stress log and journal and completing a locus of control assessment. To differentiate, alter amount of time during stress log, observe a stressful situation from television to analyze, or observe and identify internals or externals by analyzing a character from film or television. Vocational Applications resources include a Subfields and specializations worksheet. Differentiation for this topic can be to have students research and create a pamphlet about specialty careers in Psychology.
Many psychology instructors set course goals and expectations that students will apply the class material to ‘real world’ situations (Warren, 2014). Application is also one of the learning objectives in Bloom’s Taxonomy, and it is part of the first goal (Knowledge Base in Psychology) of the APA’s Guidelines for the Undergraduate Psychology Major 2.0 (APA, 2013). Using teaching techniques that encourage students to actively engage in and apply the material promotes deeper thinking, encoding, storage, and retrieval than traditional lecture (Peck et al., 2006). There are many options for students to apply the knowledge they are learning in class, such as service-learning assignments and other interactions with the community. These activities are not always feasible, however, for various reasons (e.g., class size, community demographics, or geographical location of the school). Below are four different activities or assignment options for students to apply their newly acquired knowledge by engaging with media other than their textbooks.

**Culture Book Club**

**Goals:**

It is particularly difficult for students to apply the knowledge from a cultural psychology class. Some students can travel or study abroad, thus having a chance to experience what they learned in a cultural psychology class.

Many students don’t have this chance, and cultural issues are often the hardest for students to understand until they can apply them.
One way to provide the opportunity is to assign novels, memoirs, or travelogues that are about different cultures.

**Assignment:**
In groups of 3 or 4, students are provided with a list of approximately 20 books, each of which deals with a culture other than the students’ own.
The groups choose one book from the list in a way that no two groups read the same book. During the semester, students are required to have a certain portion of their book completed (e.g., the first 20%). That day in class is spent on the groups working to apply what they’ve read to what has been covered in class since the last ‘book club day’ (e.g., sensation, development, memory).
Instructor scaffolds by providing questions or asking for a certain types of examples.
At the end of the semester, each group presents on their book and the applications to class.

**Outcomes:**
Students gain experience applying concepts in cultural psychology to ‘real life’ situations. This happens in a structured way, so that students are receiving appropriate scaffolding in their applications.
Students are assigned to read more, discuss informally with classmates, and do a formal presentation – all important skills.

**Interactive Movies**

**Goals:**
Many movies depict psychological concepts in action. However, not all students can engage in multiple hour activities outside the classroom and some struggle in applying the concepts. Conversely, many teachers feel that showing a movie is a waste of time. Thus, requiring students to watch a movie in class while completing an application worksheet allows students to interact and immediately apply material.

**Assignment:**
Students are given the opportunity to watch a movie (in class). The movie is usually viewed after relevant material has been taught, and sometimes serves as an exam review. While viewing the movie, students are given a worksheet that contains 20-25 phenomenon/constructs studied in the class thus far (e.g., self-fulfilling prophecy, confirmation bias). The instructions are to “Describe a scene or ‘line’ in the movie that exemplifies each of the following concepts.”
Students work on the worksheet during the movie. If the movie is split in half by the timing of the class, students turn in the worksheet and it is returned at the beginning of the next class. This stops students from working at home, with friends, or skipping class.

**Outcomes:**
It provides practice with hands-on application of the material (with help available).
It breaks the monotony of lecture while maintaining rigor and learning.
When graded, the worksheet serves as a knowledge check so that students know where their weaknesses are.
Students like this activity.
**Media Artifacts**

**Goals:**
Apply psychological concepts in popular media and news sources.
Encourage students to be critical consumers of the information exposed to in the media.

**Assignments:**
Students locate examples of gender stereotypes from popular print and online advertising to share in class.
Students find an article or editorial which demonstrates specific attributional errors (e.g., fundamental attribution error or self-serving bias). This assignment can be extended to identify if the news article or advertising campaign uses central or peripheral route in its attempt to persuade. Assignments can be completed outside of class and/or shared during class time.
Media artifacts can also be short presentations. In my Motivation & Emotion class, each student is assigned a day to present their “artifact.” (e.g., Youtube clip, magazine print ad, book, etc.) that displays a concept relevant to course material.
Presentations are brief (no more than 5 minutes) and done at the beginning of class.
Students also turn in a short 2-page reflection paper in which they describe the artifact and its application.
Past presentations include meaningful books, quotes, poetry, or inspirational videos that have motivated their specific behaviors (e.g., athletic performance, philanthropy, pursuit of a psychology degree).

**Outcomes:**
Incorporating current events combined with self-referencing aids in the retention and application of these psychological concepts.

**Preparing for a Conference**

**Goals:**
Generate discussion among students about research.
Familiarize students with what research conferences are like.
Prepare students for their first research presentation at the college’s annual internal research conference.

**Assignment:**
Students are assigned a supplemental book: Silvia, Delaney, and Marcovitch’s (2009) *What psychology majors could (and should) be doing: An informal guide to research experience and professional skills* (Washington, DC: American Psychological Association).
In this brief book (167 pages), the authors cover several topics that help students learn how to make the most of their time as a psychology major and how to stand out. Each chapter is concise and written in a humorous and lighthearted tone.
Topics in the book include how to get involved in research, what it is like to attend a conference, how to create and present a research poster, and how to prepare and present a research paper.

Students read one chapter from the book for every class meeting and come to class ready to share what they learned from the chapter and what questions arose for them while reading.

**Outcomes:**

This assignment generates a lot of discussion among the students about research. It also helps familiarize students with what research conferences are like. In addition, it contributes in preparing students for their own research presentations at conferences.
Blogs Help Students Engage and Apply Concepts in Introductory Psychology

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Stereotyped Advertisements in the Digital Age: An Authentic Learning Activity

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The most lasting and important knowledge and skills that students learn in college are those they apply in real life situations (Angelo & Cross, 1993). These authentic learning activities typically involve exploration and discussion of concepts and relationships that are relevant to the learner, often culminating in a proposed solution to a real-world problem or a contemporary controversial issue. Students are learning in the process of developing a solution, instructors are facilitating the process, and the students' solutions to the problem become an assessment of how well the students can meaningfully apply the concepts. Active learning strategies also serve as assessments that engage students in interactive activities to build teamwork, develop higher-order thinking ability, and provide students with immediate feedback from the instructor (Southerland & Bonwell, 1996).

One of the authentic learning activities I frequently use in my general (introductory) psychology class is the identification of stereotypes in advertising. Advertising is sold on the basis of the characteristics of the audience expected to view the advertisement (Wolin, 2003). The stereotyped belief about a particular group or class of people is a critical factor in developing marketing strategy through advertising that emphasizes messages that are thought to persuade the consumer. Numerous studies have reported the negative and potentially harmful effects of advertisements that stereotype men and women, people with disabilities (Dahl, 1993), cultures (Shirazi, 2001), and the elderly (Robinson, Gustafson, & Popovich, 2008). Recent discussions explore the influence of uber-ironic advertising that is sexist, racist imagery to shape our perceptions of others and “normalize” sexism in an ironic way through cynicism and humor (Day, 2003; Moretsky, 2013), which is sometimes referred to as retro sexism or ironic sexism.

This authentic learning activity was designed to engage students in a critical thinking challenge that is also interdisciplinary, integrating various fields in psychology (perception, social, and developmental) and the marketing field in business. For prior preparation, students complete an assignment on stereotypes and persuasion. To assess comprehension, and increase skills in analysis, synthesis and evaluation, students generate a list of images that could represent stereotyping, then teams of four select one of a list of websites, locate an advertisement, and identify as many stereotyping characteristics as they can. Teams that identify the most stereotypes “wins.” Variations include students selecting one of twenty hardcopy ads or magazines with stereotypic ads from my collection, selecting an advertisement from any source (including TV, social media, or
apps), or changing the advertisement to remove the stereotype(s) in some way. This activity generates lively team collaboration, excitement in the classroom, and feedback on the students’ analysis of an authentic real-world problem or issue.

Five Categories of Gender Stereotyping (Genderisms). Can also be applied to ageism, sexism, racism, ethnocentrism, handicapism, and retro sexism:

Functional Ranking- men in executive roles.

Relative Size- men depicted as teller, larger than women, except when women are superior in status.

Ritualization of Subordination- Ex: images of women lying on floors, beds, ground, etc.

The Feminine Touch- women cradling and caressing surface of objects with fingers.

Family- fathers depicted as physically distant from families or relating primarily to sons; mothers depicted as relating primarily to daughters

Source: Gender Advertisements, by Goffman

Examples:


References


adults and college students. *Ageing and Society, 28*(2). Retrieved from [http://dx.doi.org/10.1017/S0144686X07006605](http://dx.doi.org/10.1017/S0144686X07006605)


A Team-Based Approach to Teaching Introductory Psychology

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Presented at: Annual Conference on Teaching
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Many colleges and universities offer multiple sections of *Introductory Psychology* each semester, and instructors of those sections rarely, if ever, work collaboratively. The result can be wildly different expectations and learning outcomes across course sections for students, leading some students to “section shop” for the class perceived to be the least rigorous. Additionally, sections that require more active engagement from the students are often evaluated more negatively compared to those with fewer requirements. A team of faculty worked together to redesign *Introductory Psychology* at Missouri State University from a traditional lecture course to a highly rigorous, standardized course offered in a blended (hybrid) format. The faculty who teach the course continue to work closely together on its development, implementation, and assessment. This team-based approach to teaching *Introductory Psychology* has not only led to reduced variability in exam scores and final grades across sections, but it has also resulted in significantly improved student perceptions of the course. Moreover, the enhanced rigor has resulted in improvements in learning outcomes compared to the traditional course. In our talk, we first focused on the “nuts and bolts” of implementing a team approach to teaching multiple sections of a blended course, including how to develop shared learning objectives, create a common syllabus and assignments/grading schemas, and develop a common exam item pool. We then focused on the advantages of a team-based approach, including opportunities to share resources (e.g., video tutorials designed to help students navigate online course requirements) and to pool talent/effort in developing active learning experiences for students. We also presented data illustrating the improvements in student learning, completion rates, and perceptions of the course associated with this approach. Finally, we addressed the challenges of implementing a team approach to teaching with an emphasis on addressing issues related to academic freedom.
Perceived Benefits of Serving as an Undergraduate Learning Assistant for Introductory Psychology

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Introductory Psychology at Missouri State University is offered in large sections of 330 students in blended format, with 5-6 Undergraduate Learning Assistants (ULAs) assigned to each section. The responsibilities of ULAs include helping the instructor with class demonstrations and activities, maintaining contact with students through email, holding office hours, and leading study sessions prior to each unit exam. This poster focuses on ULAs’ own perceptions of the benefits of the ULA role, both to Introductory Psychology students and to ULAs themselves. Seventy-six ULAs responded to an open-ended, six-item questionnaire in the final week of their semester-long duties at the end of four semesters. Two coders worked independently to categorize responses to each survey item and identified the common themes that emerged. Perceived benefits to ULAs included reinforcing knowledge of key psychology concepts, gaining teaching experience, and developing relationships with psychology faculty. Participants also reported that their experiences as ULAs helped confirm their interest in pursuing a career in higher education. Perceived benefits to Introductory Psychology students included providing an approachable contact point for students and making the large class seem smaller. This poster presents these and other themes and discusses how results can help refine the ULA role and can inform both the recruitment and training of future ULAs.
Creating Change: Examples of Action Teaching and How to Apply it in Your Classroom

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Many of us have been drawn to our profession by the possibility of helping shape our students into lifelong learners, but also with the ulterior motive of wanting to effect positive change in the world. “Action teaching” is a philosophy and style of instruction that readily addresses both these motivations. Scott Plous, action teaching pioneer, has called it the pedagogical counterpart of Kurt Lewin’s idea of “action research” or research that advances scientific knowledge while promoting social good (Plous, 2012). Action teaching is a type of instruction meant to advance students’ individual academic goals—helping them learn and understand specific course material—while also addressing important societal issues. It serves as a practical implementation of Goal 3 of the APA Guidelines for the Undergraduate Psychology Major (APA, 2013), which is focused on helping students develop a sense of ethical and social responsibility in a diverse world. In this way, action teaching is a practical and community-minded way to bring lessons to life in a manner that motivates students and piques their interests. Anecdotal evidence suggests that students feel more connected to and have better memory for course material following the use of action teaching strategies (Azar, 2008). As such, action teaching is a “win-win” alternative that may be better at advancing students’ individual academic goals than other, more traditional teaching approaches.

So what does action teaching look like? Action teaching can be applied in a multitude of formats, including individual or group in-class activities, take-home assignments, and field experiences. Any activity that asks students to apply their classroom knowledge to a real-world social issue would fit into the parameters of action teaching. Plous and the Social Psychology Network have helped to promote the development of this philosophy through a yearly “Action Teaching Award” and by compiling projects on their publicly available, online database (www.actionteaching.org). Among their examples is Plous’s own group activity in which students practice confronting real-world prejudice by applying the knowledge and skills they’ve learned in their Social Psychology course (Plous, 2000). Another example comes from 2014 Action Teaching Awardee Adam Pearson in which students are asked to write an “op-ed” piece, aimed at lay-person audiences, based on some of the concepts learned in their introductory psychology class. The activity is designed to help students develop their research and writing skills while also empowering them to engage in the public debate of the media’s coverage of scientific findings (Pearson, 2014).
Our own experience with action teaching has been within a Human Sexuality course. As instructors of this course, we are tasked with covering a variety of controversial topics, including rape, sexual assault, and sexual coercion. Inspired by the idea of action teaching, we developed an individual in-class with the end goal of increasing student empathy toward survivors of sexual assault. In developing the activity, we tried to be sensitive to the fact that we may be teaching students who are themselves survivors, or know a survivor, of sexual assault. Statistically, approximately 1 in 5 women will experience an attempted or completed rape during their college careers (Krebs, Linquist, Warner, Fisher, & Martin, 2009). Consequently, we tried to be sensitive to the fact that these topics may be quite personal for some of our students. Additionally, we were aware that, given media coverage and public discourse about these topics, many students arrive to our class with preconceived ideas and internalized rape myths, victim-blaming attitudes, and values that may unconsciously align with rape culture. Consequently, this is a controversial topic that rouses strong reactions from everyone, and usually polarizes people. Lastly, we were aware of the constraints of our classrooms and the pressure to cover a certain amount of material within the allotted time of the semester. With all of these challenges in mind, we developed a 3-part activity, of which the last component we view as the “active ingredient.”

First, we do an abbreviated lecture that covers the basics of these topics, including the facts (versus the myths) and the alarming statistics on sexual victimization. We then have students watch 18 minutes of the documentary Brave Miss World (Peck, Lessner, & Reif, 2013; available via Netflix), which presents personal narratives of a variety of sexual assault survivors, including Linor Abigail, Miss World 1998. Finally, students are invited to engage in an individual activity in which they can write a letter to a survivor of sexual assault. Students are informed that the activity is completely optional, that they may sign the letter anonymously if they wish, and that the letters will be disseminated to real survivors of sexual assault via the Dear Survivor Project (an online effort by the YWCA Silicon Valley Support Services Department; available at http://dearsurvivorproject.tumblr.com/). The goal of this combination of activities is to help students gain a deeper understanding of the realities of sexual violence—including its psychological effects—while also increasing empathy for survivors. To assess whether our action teaching is evoking the responses we hope in students, we have begun to collect data on its effectiveness (and are currently in the midst of data collection). We are measuring rape myth acceptance, individual empathy, and bystander intervention efficacy both before and after students participate in these activities. Thus far, we do not have enough data to make any statements about the effects of the activities, but we have seen that students give the activities as a whole a high rating (4.38 out of 5) and recommend the use of these activities in future courses. Additionally, students' qualitative responses suggest that we are meeting both of our action teaching aims—teaching students the course material while also provoking real social engagement.

In our experience, about one-third of students opt out of the letter-writing activity for a variety of reasons. The most commonly cited reason is that the topics bring up feelings that
are too personal for them to process during the class period. As part of the informed consent process, students are provided with available resources both on- and off-campus for processing any lingering feelings or discomfort the activities may evoke. Even students who have opted out of the letter-writing portion of the activity have noted in their feedback, however, that they found the activity useful and would highly recommend it for future sections of the course.

We hope that after learning about these examples of action teaching, you might consider applying this type of instruction in your own classroom. To see more examples of action teaching and to learn more about engaging your students in meaningful, socially-impactful ways, visit the Social Psychology Network (http://www.actionteaching.org), the Institute for Humane Education (http://humaneeducation.org/), or Teaching Tolerance (http://www.tolerance.org/).

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Learner-centered teaching, teaching with technology (apps), and pedagogy

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The current study examined the impact of mobile applications or apps on student learning in an introduction to psychology course. We designed a pretest as a baseline measure of students’ knowledge about the location and function of some subcortical and cortical brain structures. The pretest consisted of two diagrams and 11 multiple-choice questions that assessed students’ baseline ability to identify, locate, and apply their knowledge of the brain. During the next class meeting, all students individually completed a worksheet using either their online course text or a 3D brain app, depending on their class section. Two versions of the worksheet were created that covered the same content and included diagrams and questions about the location, function(s), and resulting deficits from damage to various structures. The app worksheet contained additional instructions for students to rotate the various brain structures with their fingers and to review the case studies and current research associated with each structure. During the third class meeting, students in both classes were given a posttest modeled after the pretest. The critical differences between tests were that we presented different views of the brain and used a different set of multiple-choice questions covering the same general content as those on the pretest. We measured student learning based on the change in performance from pretest to posttest separately on labeling and multiple-choice items, and then from a composite score (labeling + multiple-choice). There was a significant increase in performance from pretest to posttest for the app group on all measures; however, there was only a significant increase on the labeling measure for the text group. The app group answered more items correctly than the text group on the multiple-choice and composite measures, but there was no difference on the labeling measure. Also, there was no difference in self-reported ratings of enjoyableness on the posttest for the worksheet activity between the app and text conditions. The results demonstrate one way in which mobile devices, in general, and mobile apps, specifically, can be effectively integrated in an introduction to psychology class to enhance student learning.
Mind the Gap: Using Mindfulness and Other Contemplative Pedagogies with Your Students

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This session explored how to integrate mindfulness and other contemplative pedagogies into the higher education classroom, regardless of course subject. The presenters shared specific practices for integrating this mode of pedagogy explicitly into any discipline.

Colleges have been criticized for focusing too much on knowledge development and not enough on personal reflection of one’s self and larger purpose (Lewis, 2006; Taylor, 2010). Methods of teaching and working with students that are grounded in contemplative/reflective modes “provide the opportunity for students to develop creativity and insight, hone their concentration skills, and deeply inquire about what means the most to them. These practices naturally deepen understanding while increasing connection and community within higher education” (Barbezat & Bush, 2014, p. 8).

The objectives of contemplative pedagogy include: 1) focus and attention building; 2) introspection into course content and a deepening of understanding; 3) compassion, connection to others, and a deeper sense of moral and spiritual aspects of education; and 4) an inquiry into the nature of minds, personal meaning, creativity, and insight (Barbezat & Bush, 2014, p. 11). Forms of contemplative practice and pedagogy are many; for examples, refer to the “Tree of Contemplative Practices” in Barbezat & Bush (2014), or at the following webpage: http://www.contemplativemind.org/practices/tree.

Examples and Uses of Mindfulness and Contemplative Pedagogies and Practices

Developing Authentic Presence

Using contemplative practices and pedagogy in the classroom can also help faculty members develop authentic presence (Kessler, 2000). According to Weaver & Wilding (2013), “who the teacher is as a human being and how he or she expresses this unique presence in the classroom have a profound impact on students’ learning and engagement” (p. 12). Parker Palmer (2007) advises teachers at all levels to be less concerned with technique and content and focus more on “who is the self that teaches?” (p. 7). This focus on developing authentic teaching presence can help all faculty maintain well-being and is particularly important in the field of teacher preparation, which is charged with facilitating the development of future P-12 teachers.
Faculty members from all disciplines could benefit from drawing from the five dimensions of engaged teaching in order to develop their own authentic teaching presence and to facilitate the "inner development" of their students. The five dimensions can be summarized as follows (Weaver & Wilding, 2013, p. 13) and apply to teachers as well as their own students:

*Cultivating an open heart:* "Expressing warmth, kindness, care, compassion;" cultivating relationships (teacher-student and student-student) and trust in the classroom;

*Engaging the self-observer:* Noticing, observing, and reflecting on our thoughts, beliefs, biases, emotions, and behaviors to lead to more conscious actions;

*Being present:* "Bringing attention to the present moment and learning to manage distractions so we can be responsive, aware, focused, and creative in the classroom";

*Establishing respectful boundaries:* "Respectfully establishing clear and compassionate boundaries for ourselves and with others";

*Developing emotional capacity:* "Developing emotional intelligence, expanding our emotional range, and cultivating emotional boundaries so we can effectively address a range of feelings in ourselves and others."

**Silence and Centering in the Classroom (Intrapersonal Mindfulness)**

Teacher Education professor Dr. Dorman opens her class sessions with a period of silent reflection as a focusing and centering exercise in order to help her students, who are studying to become teachers, develop social-emotional competence. She collected and analyzed data over a three-year period examining students’ perceptions and attitudes about the practices. In this session, she presented the study’s key findings, which included:

- a welcoming of the practice after an initial period of disequilibrium;
- the belief that it helps focus one’s mind on the content and class activities and is especially helpful for transitioning;
- an opportunity to nurture oneself through compassion and reduced self-judgment;
- an increase in social awareness;
- the transfer of the practices to other contexts outside class;
- a resistance to the calmness and stillness; and
- class time concerns.

For more information, please see Dr. Dorman’s (2015) published article entitled “Building Teachers’ Social-Emotional Competence through Mindfulness Practices.” The study has implications for any practitioners interested in mindfulness incorporated into education settings.
Contemplative Movement Exercise: “Finger Dance” (Intrapersonal and Interpersonal Mindfulness)

Theatre professor Ms. Judy Austin led participants through the following contemplative movement exercise, according to these steps:

Participants begin by finding their own space and facing away from others. They then mindfully focus on their breathing while standing in a relaxed, double-weighted stance.

Slowly invite participants to become aware of their first (“pointer”) finger and begin to move it through space, following it with their eyes.

Participants connect with one other finger belonging to another person, as if drawn together by soft magnetic force via one fingertip. Instruct participants to keep their gaze on their fingers while being aware of their entire bodies. With one person leading, the two create a connected movement sequence, in slow motion.

Begin the exercise by instructing partner “A” to slowly move his/her finger in slow continuous movements. “B”s goal is to remain attached to “A” and follow the movement of “A’s” finger and whatever body parts follow this.

Once the partners are moving in unison, have them switch, allowing “B” to become the leader and “A” the follower.

Have participants flow seamlessly from leader to follower without cuing them or allowing them to cue each other as to the role switches.

Mindful Listening Exercise in Dyads (Interpersonal Mindfulness)

As a way to develop the fundamental quality of listening, which is at the heart of contemplative practice, professors can engage students in mindful listening exercises. This works especially well with prompts or questions that arise from course content. In dyads, each person takes a turn responding to a given prompt while the other person engages in active listening without responding. Then, the listener paraphrases what s/he heard and discusses with the partner how accurate the paraphrase is. More detailed instructions for this exercise can be found in Barbezat and Bush (2014, pp. 143-147) and on this webpage: http://activities.thetrainingworld.com/index.php?action=artikel&cat=37&id=20&artlang=en.

References


The “True Life” Series: A Media Resource for Connecting and Teaching with Undergraduate Students

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There are popular MTV series that feature competitive or hyperbolic dynamics (e.g., “The Real World”). Such series have been criticized for promoting/reinforcing negative stereotypes (Bell-Jordan, 2008). In contrast, the True Life (TL) series provides a more realistic portrayal of young adults’ experiences. Each episode features a small group of adolescents/adults (profiled individuals [PIs]) who are having a similar experience. Similar to the PBS series “POV”, each TL episode concentrates on the experiences and viewpoints of the small group (rather than multi-view series, such as “Frontline”). The TL documentaries have been credited with focusing on some socially relevant issues. Research on exposure to some TL episodes has been associated with attitudinal changes, such as less prejudice toward individuals with disabilities (Flynn & Louis, 2011). TL episodes might be a valuable teaching resource in demonstrating psychological concepts. More specifically, the episodes can serve as a bridge between course concepts and PIs’ life experiences. This bridging process is consistent with parasocialism.

Parasocialism refers to psychological connectedness to media-based others. The ‘others’ were traditionally conceptualized as celebrities and fictional characters (Horton & Wohl, 1956; Fitzpatrick, Fischer, Floyd & McCourt, 2003). This connectedness is reflected in cognitive, affective and/or behavioral dimensions, such as identification, speculation about future life choices, or cinema tourism (Fitzpatrick, et al., 2003; Reijnders, 2009). More recently, there has been recognition that ‘others’ might be expanded to include individuals profiled in documentaries. According to Schiappa, Gregg and Hewes (2006), parasocial contact can be an effective means of facilitating (a) awareness of the diversity of human experiences and (b) empathy/tolerance. Prior research has shown that parasocial contact was associated with more tolerant racial/ethnic attitudes and greater acceptance of LGBT sexual identities (Schiappa, et al., 2006). Similarly, Müller (2009) reported that parasocial exposure to minority characters (from underrepresented groups) was positively associated with character identification, which in turn was negatively related to perceived racial/ethnic threat.

Parasocial contact also aligns with Vygotskian educational principles of scaffolding or the zone of proximal development (ZPD; Vygotsky, 1978). More specifically, the principles suggest that individuals can learn effectively from peers who have slightly higher levels of knowledge/skill. Although, the PIs (in documentaries) have no direct interaction with
students, they can serve a parallel function to ZPD peers. Compared to students, PIs are likely to have more experience with the issues of focus (e.g., disability, pansexual ambiguity, genius intelligence, instant wealth). Thus, the PIs can serve as a guide to their history with the experience (when the documentary begins) and then show a pathway of growth via insights/skills (as the documentary progresses). Given the realism of TL series, PIs’ choices do not always lead to successful outcomes. However, such documentary dynamics can be illuminating for students as well.

Instructors can use TL episodes to teach multiple psychological concepts/principles (see Table 1 for sample list). To demonstrate specific phenomena, such as situational anxiety, teachers might only show brief scenes. In contrast, they can show entire episodes to reveal the (a) trajectory of experiences over time, (b) individual variations under similar conditions, or (c) intersectionalities [e.g., race/gender influences in education]. Outside the classroom, teachers can require students to view TL episodes. Consistent with parasocial principles (Fitzpatrick & Morgan, 2014; Schiappa, et al., 2016), this context allows the students to view episodes in (a) ‘small doses’ (each scene for a brief period) and (b) private spaces. Instructors can assign either single episodes or multi-episodes with common themes [e.g., “I have a parent in prison” + “I’m getting out prison”; “I’m looking for my mother” + “I’m looking for my father” + “I’m adopted”]. Alternatively, instructors can allow students to select episodes that are meaningful to them.

Although episode viewership can be enlightening, it might not be sufficient to foster higher-level learning skills. So, instructors might want to consider the use of writing assignments. For example, I teach an undergraduate contemporary families course which addresses (a) family structures [childless/childfree, single parent, divorced, remarried, adoptive, gay/lesbian] and (b) family-environment linkages [employment, money, education, fashion, food, housing, hospitality-leisure]. Students are typically assigned three brief (1.5-2 pages) individual paper assignments across the semester. These papers are designed to assess whether students (a) comprehend course concepts accurately and (b) can apply concepts to media-based examples [TL episodes]. For each paper assignment, I list a few TL episodes which are relevant to course topics. For example, a family structures paper might include episodes such as “I’m ending my marriage”, “I’m a single parent”, “I’m placing my baby for adoption”, and “I have gay parents”. A family-environmental linkages paper might include episodes such as “I work for my parents”, “I can’t afford my lifestyle”, “I’m homeschooled”, “I’m going to Fashion Week”, “I’m addicted to food” or “I’m homeless”. Students are not required to watch all of the episodes listed in a single paper assignment. Rather, students are permitted to select the episode which is of greatest interest to them.

I have varied the use of closed and open format papers. In a closed format assignment, students are given a list of brief essay question sets. Students must select one question set as the focus of the paper. Each set is tied to a specific TL episode. For example, one question set is “What are two specific ways in which family dynamics portrayed in “I have gay parents” is consistent with the Kurdek article? What are two specific ways in which the dynamics are inconsistent with Patterson article?” [The Kurdek and Patterson articles are
required readings within the course.] The paper instructions specify that students are expected to integrate details from both the TL episode and required readings within the paper. If students can accurately draw connections between episodes/readings, this is an indication they can recognize course concepts when seen ‘in action’. In open format papers, students are not restricted to the use of specific readings. Rather, students are free to draw connections between a specific TL episode and any course concepts addressed within the textbook/readings (see sample paper instructions in Appendix 1). This format allows students extensive freedom in selecting the specific connections on which they wish to focus. Similar to the closed-format, the papers are evaluated on the accuracy and completeness of integration.

To date, no formal evaluation of this activity has been done. However, there are trends in students’ reactions. Consistent with Vygotskian (1978) ZPD, some students indicated that they find the TL episodes relatable and relevant because the episodes feature young adults. One student noted that an episode was so similar to his/her personal experience that ‘it could have been me’. In contrast, some students noted that they were quite surprised by an episodes’ content. The content was either quite different from their own experiences (e.g., “I’m homeless”) or they were simply unaware that some events/dynamics occurred. No students reported distress by this exposure. However, it is possible that it took some time to consider new information (for them). This reaction appears to align with parasocial contact principles (e.g., Schiappa, et al., 2006).

In addition, TL episodes can be used as an element of active teaching techniques, such as critical case analysis, group debates, or advocacy/community engagement (Dundes, 2001; Laszloffy, 2002). For example, an instructor can form small student groups and assign a single topic area (e.g., identity) to each group. Across the semester/term, groups would be required to view multiple TL episodes reflective of their topic. On a periodic basis (weekly, monthly), the instructor can require groups to identify ways in which the episodes are relevant to current course topics (e.g., identity and prejudice, identity and self-esteem, identity and group dynamics). Instructors could also use TL episodes as a foundation for inclass debates/discussions. For example, teachers can assign multiple episodes on a single theme (e.g., adoption) and then conduct inclass discussions about topics such as (a) privacy rights in open vs. closed adoptions, or (b) maternal vs. paternal primacy in adoption decisions. Instructors can require that students use specific examples from TL episodes to support their arguments/positions on such issues.

Similar to other uses of documentaries, TL is not appropriate for every concept, course or instructor. Rather, TL is simply one teaching resource. Viewership by itself might not be sufficient and students can rely on instructor guidance to comprehend media linkages to course concepts. Consistent with Vygotskian principles (1978), teachers might use episodes as a prelude or scaffold to more intense learning experiences (e.g., Lechuga, Clerc & Howell, 2009). Media can help students to build linkages between course concepts and actual events. Given the depth and breadth of TL documentaries, their potential pedagogical value might be worthy of some additional consideration.
References


Table 1 – Sample List of Psychological Concepts and True Life (TL) Episodes

<table>
<thead>
<tr>
<th>Concept</th>
<th>TL Episode Titles</th>
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</table>
| Cognitive Dissonance/Ambivalence| “I’m having second thoughts”  
                                 | “My parents are in porn”  
                                 | “I’m questioning my gender again”  
                                 | “I’m giving my boyfriend an ultimatum”  
                                 | “I’m fighting my faith” |
| Anxiety/Fear                    | “I have social anxiety”  
                                 | “I have post-traumatic stress disorder”  
                                 | “I panic”  
                                 | “I’m obsessed with staying young”  
                                 | “I have a strange phobia” |
| Sensation/Perception            | “I’m too beautiful”  
                                 | “I hate my face”  
                                 | “I’m addicted to tanning”  
                                 | “I have a paranormal ability”  
                                 | “I’m a competitive eater” |
| Identity/Self-Esteem            | “I’m the black sheep”  
                                 | “I live a double life”  
                                 | “I was famous for 15 minutes”  
                                 | “I’m a civilian again”  
                                 | “I’m adopted” |
| Social Influence/Group Dynamics | “My dad is a bro”  
                                 | “I need to leave my mom”  
                                 | “I’m passing as someone I’m not”  
                                 | “I’m in an interfaith relationship”  
                                 | “I’m under peer pressure” |
| Anger/Aggression                | “I hate the government”  
                                 | “I need anger management”  
                                 | “I have a family who hates my boyfriend”  
                                 | “I’m clashing with my parents”  
                                 | “I’m competitive with my friends” |
Appendix 1 – Sample Paper Instructions

This Individual Brief Paper is worth 15 points. The student is required to write a brief paper after viewing one of the media episodes. The paper will be an opportunity to apply course concepts to a specific family’s experience. The task is to link the media to a specific course concept.

The student must view a single episode of one of the program episodes listed below. These episodes are either accessible via television (e.g., MTV) or online sources (e.g., www.mtv.com). These program episodes depict typical aspects of daily life among various families. Similar to most television programs, it is possible that individuals might use terms (e.g., curse words, derogatory terms) or engage in behaviors that the student might find offensive. These television episodes have been selected for their educational relevance to the course concepts, not to judge or endorse the behaviors. If the student thinks that the risk of exposure to such behaviors/information might be an undue burden for the student, then she/he should contact the instructor to discuss assignment alternatives. If the student chooses to view the media, then she/he is solely responsible for the personal consequences of this choice.

Television Episode from the MTV Series “True Life” that can be used for this assignment:

“I’m Ending My Marriage”
“I’m a Single Parent”
“I’m Placing my Baby for Adoption”
“I have Gay Parents”

Required Paper

After viewing the media, the student must complete a brief paper. The paper is composed of two sections:

Section 1 – Summary of the Media/Biography (3/4-1 page):

Identification of the Episode (e.g., “I’m Ending my Marriage”).

Description of Couple/Family (e.g., names, family position [mother, child, grandfather]. If multiple couples/families are shown in the documentary, then the student can select only one couple/family on which to focus for the paper)

Major Events (e.g., what couple/family did [as shown/described in episode])

Section 2 – Connection of the Media/Biography to a Specific Textbook Concept (3/4-1 page):

Description of how the (1) family members’ relationships to each other or family events are related to a specific (2) a course concept from the textbook (e.g., How did a remarried family demonstrate that they were in the contact phase of adjustment? Which type of
adoption reunion occurred?). The course concept can be drawn from any chapter or article within the textbook. The specific concept (and page numbers from the textbook) must be integrated into the paper. A concept from a Powerpoint cannot be used to complete the paper.

It is not sufficient to simply repeat the information from (1) the textbook and/or (2) online description of the episode. In addition, it is not sufficient to simply label the family relationship seen in the media (e.g., the couple was disenfranchised). Rather, it is necessary to demonstrate a specific link between course concepts and media/biography events.

For example, the following connection could have been media between the textbook and a TV reality series divorce - “On page 166 of the textbook, the authors noted that families with low social integration were more likely to get divorced. This would seem to fit the Gosselin family’s experience (in “Jon and Kate Plus 8”). The couple moved to a new neighborhood in which they didn’t know anyone. They felt isolated and didn’t make connections to neighbors or the community. So, it appears that had low social integration. After they moved to new neighborhood, they became more stressed and angry with each other. It is possible that this low integration contributed to their divorce.” [This is a brief example and not sufficient to complete the entire activity paper.]

This paper is not an autobiographical assignment. Therefore, the connection should not be between (a) the media/book biography and (b) personal information about the student and his/her social network (e.g., “I am an only child, so I couldn’t relate to the families in the siblings episode.”; “My neighbors adopted a child from South Korea.”). Similarly, the connection should not be between (a) the media and (b) hypothetical situations (e.g., “Imagine that Andre and Roberta are getting a divorce.”, “A couple wants to have five kids, but they don’t stop at five. Instead they have ten kids.”).

The content of the paper should focus only on Section 1 and Section 2. No extraneous information should be included in the paper. For example, the episode “I’m living off the grid” might have some similarities to Pre-Industrial family life described in the textbook. The paper should only focus on the relevance of specific course concepts to the experiences of families in this episode. The paper should not (a) provide an overview of the differences among the Colonial, Industrial or Modern periods and/or (b) provide an overview of non-familial elements of Colonial life (e.g., politics, religion, economics).

The paper should meet the following format conditions:

Title page (Name, Course & Section number, date, Media selected [e.g., title of MTV episode]) – do not list Social Security or Student Identification/Eraider name/number on the title page

1½ -2 text pages (in addition to title page)

12-point font (in Times New Roman)
Double-spaced (e.g., no triple/quadruple spaces between lines, paragraphs or paper sections)

1” margins on all sides

Proper spelling/grammar
Many college students come from high school overly focused on grades and test performance. They study the material to pass a test, but don’t think how to use the material beyond the classroom. Then they lament about taking classes that don’t seem to be useful to them and were a waste of time/money. They don’t understand that psychology can be used in EVERY field and their everyday lives to improve their health, task efficiencies, and happiness. I have developed several activities and practices in my classes to inspire the application of psychology outside the classroom. My mission as a community college psychology professor is both to help students learn the material in a way that will persist long-term, but more to show them how psychology can really change their lives. Using the principles of operant conditioning (specifically the research that shows that positively reinforcing a behavior causes it to increase) I have embedded a wide variety of activities to encourage students to apply psychology principles outside the classroom. One way I get students to engage with psychology outside the classroom is to have them complete an activity at home and email me the results. To teach Schachter & Singer’s (1962) Two-Factor Theory of Emotion, I have them induce the chameleon effect to bring up the mood of someone who is unhappy through only the display of their own positive emotion and email me what happened.

Another way I get students to apply psychology is through group projects and competitions. I teach them several factors based on psychological concepts that increase psychological attraction: smiling (the chameleon effect and facial feedback hypothesis), looking physically attractive, familiarity, having someone do you a favor, etc. and have students compete in small groups to come up with the most specific behaviors they can do in a job interview or first date to increase liking. This project highlight’s Chartrand & Bargh (1999) study on the chameleon effect and Strack, Martin, and Stepper’s (1988) on the facial feedback hypothesis, Feingold’s (1992) meta-analysis on the physical attractiveness stereotype, and more.

I also give students structured assignments with paper write ups to apply psychology concepts. To teach various principles of persuasion, I have students try and sell three people a product or brand they don’t normally buy and write it up mimicking APA format. This project showcases Meyerowitz and Chaiken’s (1987) study on the use of loss...
frame to promote self-breast exams, Moreland and Beach (1992) study on the mere exposure effect, and Friedman and Fraser (1966) food-in-the-door field experiment.

Finally, I use the threat of negative punishment on poor test takers (students who get a D or lower on one of my exams) to motivate students to attend a workshop on increasing their test taking skills and to meet in study groups with classmates to practice those skills. Students gain 5pts on the failed test once they attend a workshop and lose 5 additional points off their test score if they fail to attend a workshop before the next test. I start the workshop describing field research by Blackwell, Trzesniewski and Dweck (2007) which shows that having the expectation that intelligence is not a fixed trait and can be improved combined with practice can dramatically increase student classroom performance. Then I teach students about cognitive psychology research on the self-reference effect, visual encoding, and more to increase memory by elaboration.

Ultimately, I hope that once students are in the practice of applying psychology principles for course points, they will find secondary reasons for continuing these practices in their everyday life. This should both increase their long-term memory of psychology concepts and boost their perception of the utility of psychology in their lives. Hopefully, this will also help change public awareness of policies that conflict with psychological research by informing the voting public.
Getting Ahead with Ted-Ed

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Recoup the Group: Using Groups Effectively in your Classroom

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What we think students learn from doing group work and what they actually learn from doing group work differs greatly. As educators, we like to think that they learn content and how to work with other people. Yet students report that they learn how to do entire projects on their own and how ineffective other people can be! This is not because group work is itself ineffective but rather due to how we structure such groups. The optimal way in which to structure groups fluctuates depending upon your learning objectives. If you are striving to generate discussions, you would use a different set of methods than if your primary aim was to review or teach content.

When stimulating discussion in class, there are many different types of groupings that you can employ. The four group types that are most often successful in the classroom are as follows:

Think-pair-share, where students think of answers on their own, then join a partner to discuss and then share the partner discussion with the class;

Pair-pair grouping, where students in partner groups join another set of partner groups and share their discussions;

Circle of Voices or Socratic Circles, where the class forms two concentric circles with the inner circle talking and the outer circle listening, then the circles switch places and roles; and

Rotating Trios, where groups of three are formed initially; then one person rotates to the right, one stays in their group, and the last rotates to the left, thus forming a new group of 3 multiple times.

If your purpose instead is to review course content, you might group students in one of the following five different ways:

Ability grouping, where students are grouped by their abilities (i.e., putting all high students in a group, middle students in a group, and lower level in a group) or by cross-abilities, such as by placing one high, two middle and one low performing student into each group;
Student choice, where students are grouped via their own choices or by their shared interests;

Random grouping, in which groups are formed by numbering off, by proximity of seats in the classroom, or by randomly giving out cards so that like number groups are formed;

Social grouping, which involves forming groups by social roles and needs; or

Jigsaw, where students have home groups, then each member gets assigned to an expert group and the expert groups form to then return and teach their home groups new content.

So the question remains, why use group work at all if students sometimes find it irksome and unproductive? Group projects can help students develop a host of skills that are becoming increasingly important in the professional world (Caruso & Woolley, 2008; Mannix & Neale, 2005). Positive group experiences, moreover, contribute to student learning, retention and overall college success (Astin, 1997; Tinto, 1998; National Survey of Student Engagement, 2006).

If properly structured, group projects reinforce skills that are relevant to both group and individual work (Carnegie Mellon, 2015), including the ability to:

Break complex tasks into parts and steps
Plan and manage time
Refine understanding through discussion and explanation
Give and receive feedback on performance and
Develop stronger communication and even leadership skills.

Whereas the potential learning benefits of group work are significant, simply assigning group work is no guarantee that these goals will be achieved (Carnegie Mellon, 2015). In fact, group projects can backfire badly when they are not designed, supervised, and assessed in a way that promotes meaningful teamwork and deep collaboration.

References


Mindfulness is a key construct in the psychological literature. One common definition of mindfulness is “awareness of present experience with acceptance” (Germer, 2005, p.7). Shapiro, Carlson, Astin, & Freedman (2006) discuss three underlying axioms of mindfulness: intention (purpose), attention (focus), and attitude (mindful approach). These axioms “are interwoven aspects of a single cyclic process and occur simultaneously. Mindfulness is this moment-to-moment process” (Shapiro, et al., 2006, p. 375). Mindfulness practices lead to a wealth of benefits ranging from overall improved well-being (Siegel, 2010) to focus and attention (Morrison, Goolsarran, Rogers, & Jha, 2014). With regards to undergraduate students, mindfulness has been shown to increase task accuracy and decrease wandering mind (Morrison, et al., 2014), decrease test anxiety and increase inner calm (Hjeltnes, Binder, Moltu, & Dundas, 2015), and decrease suicidal ideation in at risk students (Chesin & Jeglic, 2016).

The use of mindfulness skills in the classroom has become a trend in the field of education, specifically educating students within the field of psychology (Barbezat & Bush, 2014; David & Sheth, 2009). Consistent use of mindfulness practices provides specific benefits to psychology students, including present moment focus and subjective well-being (de Vibe, et al., 2013). Recent studies suggest that the use of mindfulness in higher education can be beneficial for undergraduate students. A short guided mindfulness activity implemented in the undergraduate classroom led to immediate calm and increased developmental readiness to listen to intuition (Wall, 2014). “Contemplative modes of instruction provide the opportunity for students to develop insight and creativity, hone their concentration skills, and deeply inquire about what means most to them. These practices naturally deepen understanding while increasing connection and community with higher education” (Barbezat & Bush, 2014, p. 8).

After reviewing the current themes in the literature and identifying the applicability to the undergraduate classroom, mindfulness based experiences were integrated into an upper level undergraduate psychology course. Students enrolled in PSY 4120, Techniques of Counseling, participated in mindfulness based practices, both within and outside of the classroom. During the first class meeting, students learned about experiential avoidance (Siegel, 2010) and the role mindfulness serves in decreasing experiential avoidance. Students also signed consent forms to participate in mindfulness meditation practices and for their responses to be shared in publication and presentation formats. Typically the first session of this course is devoted to introductions and a general overview of the counseling profession. Since the mindfulness activities were a central theme to the semester, more time was devoted to introducing this specific concept during the first class session. Throughout the course, students participated in professor-led mindfulness practices including the body scan, mindfulness of the breath, and mindful movement (Collard, 2014).
These activities occurred one class session a week and lasted 15 minutes of a 75-minute class. On many occasions, a rich discussion of the activity would take up to 15 more minutes, requiring course adjustments. These adjustments included extra reading materials and changes to discussion forums required for the course, which provided students the platform to more deeply reflect on the reading materials.

Student responses to the mindfulness activities varied. Overall, the participants in the class enjoyed the opportunity to practice a present moment awareness in the midst of busy days. Students reported satisfaction with having new tools for calming themselves in the midst of a busy academic semester. Several students were surprised at how quickly they felt relief from taking a few intentional breaths. Susannah* reports: “I have become more aware of my body and feelings of peace and solitude have begun to enter my personal life.” Not all students were as positively impacted by the mindfulness practices. “It’s hard for me to comfort myself. I personally am not in the market to start meditating on my own, but also am not as closed off to it as I was when the semester started” reports Doug*. Other students reported disappointment that meditations did not result in quick resolutions of intense emotional experiences. These experiences were discussed both in dyads and in groups in the classroom. Students had opportunities to share their evolving views of mindfulness practices and how these practices impacted their daily lives.

Lectures included the positive implications of mindfulness practices on mental health. Student responses mirror this clinical finding. “With each meditation, I fall more in love with the practice, and it has been an essential, integral part in my healing journey so far” confesses Hannah*. The variance in responses and participation levels demanded adjustments to class flow. At the beginning of the course, meditations occurred at the end of class, however, students experienced discomfort when transitioning from this course to the rest of their days. The mindfulness experiences were moved to the middle of the class session, which provided ample time for discussion and processing of the experiences. This change was beneficial in offering students the opportunity to fully experience the activities without fearing that class would be late, hearing noise in the hallway when the class was ending, or opening up emotionally without time to transition to the next part of the day.

As with any teaching strategy, ethical considerations need to be considered. Barbezat & Bush (2014) encourage educators to maintain their own mindfulness practice prior to integrating one into the classroom. Additionally, it is advantageous for professors to be sensitive to the religious and spiritual beliefs and practices of their students. Professors need to clearly describe the intention of the practices, and to answer questions directly and openly. Offering alternative experiences for students who do not consent to the practices is an important option (Barbezat & Bush, 2014). With thorough preparation and intentionality, the implementation of mindfulness practices in an undergraduate classroom has many benefits.

*names changed for confidentiality
References


Integrating a Skills-Focus in Introductory Psychology

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In this workshop, we challenged instructors of Introductory Psychology to think about how they can enhance students’ learning, make their courses more engaging and relevant for more students, and make teaching even more fun by focusing less on delivering course content and more on teaching bigger-picture skills. Although we focused specifically on Introductory Psychology, many of our ideas and activities are relevant in other courses as well.

Introductory psychology is one of the most important courses psychology programs offer because it not only provides a foundation for psychology majors, it also typically serves as the only exposure to the discipline of psychology that many students get (Gurung et al., 2016). This leads to what are often perceive to be competing demands in the course: covering the tremendous breadth of content needed by prospective psychology majors versus achieving the broad general education goals needed by the many non-majors who typically enroll in the course. Compounding these challenges is the accumulating evidence that students retain surprisingly little of the content (e.g., Landrum & Gurung, 2013), and that both employers and students believe we need to emphasize skill development more (e.g., AAC&U, 2011; Martini, Judges, & Belicki, 2015).

We (Jhangiani & Hardin, 2015) recently integrated efforts from an APA taskforce to identify a new model for Introductory Psychology (Gurung et al., 2016) with recommendations for a greater emphasis on skill development (Strohmetz et al., 2015) to call for the adoption of an approach to teaching Introductory Psychology that emphasizes skill development at least as much as course content, and that utilizes the principles of backward course design to identify the enduring understandings that students ought to take away from this course (Wiggins & McTighe, 2006). We integrated psychology-specific outcomes (APA, 2013) with liberal education outcomes (AAC&U, n.d.; 2011) to identify two specific skills that we argued should be of universal focus in Introductory Psychology: Applying content-based knowledge and Using scientific reasoning and critical thinking.
Achieving a coherent focus on these skills in Introductory Psychology, or any course, for that matter, requires an intentional shifting of perspective from content as the means to an end, rather than the end itself. To do so, we argued in this workshop that instructors must adopt a backward course design perspective, which involves three steps (see also McTighe & Wiggins, 1999). First, instructors must identify what we want students to know or do as a result of our course (or a particular course unit). A backward course design perspective involves delineating three types of outcomes: ideas that are worth being familiar with; things that are important to know and do; and enduring understandings, those concepts or skills we want our students to know or do 6 months or even 6 years after our course. These enduring understandings typically entail the kinds of application of and scientific thinking about the material that take course content from an end in itself to the means by which students are able to apply content-based knowledge and use scientific reasoning and critical thinking.

For example, in the research methods section of a typical Introductory Psychology course, the enduring understandings might be for students to be able to distinguish questions that can be answered scientifically from those that cannot and to identify appropriate and inappropriate conclusions from different research designs. These skills are broadly relevant whether students are psychology majors or not. To be sure, acquiring these enduring understandings is predicated on students’ understanding of experimental versus correlational research, which requires understanding concepts like random assignment and terms such as independent and dependent variables. However, designing a research methods unit with the goal of helping students distinguish empirical from non-empirical questions and evaluate conclusions from research is likely to look very different, in terms of class activities and assessment methods, than a content-focused research methods unit focused on helping students memorize terms and basic procedures of the scientific method. By taking the time to grapple with the question of What do I want my students to do with this information in 6 months or 6 years? as we design our courses, we believe that the introductory psychology course (as well as other courses) can be re-invigorated. Although this shift in focus away from content delivery and toward skill development requires changes in how we teach and how we assess learning, we believe students and instructors benefit from the meaningful and exciting learning that results.

References


ABSTRACT
The use of Student Management Teams (SMTs) is a relatively new teaching technique designed to improve the quality of college courses and students' levels of motivation and performance and engagement within those courses. This study reports on two prior published studies. In each of these studies, courses with an SMT integrated into the class were compared with a control comparison class. Results of study 1 demonstrate that members of the SMT performed better in their courses, increased their course engagement, and increased course engagement and performance. Results of study 2 demonstrated that students in a course with the SMT reported higher feelings of autonomy relative to students in the control comparison course. Let's discuss the classroom implications and please download an implementation plan for instructors with a smartphone QR reader in the bottom right corner of this poster.

INTRODUCTION
A SMT is a group of 3-5 students who meet with the professor regularly to discuss and help improve the learning environment in a course (Eccles & Wigfield, 1995; Pintrich, 1996). The SMT is charged with developing and interpreting a self-evaluation questionnaire, then communicating the results to the professor (Handelsman, 2004). They meet with one another weekly; they meet with the professor every other week.

DISCUSSION AND IMPLICATIONS
SMTs effectively improve student understanding by engaging the voices and ideas of students within a course. They may also strengthen other aspects of student functioning.

STUDY 1 (Troisi, 2014, Teaching of Psychology)
Method
Four total courses examined (n = 81), two SMTs (n = 6) in two of the courses.
Results (for SMT members)
- Course performance: F = 4.05, p = .001, a = .21
- Course engagement: F = .32, p = .49

STUDY 2 (Troisi, 2015, College Teaching)
Method
Two total courses examined (n = 42), one SMT (n = 3) in one of the courses.
Results (for both classes)
- Initial perceptions of choice: F = 4.65, p = .05, n² = .11
- Final perceptions of choice: F = 5.06, p = .05, n² = .11

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Institutional Benefits Associated with Course Redesign
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ABSTRACT

In 2012, Introductory Psychology at Missouri State University (MSU) was completely redesigned using a blended, flipped classroom approach. The traditional course was taught in sections of approximately 150 students in a lecture format with only one instructor. The redesigned course is now taught in blended sections of 350 students with a course staff of five individuals. Outcome data suggest that the redesigned course leads to increased student learning, reductions in DFW rates, and improved student perceptions of the course when compared to the traditional course. The successful implementation of the redesigned course has also contributed to additional changes that were not predicted from the outset. Three years after the initial implementation of the redesign, the psychology department at MSU has a record number of psychology majors, and our course enrollment is increasing from the declining numbers that we were experiencing prior to, and during the first year of the redesign. For example, the number of psychology majors from prior to the redesign and following the redesign has increased by a factor greater than the overall student enrollment at the university. The positive and substantial longer-term benefits of implementing a successful course redesign of Introductory Psychology are discussed.

METHOD

Data were collected from Argos systems through the Missouri State University Institutional Research Office. Overall MSU annual (Springfield campus) enrollment, annual enrollment in Introductory Psychology, and number of psychology majors was recorded from 2003-2016. All enrollment data were collected as of census.

RESULTS

Figure 1. Enrollment in Introductory Psychology over time.

Figure 2. Number of psychology majors over time.

Table 1 shows the unstandardized and standardized coefficients for each regression. The standardized regression coefficient for percent change in psychology majors is larger ($\beta = .42$) compared to the coefficient for total campus enrollment ($\beta = .37$).

REFERENCES


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Sustainable Community Projects Improve Students’ Ecological Worldview

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Presented at: APS Teaching Institute, 2016
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Abstract

Conservation Psychology highlights some of the contributions psychology can make through educating students to ensure a sustainable future. This study examined the impact of sustainable community projects in a Conservation Psychology course on students’ Ecological Footprint scores. Scores reflect an increased ecological worldview and improved ecological footprints. We compared mean Ecological Footprint scores of 124 students at the beginning and end of the semester. Mean Ecological Footprint scores were significantly lower (improved) at the end of the semester for four courses, but significantly more for the two courses requiring a community-based project. Using community-based projects in psychology to examine environmental problems offers a unique opportunity for students to integrate the scientific and applied aspects of the discipline. This is a relatively new direction for psychology programs, including ours, and clearly has promise to raise awareness of and address the sobering environmental issues facing this generation of college students and future humanity.
Sustainable Community Projects Improve Students’ Ecological Worldview
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Introduction

Conservation psychology is the recognition of the bidirectional relationship between humans and the natural environment: how nature affects people and how they in turn affect the environment. The goal of conservation psychology is to promote a sustainable and healthy relationship between human and nature. Students enrolled in Conservation Psychology courses took the Nature Conservancy Carbon Footprint Calculator survey at the beginning and end of the semester. The present study demonstrates that the addition of a research-based community project in a Conservation Psychology course significantly improved students’ Carbon Footprint scores.

The Nature Conservancy Carbon Footprint Calculator score is broken down into four categories: home energy use, driving and flying, food and diet; and recycling and waste. The United States average behavior breakdown is:

- Home Energy (36.8%)
- Driving and Flying (43.5%)
- Recycling and Waste (4.4%)
- Food and Diet (15.3%)

The United States average per person total greenhouse gas emissions is 27.00 tons of carbon dioxide (CO₂) equivalent per year. The World average per person total greenhouse gas emissions is 5.5 tons of per year. Recent United Nation scenarios suggest that if current population and consumption trends continue, by the 2030s, we will need the equivalent of two Earths to support us. We are currently exceeding the Earth’s biological capacity by nearly 50%. To sustain present levels of consumption, we would need 1.50 earths.

Method

One hundred and twenty-four students enrolled in four Conservation Psychology courses took the Nature Conservancy Carbon Footprint Calculator quiz at the beginning and end of the semester. Students in two of the courses completed a research-based community project in addition to the other assignments for both courses, including a self-change project. Students also described which assignment was most responsible for contributing the change in their carbon footprint.

Results

Carbon Footprint scores were significantly lower at the end of the semester for students with no community project ($M =16.78$, $SD =3.56$) and students with a community project ($M =13.78$, $SD =3.88$) than at the beginning of the semester ($M = 20.56$, $SD = 4.32$ and $M = 19.78$, $SD = 3.44$). The mean improvement in scores was 3.78 fewer tons of carbon dioxide for courses without a community project $d = 1.13$, 95% CI [-4.71, -2.95] and 6.00 fewer tons for courses with a community project, $d = 1.79$, 95% CI [-6.46, -5.54], respectively. Seventy-nine percent of students’ scores improved over the course of the semester.

Discussion

Using community-based projects in psychology to examine environmental problems offers a unique opportunity for students to integrate the scientific and applied aspects of the discipline. This is a relatively new direction for psychology programs, and it clearly has promise to raise awareness of the environmental issues facing this generation of college students.

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Experiential Extra Credit: More Than Just Making up Points

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College professors disagree about extra credit. Norcross and Dooley (1993) explored reasons why college professors may or may not offer extra credit. Reasons against the practice include that it encourages lax student behavior, course assignments are sufficient, extra credit distorts the meaning of the assigned grade, and that other methods (e.g., curving the grade distribution) can handle the problem of low grades. On the contrary, some professors cite benefits for offering extra credit such as that it motivates and challenges students, allow students to recover from “bad grades”, encourages creativity and independence, and adds new learning dimensions.

In a study of 287 full time college faculty 13% offered extra credit (Norcross & Dooley, 1993). However, more faculty in social and behavioral sciences give extra credit than in other disciplines (Hill, Palladino, & Eison, 1993). One possible barrier to offering extra credit is the assumption that few students may complete it. Harrison, Elicker, McConnell, and Hall (2010) found that out of 1,158 eligible students 39% participated in extra credit. Meister, and LeFevre (2011) found that students are more likely to complete extra credit when they have stronger academic performance, are in large lecture classes, and are female.

Instead of conceptualizing extra credit as a way for students to simply make up points, I think of it as a way to engage students beyond the classroom. Walsh (2009) postulates that campus life is more than attending class and students have much to gain from out-of-class events such as campus speakers, discussion panels, luncheon lectures, and academic conferences. Oftentimes these events cross disciplinary boundaries to help students make more connections and challenge their biases (Walsh, 2009). It can be complicated to require students to participate in such events for various reasons, but perhaps students would be motivated to engage if the opportunities were offered as what I call experiential extra credit. Here, I describe my experience offering experiential extra credit along with some outcome measures from my courses.

The Approach

In Spring 2016, I offered experiential extra credit to four sections of Introductory Psychology at Paradise Valley Community College (PVCC), including two online sections (N=24) and two face to face (N=35). PVCC serves an area in northeast Phoenix, Arizona with an average enrollment of 10,000 students. Students were offered experiential extra credit to attend pre-specified campus events. Attendance of each event was worth 10
points and students could receive extra credit for a maximum of five campus events. Overall, students’ grades were determined out of 1000 points, making each experience worth an extra 1% added to their course grade. Examples of events included:

Sessions from women’s history month including a workshop on Marriage, Motherhood, and Careers.

National campaigns brought to campus such as *It’s On Us* against sexual harassment.

Documentary viewings and discussions including the film *White People*, exploring white privilege.

Panel discussions and guest speaker lectures such as an open forum showcasing local psychologists.

Research opportunities such as involvement in the campus Honors Research Showcase and volunteering as a subject for Research Methods.

Community events such as attending local psychology conferences and events at partnering colleges.

**Outcomes**

In the face to face classes, 63% of students participated in at least one experiential extra credit activity and 29% participated in the online classes. Average extra credit points earned were 19.50 (SD=13.56) in the face to face classes and 11.43 (SD=3.78) in the online classes. Students were asked to describe their experiences with the extra credit on their course evaluations. Sample responses included:

“I did not participate in the extra credit, I wanted to however, I did not need the points. However, I should have done it to learn new information.”

“It was extremely helpful and very eye opening and I am better off for doing it.”

“I participated in the psychology Q and A. I learned a lot during and had a great experience.”

“I really liked having the opportunity of extra credit, because it was a way to show that we care about our grade. I did not go [only] for the extra credit.”

“The events I went to represent a matter in our community. I enjoyed them and learned a lot.”

In summary, most students reported a positive experience and those who did not take advantage of the experiential extra credit still applauded the opportunity.

**Discussion and Suggestions**

Experiential extra credit may be one way to increase student engagement and motivation in campus life. Walsh (2009) suggests that we can make out-of-class learning experiences
more valuable by offering options, preparing students for the event, and giving opportunities to share learning outcomes. Additional suggestions for implementation include: introduce experiential extra credit in the syllabus, explore what is already available on campus, use a Learning Management System to announce activities, show passion for the events yourself by attending them with students, have a clear system for students to prove their attendance, and give clear instructions for reflection on the events.

More can be done to increase student interest in out-of-class experiences. Encouraging students to participate in meaningful and relevant experiences outside of class may help instructors meet the current APA Guidelines 2.0 for the undergraduate psychology major, particularly goals two and three, scientific inquiry and critical thinking and ethical and social responsibility in a diverse world (Guidelines 2.0, 2013). Further research can examine what circumstances lead students to engage in these experiences and whether engaging in these experiences can meet learning objectives.

References


Beyond Databases: Psychology Information Literacy Across the Curriculum

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Student: “My PSYC assignment says I need to find an ‘empirical, scholarly article’ from this list of journals. What search words do I use for that?”

Librarian: “That’s difficult to accomplish through search words alone. Let’s start at the beginning. Can you tell me more about a topic you’d like to read about, and how do you know if something is an empirical article for that topic?”

Student: “No, I just need to know the search words for this assignment. I don’t need to do this for any other assignments, so just any article is fine.”

While fictional, this interaction represents very real interactions with average undergraduate Psychology students at a library reference desk. As novice researchers, students do not yet value the same information tasks expert Psychology faculty members find commonplace. How do we communicate and contextualize Psychology’s information values and skills in a way that moves students beyond the mechanics of “search words?” What are the core Psychology-related information skills students need to become successful scholars and citizens? How can disciplinary faculty members and their librarian counterparts strategically support such development across the curriculum?

Professional Guidelines: More than Searching

In 2015, the Association of College and Research Libraries approved the Framework for Information Literacy for Higher Education, proposing we consider information literacy as “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.” The framework proposes six “frames” that represent underlying information literacy concepts that students encounter in their transition from novice to expert information consumers, producers, and users:

Authority is constructed and contextual
Information creation as a process

Information has value

Research as inquiry

Scholarship as a conversation

Searching as strategic exploration

The APA Guidelines for the Undergraduate Psychology Major: Version 2.0 situate psychology information literacy within “Goal 2: Scientific Inquiry and Critical Thinking.” Here, students “Demonstrate Psychology Information Literacy” through identifying, reading, evaluating, and utilizing “psychological sources.” Elsewhere, in Goal 4.1 students are asked to “Construct arguments clearly and concisely using evidence-based psychological concepts and theories and to meet Goal 5.1 students must “[provide] evidence beyond personal opinion to support proposed solutions.”

Finding and retrieving information is just one step to becoming a thoughtful and capable member of the scholarly community. Research Methods courses emphasize comprehensive literature searches in major databases, but this represents just one small slice of the information skills students need. Recognizing that “information literacy” is more than search skills and that searching happens within the context of the wider information environment is essential.

Beyond Databases: Context for Searching

Integrating information literacy instruction into existing courses is not new. Strong partnerships between disciplinary faculty members and their librarian counterparts should allow us to move beyond just-in-case “library orientations”. The first step is to consider the existing assignments, along with the context students need to know to make the most of their searching.

Introduction to Psychology: From Topic to Research

An Introduction to Psychology class assignment asks students to write a paper, requiring between three-to-five outside sources. Search skills are important for locating sources, but students also need identify the variety of information sources available to them. Research requires engaging with a variety of sources in order to refine a strategy and scope.

During a 90-minute library session, groups evaluated a variety of pre-selected information sources and formats grouped loosely around a single topic. Sources included an academic book, a popular book, a news article, an empirical scholarly research article, and a reference work like an encyclopedia. Guided questions for evaluation included:
What is the information type (format)?

Who created the source? (Not just the person’s name, consider what they do)

Who is the intended audience

Why was this information source created?

How is this type of information useful in a Psychology-related research project?

Students worked in groups and described how they might use each item during a research process. They then spent the rest of class evaluating where they were in their research process, determining the type of information would be useful to them at that moment, and learning how to formulate a good search strategy to find what they needed.

**Research Methods: Sourcing Your Argument**

In Research Methods courses, students write an original research proposal or conduct their own original research. The first step is to write an annotated bibliography or draft an “Introduction” section. The library instruction targets advanced search strategies in databases like PsycINFO. Students struggle to evaluate how their search results relate to their research ideas, and have difficulty synthesizing scholarly information in order to inform their hypothesis, construct a cogent argument, or provide the background information necessary to defend their research direction. Assignments and instruction should situate search skills within the purpose an Introduction section serves in a scholarly research article.

An activity that demystifies an article’s “Introduction” section was added to the beginning of a typical library workshop about advanced search strategies. Students read a short from a scholarly paper, with all extra clues about the paper’s topic removed. Students described the overall “topic” of the research paper. Students were randomly assigned to carefully read different paragraphs within the Introduction, and describe what individual paragraph’s subtopic. Students then worked in small groups to discuss how the author organized the paragraphs, how the author built their argument, and the way the author used in-text citations of previous research. Finally, the entire class discussed how an models the way Psychology researchers search for, select, and use information in their regular practice. Throughout the rest of the lesson, students applied their new understanding of the purpose and structure of an Introduction to inform the advanced search strategies necessary to find information for their own research topics.

**Conclusion**

Finding and retrieving scholarly information remains important, but search strategies alone do not equip Psychology students with the information skills necessary to become
capable information consumers and producers. Using our professional guidelines as common ground, librarians and Psychology professors should assess existing assignments across the curriculum for places to integrate contextual information skills necessary to make searching make sense.

References


Open Access Textbooks: The Good, the Bad, the Ugly

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The purpose of the presentation was to discuss many of the Open Access textbooks that are available in psychology and presenting the benefits and drawbacks of Open Educational Resources (OER) in general for considering adoption in one’s courses.

OER are textbooks and ancillary materials that are free for educators to utilize in their courses without the need for students or instructors to purchase from a publisher. This is couched within the large Open Access movement seen both in academia and in internet and technology culture. The philosophy of OER is that by making course materials free for students to access, many barriers are removed in the pursuit of the democratization of education for everyone seeking it. Technology advancements mean that the holder of the printing press is no longer a gate keeper to information and that education should be more affordable and accessible to disadvantaged groups both nationally and globally. (See Caswell, Henson, Jensen, & Wiley, 2008; Adams, Liyanagunawardena, Rassool, & Williams, 2013).

OER are typically licensed through a Creative Commons (CC) license. CC licensing was designed for the purpose of addressing issues that were arising in attribution and sharing of intellectual material online (Creative Commons, 2015). Authors may choose a number of different licensing types within CC depending on how they desire the material to be shared, edited, and reproduced. Authorship models vary by text and each have their benefits and drawbacks. Some, like the NOBA project, an Introductory Psychology OER, uses a ‘reader’ structure where expert authors in specific subfields write those subsections (NOBA, 2015). Others have single authorship or limited open source where multiple authors can draft and edit.

Various funding models of OER are being attempted. While electronic formats allow for much lower costs, there are still labor and financial concerns. Currently, most are funded through foundations dedicated to expanding OER such as in NOBA (the Diener Education Fund) and OpenStax, which publishes an Introductory Psychology text, along with many others like Statistics and Physics (William and Flora Hewlett Foundation, among others). Authors are typically not compensated and are simply donating the material and/or using for the purpose of scholarship fulfillments for tenure and promotion. Other models such as ‘pay what you want’ have been tried, but currently the sustainability of these models is yet to be seen. Flat World Knowledge, for example, chose to move away from an open approach to a traditional cost based system (Flat World Knowledge, 2015).
The direct benefits to the classroom are noticeable. Free textbooks means one less barrier to access higher education for students who are already stretched financially, especially students from underserved populations. This is a primary motivation for schools that serve underrepresented groups to consider OER, such as Salt Lake Community College; through a grant from the William and Flora Hewlett Foundation, SLCC has been implementing OER in courses as broad as psychology, sociology, history, and algebra. There are other benefits. Access is immediate, so students do not have to wait for financial aid or ordered books to arrive. This also stops students from trying to take a course without purchasing a textbook. Being electronic and online based, the texts can also be accessed from most electronic devices: tablets, smart phones, e-readers, laptops. The benefits to the instructor include being able to blend and rearrange content to fit their course and easy integration into online course management systems. And for courses that do not have textbooks that directly align, OER can be used to create and accentuate course texts. The earliest example relating to psychology found was an online open animal behavior text from the early 2000’s (Breed, 2001) when the availability of introductory animal behavior texts was far more limited.

Yet, there are drawbacks. The most noticeable is that online textbooks do require students to have regular access to internet and electronic devices. While schools have computer labs, this can be a barrier for students in ease of access at home for homework. In addition, some students may not have the technological skills for navigating these online platforms.

There is a concern about retention and comprehension in electronic media. But research generally shows the same learning outcomes in electronic versus print textbooks (Hilton & Laman, 2012; Rockinson-Szapkiw, Courduff, Carter, & Bennett, 2013). Yet there is some resistance to this format (Shepperd, Grace, & Koch, 2008). NOBA and OpenStax do allow for students to purchase an at-cost hard copy if they wish, but not all OER has this available.

While OER is in its infancy, there is a dearth of ancillary materials such as slides and test banks for instructors and additional study materials for students. Over time, materials are growing, but this lack of additional resources is a current concern. Quality control issues are a large part of the skepticism of OER, but the quality of each text should be independently considered, as in any textbook adoption process. The final drawback is that of funding sustainability. The future of funding models is yet to be seen.

The library of OER is growing, and there are a handful of psychology texts available already. While OER as a whole has its benefits and drawbacks, the advantages are strong. Having personally used both NOBA and OpenStax, I feel that both are worthy of consideration for adoption. And more effort should be made to create a robust OER environment which enables instructors to choose and rely upon OER. Finances are too large a barrier to access higher education, and the skyrocketing costs of textbooks are only exacerbating the problem. OER seeks to fix this fundamental problem, using technology now available to make knowledge available to all who seek it.
References


The Hero of Psyrule and Travels Through Developmental Earth: Gamification of Two Psychology Courses

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Promoting Teachers’ Use of Adaptation and Differentiation: Using the 9-Grid Tool in Content Area Classrooms to Include Students with Exceptionalities

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When students are engaged in and able to function within the curriculum, misbehavior and boredom are typically less likely to occur (Kauffman, 2010; Renzulli, & Park, 2002; Witt, VanDerHeyden, & Gibertson, 2004); however, many of these students have psychological and learning needs that keep them from being able to participate effectively in content area assignments (Sabornie, Cullinan, Osborne, & Brock, 2005). Students with varying abilities can be found across topic areas and include students learning a new language, those with visible and invisible disabilities, and those who are identified as gifted and talented. Within their wide range of abilities, there can also be found gaps in their academic skills, which often leave teachers at a loss as to how to support them (Reid et al., 2004).

If students are in support programs such as those for English language learners, special education, or gifted and talented enhancement, teachers may feel they are not responsible for addressing these areas in the general curriculum; however, if these needs are not addressed, students very easily fall through the cracks and their prospects as future students or contributing members of society are often deleterious (Reschly & Christenson, 2006; Reschly & Lovelace, 2010; i.e., What Works Clearinghouse).

Finding ways to engage struggling students with techniques that allow access to the teachers’ content area of expertise is a successful solution for both teachers and students. When material is presented initially through approaches that allow students to feel competent, teachers can then support students to accept further and attempt more sophisticated deliveries. It is beneficial to have students begin work in their areas of strength, bypassing the discouragement that is often presented when they are introduced to an unfamiliar or challenging assignment.

Teachers need ways of allowing students to work within their strengths, using connections within subject areas of interest and authentic life activities or events as motivators. This may require that they elicit performances from students that demonstrate output of learning beyond formats that are traditionally accepted.
The teachers in the current study reported that completing the 9-Grid tool (DeSchenes & Sprague, 1994), was initially difficult because they realized they did not know some of the students’ needs; they only saw the outward display of challenging social and academic behaviors that they found took large amounts of time to address or were disruptive to teaching and student learning. As the teachers examined the nine areas for a need of adaptation, they reported a greater ability to add supports to the lessons developed. They also reported that as they completed the 9-grid for specific students, they saw how the same adaptations could be used for many students in their classes. An example of a completed 9-grid from mathematics for a student with high anxiety, a preference for the verbal modality of expression, difficulty with fine motor skills in handwriting, and slow processing of information read or delivered verbally was recognized as helpful to many other students as well.

The study used qualitative methods of paper review and teacher perceptions regarding curricular and instructional adaptations and differentiation techniques. Pre-service and in-service teachers in grades K-12 revealed through the use of a 9-grid adaptation identification tool various way in which they would include students with disabilities in their content areas. The workshop focused on the various ways this tool is most effective for student output of knowledge learned and teacher input for content delivery. University personnel who coach teachers and support students with learning and social needs learned to use this tool to achieve those purposes.

Agenda followed this outline:

a) Review of literature on the history and the development of the 9-grid tool.
b) The introduction of the 9-grid components for area content adaptation for student output.
c) Description of study completed with teachers using the 9-grid tool for middle school students with varying abilities.
d) Attendee discussion of various challenges faced in content area classrooms by students with varying needs from disabilities, ELL, and Gifted/Talented abilities.
e) Teacher use and examples demonstration of past teachers’ use specific to content areas.
f) Attendees practiced completing a 9-grid tool and consulting with a teacher in need of this tool.

Attendees left with the following outcomes addressed.
Use of the 9-grid tool to identify students’ need in order to make adaptations in content area teachers.
Demonstrated variation of output by students to demonstrate knowledge gained will be allowed when teachers understand their ability to vary their Input.
Students can show more academic effort when teachers used instructional methods that allow student interaction and physical movement than teachers typically provide.

Other changes that were addressed through the 9-grid tool as they relate to student motivation for continued effort when challenged, teacher confidence in identifying instructional methods for student unique needs, methods of grading and related expectations for students’ performance. Challenges that can occur as a result of these changes, as well as implications for practice, teacher education, and future research were discussed.

References


Putting Students in Charge of Student Learning: Creating Eye-Tracking Lab Modules for a Psychology Curriculum

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Universal design began with architecture and technology, and the concept has been extended to the scholarship of teaching and learning (see McQuire, Scott & Shaw, 2006), with Universal Design for Learning (UDL), Universal Design for Instruction (UDI), and Universal Instructional Design (UID). This presentation outlined some general principles of UDL and many concrete examples that attendees can use in their own classes.

Instructors may not know whether students in their courses have a disability and could benefit from instruction based on UDL. Schelly, Davies and Spooner (2011) found that almost 80% of students in Introduction to Psychology courses chose not to disclose their disability to their university. This suggests that designing materials to help anyone with a disability comprehend and learn would be advantageous, since instructors will not always know which students have disabilities.

Efforts to make instructional material accessible to those with disabilities can help also help many other people, such as students from diverse cultures. In this presentation, we highlighted several concrete examples of how to present material consistent with UDL, and, we explained which types of students (e.g., students with learning disabilities, students whose first language is not English) might benefit from such a presentation.

Some research suggests that providing psychology instructors with information about UDL principles can affect their use of such principles. Schelly, Davies, and Spooner (2011) found that instructors of Introduction to Psychology were more likely to implement teaching techniques consistent with UDL after an hour-long training. For example, students reported that their instructors were more likely to present information in a variety of ways and to summarize the content before, during, and after presenting the information after their instructors attended the UDL training.

Although there may be benefits to the UDL perspective, not all instructors are interested in UDL. We presented data from a survey of instructors at our university about the barriers they perceived in implementing UDL in their classrooms, which includes a lack of knowledge of universal design. Additionally, we presented some ways to deal with these types of perceived barriers, as well as many quick and easy ways to implement UDL in their courses.

For example, one way to make your course materials more accessible to everyone is having your presentations be in colors that make them easy-to-read and comprehend. The best options are black text on a white background, red text on a white background, white text on a black background, aqua text on a black background, and magenta text on a black background.
background. In addition, it is easier to read text being projected when it is in sans serif font, but it is easier to read documents when the text is in serif font.

Another specific tip is to not have any material be exclusively audio or exclusively visual. Whenever you have a graph on your presentation slides, for example, you should also verbally explain what the graph means. This will help people with a visual impairment but it will also help individuals who lack scientific literacy understand the main points of the graph. A similar suggestion is to not say, “You can read this,” when referring to one of your slides. A person with a visual impairment, a person whose native language is not English, and a person with a learning disability may all have issues reading the information and reading it quickly enough to comprehend it. You do not have to read your slides, but summarizing the important points of each slide will be helpful.

Overall, making our course and our course materials more accessible and more in line with universal design for learning (UDL) principles will help all students, regardless of their disability status. Making content easier to read, reinforcing content by presenting in multiple channels, and providing flexibility in our assignments are all consistent with UDL but that will likely help all of our students.
The idea of psychologically “triggering” stimuli—emotionally-laden material that might interface with an individual’s history to trigger PTSD-type symptoms—has been around for decades. However, only during the last 15 or so years have trigger warnings emerged (first in online self-help forums and blogs, then across websites and social media) to protect people from unintentional exposure to information that might induce painful memories, flashbacks, or panic attacks. More recently, trigger warnings have entered the academic classroom.

Institutions like the University of California at Santa Barbara, Oberlin College, Rutgers University, and George Washington University have held debates and wrestled with demands related to the call for teachers to provide warnings in advance if assigned material contains anything that might trigger difficult emotional responses for students. Recently (August 2014) the American Association of University Professors (AAUP) called the demand that instructors provide trigger warnings in advance of assigning sensitive material “a threat to academic freedom in the classroom.” They elaborated, “the presumption that students need to be protected rather than challenged in a classroom is at once infantilizing and anti-intellectual.” Because the implementation of trigger warnings in academia is so recent, there is little in the scholarly literature to guide instructors.

Across the psychology curriculum, faculty present controversial and potentially troubling topics. With certain issues (e.g., abortion, sex trafficking), we can predict in advance that some students may find themselves emotionally challenged by the material. In other cases, though, topic areas that may not seem particularly sensitive (e.g., bullying, poverty) may trigger emotional traumas in specific students’ lives, which can overwhelm their resources and interfere with learning. While emotional arousal can heighten students’ interest in and engagement with course material, too much emotion can threaten to disrupt the learning process, not only of any given individual but of the class as a whole.

Many faculty members applaud the notion of trigger warnings, which give students a heads-up about the material they are about to encounter and allow students some choice regarding whether and how they will engage with the information. Others, however, worry that trigger warnings amount to an overly cautious approach, and that hypersensitivity to students’ potential unpleasant reactions may yield to a kind of censorship or narrowing of curricular content. Recently (August 2014) the American Association of University Professors (AAUP) called the demand that instructors provide trigger warnings in advance
of assigning sensitive material “a threat to academic freedom in the classroom.” They elaborated that “the presumption that students need to be protected rather than challenged in a classroom is at once infantilizing and anti-intellectual.”

Navigating the choppy waters between “safe but censored” and “potentially volatile” can be a bit of a guessing game, as it is impossible to know the range of triggering content that may push against students’ idiosyncratic histories. Informed by literature on trauma, by personal experience teaching “triggering material,” and by the recent university adoption of a controversial book about sex trafficking, this presentation helped instructors make thoughtful decisions regarding when and how to prepare students for intellectually relevant yet disturbing material. Attendees received information about managing student reactions and self-disclosures before, during, and after the inclusion of sensitive material in the learning environment.
Gamification applies gaming mechanics to teaching in order to increase engagement and motivation (Sheldon, 2012). Gamification can take place from the micro- to macro-level; some examples are described below. Even professors new to gamification can incorporate some shared techniques to increase student engagement.

**Micro-level Gaming:** Micro-level games take place within a single class session. These are useful for learning or reviewing vocabulary or specific concepts.

*Cranium Cranium:* Students are divided into groups of 4-6, and take turns choosing a card and helping their group to guess the concept (for example, Amygdala) on that card. Students roll a 20-sided die and use the following means for hints:

- 1-5: Describe it!
- 6-10: Draw it!
- 11-15: Sculpt it!
- 16-20: Act it!

*Psychology Taboo:* Students are divided into groups of 3-5 and are given a stack of cards with psychology concepts or vocabulary. Groups must come up with four “taboo” words which would often be used to describe that concept. Groups trade their cards, and students take turns helping their group to guess the concept without using one of the “taboo” words.

*Head Games:* Students are divided into groups of 3-5 and are given sticky-notes with psychology concepts to place on their foreheads. Group members try to give each other hints so students can guess which concepts are on their foreheads.

**Mid-level Gaming:** Mid-level games take place across several class sessions. These encourage outside research, creativity, and critical analysis.

*Reacting to the Past:* Students learn content from a particular time period by role-playing in games set in the past. Students must adhere to an assigned character’s ideals and typically prepare by reading original texts. There are at least 2 factions/teams in games, each with different game-win objectives. Characters often have their own game-win objectives as well. During class, students behave as their character: they give speeches, argue with other students in-character, vote on
resolutions, etc. There are no fixed outcomes in these games; history can be “changed.” Although many prepared games are appropriate for history, some games are relevant to clinical psychology, health psychology, social psychology, and history of psychology courses. Games can take a few class periods, or be expanded over an entire semester. For more information, see https://reacting.barnard.edu/.

**Macro-level Gaming:** Macro-level games are built directly into the course structure, and take place over the entire semester.

*Kingdom of Psyrule:* In General Psychology, I use a *Legend of Zelda* video game theme. Course components are adjusted to match those of the game. Students are adventurers in the *Kingdom of Psyrule* and are given a small introduction in the course syllabus:

> “You are an adventurer on a quest to save the **Kingdom of Psyrule**. You must brave perilous dungeons, travel through villages, receive useful items, and collect magical gems to help you on your journey. As an adventurer, you will start with zero (0) experience points, but you will accumulate points throughout your quest. At certain levels of experience points, you will receive valuable items which will help you on your journey. More valuable items will require more points, but you will have control over when and how you will use your items – so collect them, and use them wisely.”

All course components are reframed using gaming elements. Students (Players) battle Mini-Bosses (unit quizzes) and Dungeon Bosses (exams). Along the way, they complete Save Points (homework). To help them with their journey, they collect Wisdom Gems (demonstrated reading), Courage Gems (research participation), and Power Gems (extra credit). Completion of these gaming components leads to accrual of experience points (XP; course points), allowing them to Level Up. Leveling up earns helpful items, such as a Boomerang (allows them to retake a quiz). Items positively reinforce effective study habits, help students to make smaller goals throughout the semester, allow them to correct earlier mistakes, and give them feedback on their course performance.

*Developmental Earth:* In Developmental Psychology, gamification is centered on group work. The following introduction is given in the syllabus:

> “You are a traveler of *Developmental Earth*. During your excursions, you have found a great evil – monsters have been infiltrating the temples, forests, and plains of this fair land. You stop to rest at the Foundation Inn and meet other travelers, who – like you – want to make things right in Developmental Earth. After much discussion, you decide that the best course of action is to form a **Guild** and work together. Your Guild is an unlikely, but effective, mix: **Ranger, Mage, Rogue and Warrior**. You will combine your strengths to return Developmental Earth to a land of peace and beauty once again. To do this, you must gain wisdom and skill by reclaiming the three lands: the **Physical Forest**, the **Cognitive Caverns**, and finally, the **Socio-emotional Shores**. Each contains a dungeon in which a great monster lurks. Will your guild work together to defeat the evil? You must gain mastery along your journey for you and your guild to succeed.
Students travel with their Guild (4-5 members) through Developmental Earth by sitting and working together throughout the semester. Students are assigned a character class within their guild, requiring special tasks and abilities:

Healer: checker, harmonizer, fills in if guild member is missing

Mage: facilitator, timekeeper

Ranger: researcher, innovator (imagination and new ideas)

Rogue: Devil’s advocate, innovator (imagination and alternate ideas)

Warrior: recorder, reporter, fills in if guild member is missing

Along the way, Guild members individually complete Dungeon Battles (quizzes), Boss Raids (exams), and Grinding (preparation assignments). There is also a Guild Competition, in which guilds earn points by all guild members being present, prepared, and undistracted. They can also earn points by creating a Guild Crest and avatars for their members. The Guild with the highest points receives a game win bonus (2% extra credit).

Team Teaching

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Teach teaching consists of two or more instructors working together to plan, teach, and evaluate the same group of students. Sometimes the purpose of team teaching is for a senior faculty member to mentor a more junior instructor, but it can also be of “equals” collaborating. With any type of collaborative efforts, there are some disadvantages to team teaching. Coordination and planning can be very time consuming because content, delivery, grading, and other aspects of the course must be standardized to ensure fairness to the students. Even with detailed standardization of rubrics, team teaching instructors often need to meet to discuss how grades will be assigned and/or disciplinary issues if any arise (Letterman & Dugan, 2004; Wentworth & Davis, 2002). Team teaching, however, also offers many benefits related to student learning outcomes: students are given additional perspectives on important issues, the instructors are able to engage in open dialogue to stimulate critical thinking as well as group discussion, and it also allows students to see that debate or “professional disagreement” (Anderson & Speck, 1998) is not necessarily negative and can even be productive. When two people have different backgrounds, it increases the diversity of perspective within the classroom. For instance, in a psychology research methods course, two instructors of different backgrounds would provide more thorough training in context, knowledge, and skill set rather than one instructor alone. Both instructors can model multiple approaches to problem solving and emphasize that one technique is not necessarily better than others, but the approach should depend on the specific issue.
Additionally, with two individuals teaching the course, each with his/her own unique teaching style, students at various stages of their academic careers benefit from an enhanced learning experience. For instance, two instructors trained in different disciplines can incorporate diverse teaching tools in addition to lecture such as hands on activities, group discussions, video reactions, scholarly debates, and writing assignments. By moving away from a traditional lecture format, students are better able to develop and apply critical thinking within a scientific framework to more actively evaluate academic information in the classroom as well as in the world around them. Given that the inherent nature of team teaching invites open discussion between instructors, this should encourage students to engage with their professors, one another, and the course content. An additional benefit to team teaching is that interdependence can foster cooperative learning and a supportive environment. If two classroom leaders are comfortable with one another and communicate openly, this would model to students that cooperative efforts are enjoyable and need not be stressful. By emphasizing a positive working relationship, students may adopt a collectivist mindset valuing group cohesion and be less inclined to engage in social loafing. Students may also perceive and utilize additional support in the learning experience from two instructors rather than one.

Perhaps the most advantageous benefit of team teaching is modeling conflict resolution skills through mediation and respectful disagreement to increase cooperation and appreciation for diversity. The multiple perspectives approach highlights pros and cons of important issues rather than presenting a one-sided argument, teaches how to communicate disagreement in civilized discourse, and shows individuals how to engage in compromise in order to reach the most productive outcome while maintaining respect for one another. This method of pedagogy, much like the jigsaw classroom technique, could potentially help students to see beyond superficial differences in one another and value each individual’s contributions regardless of background. Students are then better able to voice opinions and collectively generate ideas that consist of greater creativity through brainstorming and teamwork.

References


A flipped classroom is one in which delivery of informational content takes place outside of the classroom. A teacher in a flipped classroom curates sources of content and provides direction on how students should study that information outside of class time. During class, the teacher is then free to focus on discovering what aspects of content are difficult for students to master, providing opportunities for practice related to course learning outcomes, and evaluating student success at reaching the outcomes. For the past four semesters, I have practiced the flipped classroom in my Introductory Psychology, Research Methods, and Social Psychology courses. By comparing scores on various exams and projects, I hoped to find out if this approach improved my students' performance on learning outcomes.

The basic structure of my flipped classroom is the same in all of my courses. There are three elements: information delivery, skilled practice, and assessment. The first of these, information delivery, occurs outside of the classroom. The second two, practice and assessment, usually happen during class time.

In planning for information delivery, I have found it helpful to begin by outlining very specific learning outcomes for each course, tied to the exact methods used to assess them. I then create a Reading Guide to direct students in how to study informational materials that support those learning outcomes. I would recommend investigating online materials, including videos, to supplement traditional textbooks as sources of the information content students will study outside of class.

I then design in-class activities around major assessments. I utilize the benefits of distributed retrieval practice by giving frequent low-stakes quizzes. These not only strengthen student learning but serve as developmental assessments that help me track individual student progress. I then use a variety of other activities centered on the basic concepts students have studied for that day. These take many different forms but some examples include short application problems, games, or case study analysis. Students sometimes work individually, sometimes in duos or larger groups. I typically do not grade student responses to the activities, but try to ensure there is discussion in class about different responses, so that students practice assessing their own performance.

The final phase is assessment. I use a mix of traditional exams, papers, and research projects as assessments in most courses. It is important in the flipped classroom model to
make sure that the study and practice phases are directly preparing students for the assessment phase. For example, if my exam will include multiple choice and short answer questions, then students should be practicing those kinds of responses during the retrieval sessions in class. If a research paper will be a major assessment, then students should be practicing and critiquing skills related to doing research or writing about research during class time. Students then should feel more confident and prepared to do well on assessments.

I hoped to find this would be the case by comparing classes I taught using the flipped classroom approach to those I had taught previously. To assess the effectiveness of the flipped classroom, I used data from two courses I teach on a regular basis: Introductory Psychology and Research Methods. I had two completed sections of flipped classroom scores for Introductory Psychology. I compared the mean total exam percentage score and the mean final exam percentage to those of two sections taught during previous years. While there was no significant difference in overall exam scores, students in the flipped classrooms did have a significantly higher percentage on the comprehensive final exam, $M = 81.29$ ($SD = 10.64$, $n = 57$) vs. $M = 75.50$ ($SD = 14.27$, $n = 48$); $F(1, 103) = 5.66$, $p = .02$, $eta^2 = .05$.

I also had two completed sections of flipped Research Methods classes and compared scores in those classes to two sections taught previously. I found that Research Methods students in flipped classrooms had a higher mean overall exam percentage of $82.17$ ($SD = 8.28$, $n = 46$) than non-flipped students’ percentage of $77.83$ ($SD = 11.24$, $n = 47$); $F(1, 91) = 4.44$, $p = .038$, $eta^2 = .05$. Students in the flipped classrooms also had a higher mean percentage score on research projects ($M = 82.25$, $SD = 9.10$, $n = 46$) as compared to non-flipped students’ ($M = 74.88$, $SD = 16.71$, $n = 47$); $F(1, 91) = 7.07$, $p < .01$, $eta^2 = .07$. Because I only had one non-flipped section that had taken a comprehensive final exam, my comparison is not as valid, but the flipped sections’ mean final exam score was significantly higher ($M = 81.17$, $SD = 1.23$, $n = 46$) than for the one non-flipped section ($M = 65.33$, $SD = 23.48$, $n = 22$); $F(1, 66) = 18.01$, $p < .01$.

Effect sizes are quite small, but the data above indicates that the flipped classroom may increase student success in achieving both knowledge and skill based learning outcomes. There are challenges associated with the flipped classroom model. The approach requires much advance preparation on the part of instructors. Students take more responsibility for learning, and the teacher must relinquish some control. Students are also sometimes resistant to more active involvement. Overall, though, I believe that the flipped classroom has allowed me to be more effective in monitoring individual learning, making course corrections, emphasizing application over memorization, and making personal connections with students. I would encourage others to try this approach to teaching.
Resources

Supporting Student Learning with Undergraduate learning Assistants

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Attention instructors! Does it seem as if you are continually fielding questions from students, questions to which they could easily find answers in your syllabus? Does it leave you wondering whether students are even reading the most essential document associated with your course? Although students certainly should do their part, with reading the syllabus high on the priority list, the average syllabus is not very desirable to read. If your syllabus is filled with pages of black text and you are questioning its efficacy, then it may be time for a Syllabus Makeover! Attend this 10-minute demonstration for inspiration and a handy framework to take a syllabus from disregarded document to visually-appealing, useful class brochure.

The ultimate goal of this demonstration is to inspire deliberate syllabus design, design which considers scholarship and increases the usefulness of the document for its intended target, students. Specifically, the demonstration walked you through my 7 R’s Syllabus Makeover Framework. This is a framework I developed to compartmentalize the makeover process, with each R representing an aspect of focus. While moving through the framework, information from scholarly literature was conveyed related to relevant items to be considered in syllabus design, items such as functions, length, tone, and contemporary students’ perceptions and habits.

What do students attend to most on a syllabus? Do students have more favorable perceptions when a syllabus contains details about course themes or course policies? What messages are sent when syllabus language has a warm tone or a cold tone? Answers to these questions were covered along the way, in order to facilitate more mindful syllabus design.

The syllabus is arguably the most ubiquitous yet overlooked element of a college course. If you are using one in yours, regardless of your field, this demonstration is applicable to you.

Be inspired to see your syllabus with fresh eyes and be equipped with a framework to turn your syllabus into an engaging and useful course document for students.

References


Navigating the Life of the Mind (Together): A Scholarly Look at Pedagogy, Relationships, and the Intersection of the Two

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Abstract

In American culture, going off to college is often viewed as a rite of passage. But a rite of passage is designed to be a profound experience, and college is often a mundane one: showing up to classes on time, picking a major, preparing for a job after college, and so on. So how can we turn this mundane experience into a profound one? How can professors light a flame in their students, engender a passion for lifelong learning, and transform students not only into good workers, but into good, inquisitive people? The speaker presented new and peer-reviewed data on effective practices in college education, particularly as they pertain to the teaching of psychology. The view presented on the Scholarship of Teaching and Learning is informed by research in relationship science, and the ways in which relational variables may enhance learning and its motivational underpinnings. This talk examined three primary questions directed at improving student learning: 1) what can teachers do? 2) what can the mentors of teachers do? and 3) what can students do? Drawing from numerous theoretical backgrounds, as well as rich experimental and national survey data, the speaker provided perspective on these questions and argued that effective relational practices are a crucial factor in transformational student learning.
Using Student-Generated Case Studies to Teach the Psychology of Disabilities

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Introduction
The use of case studies is a common active learning strategy employed in psychology. Case learning is useful for building critical thinking skills (Klein, 2010), as well as increasing students’ motivation and interest in course material (McNamara, 1998). Many positive outcomes of using case studies have been described, such as abstract theoretical information becomes concrete and easier to understand, course concepts are integrated better as students evaluate, make inferences, and see relationships (Graham & Olweus, 1998). It is not uncommon that in psychology students integrate learning by incorporating theory into practice and practice into theory (Aldridge, 1999).

Successful application of student-generated case studies have been used at both the undergraduate level in business and science, as well as in medical training (Yance, 2014). Yance noted greater student confidence, ownership of the learning process, deeper understanding of the material, and improved critical thinking in an introductory neurology course.

In this Psychology of Disabilities course, students wrote their own case study of an individual with a particular disability. The project included:

- An integrative literature review that described the disability, including psychological and behavioral characteristics, developmental changes, and possible causes of the disability.
- A case study of an individual with that disability at two contrasting ages.
- Description and effectiveness of two possible treatments, one each that would be appropriate for the different ages chosen for the case.

Student Ratings
Students completed an anonymous rating of the project. Each question was rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

Student's average ratings were quite high:
- Completing the case study project increased my understanding of disabilities (M = 4.20, SD = .58, range 3-5).
- The case study project was a useful way to help me learn the case material (M = 4.29, SD = .73, range 3-5).
- I rate the project as interesting (M = .36, SD = 52, range 3-5).

In addition to the students' high ratings, the project was well received, with numerous anecdotal comments on the course evaluations that they enjoyed the project and helped them learn to apply course material.

Results - Each Section of Project

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Literature Review</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>63.3</td>
<td>60.7</td>
</tr>
<tr>
<td>B</td>
<td>32.2</td>
<td>71.3</td>
</tr>
<tr>
<td>C</td>
<td>8.4</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Below C: 3.6 8.4 8.4

Overall, students were performing well on all three areas of the assignment, with at least 79% earning an A or B in each category.

Results - Application Exam Questions

There are 3 exams in the course. Each exam has 5 application multiple-choice questions. The first 2 exams are given before the students have written their case study. Students take Exam 3 after they have completed the case study project.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Average % correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>19.2</td>
</tr>
<tr>
<td>Exam 2</td>
<td>60.4</td>
</tr>
<tr>
<td>Exam 3</td>
<td>81.6</td>
</tr>
</tbody>
</table>

Students, on average, performed better on multiple choice questions after completing the case study. There was a significant difference between performance on Exam 1 and Exam 3, t(26) = -3.06, p < .05 and Exam 2 and Exam 3, t(26) = -3.177, p < .04.

There was no difference between Exams 1 and 2, t(26) = -1.375, p = .24.

Discussion

Student ratings for the case study project were quite high, with the lowest rating for all three questions as neutral. No project may be one way to get the students more actively engaged in learning about disabilities.

Students performed quite well on the assignment, with the lowest scores on or below the literature review portion of the assignment. Common difficulties on this section included not fully describing the disability, choosing inappropriate sources (especially an over-reliance on internet sources), and lack of integration of information from multiple sources. For some students, the case study psychology course has made this in-depth a writing assignment and performance on the application multiple choice questions on the exams improved after completion of the case study project.

Students may be getting better at application questions with increased practice on the exams but completing the case study project may have also helped in learning to apply information.

Since incorporating the case study project, class discussions have become much richer:
- More students are participating in meaningful ways.
- Students are expanding on information from the required readings.
- Many students are making connections between the common characteristics of a different disabilities share.

I have found this project to be one of the most engaging ways to help students learn about disabilities. It demonstrates that the majority of students can apply information and describe how characteristics of disabilities can change developmentally.
Each student may have a preferred learning style, all students can benefit from different presentations.
- When instructors appeal to all four learning styles, it maximizes the learning experience of all students (Meniam, 2007).
- Ruth Rodgers from Durham College’s C.A.F.E. (Centre for Academic and Faculty Enrichment) developed the Jumpstart unit planning model in 2008 to organize lesson plans in a way that appeals to each learning style (adapted from a model developed at the Northern Alberta Institute of Technology).

Kolb & Kolb (2005) learning styles

**References**
Using Student-Made and Feature Films to Promote Understanding in Psychology Classrooms: Perspectives from a University Professor and an Undergraduate Psychology Major

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In this essay we discuss the use of student-made as well as feature films to foster greater appreciation of concepts to be learned in psychology classes. Further, discussions of student-made and feature films are presented from the perspectives of a university professor who has required her students to make films of interviews on selective aspects of memory such as autobiographical memories, constructive processes of memory, flashbulb memories, false memories, and procedural memories as well as other concepts related to learning such as the effects of reinforcement and punishment on children’s behavior from their perspectives and that of their parents and the influence of motivation on learning. We also explore a junior level undergraduate psychology major’s appreciation of an instructor’s use of feature films to understand concepts discussed in a psychology class.

Assignments Using Student-Made Films

I (KMZ) often look for projects allowing my students to become more engaged with the material I teach and to see greater connections between the material and the real world. For this reason, I frequently require students in my classes to participate in making their own films (often in small groups) related to topics we are studying. Students’ films involve videotaping interviews of one or two individuals and have been related to a variety of topics, such as memory in children and seniors, flashbulb memories, the misinformation effect and false memories, eyewitness testimony, and the reminiscence bump. My students have also investigated the effects of reinforcement and punishment from both children’s and their parents’ perspectives and issues affecting motivation in the classroom, among many other psychology topics.

Over the years I have been required to think creatively and work hard to make creating a film not only a highly collaborative assignment, but one in which students learn the fine art of compromising to create a great film. I have found that the smaller the group the better the harmony and the less likelihood of some students turning into the sole directors of their groups’ films. Making creative films “from scratch” involves finding interviewees, having a relevant topic approved, developing interviewing skills and questionnaires, learning how to use video and editing equipment, and taking steps to ensure that a group’s film results in a presentation comprised of high quality visual and auditory components.
A colleague at Clemson University (D. Moore, personnel communication, 2016) has also used interviewing and filming small group projects successfully in his developmental psychology classes such as lifespan development, adolescence and the psychology of aging. He has found that such assignments work well to better understand some of the unique issues facing developmental stages such as adolescence (e.g., students have interviewed and filmed younger siblings or friends about parents, cliques, school, and dating) and gain a greater understanding of individuals’ experiences during later life (e.g., his students have interviewed and filmed grandparents about marriage, children, and life events).

In the past, Zabrucky and colleagues have found that the creation of student-made films to better understand psychology content proved helpful to students (Zabrucky & Commander, 2012) and demonstrated not only increased deeper thinking about concepts investigated but also more reflection on concepts (Commander, Ward, & Zabrucky, 2012). Commander et al. (2012) also found that assignments requiring student-created films encouraged students to think more about the concepts in question in the real world and how concepts related to their own lives. Overall, the assignment for students to create their own films over important topics within a class has great potential for use in a variety of psychology classes.

Assignments Using Feature Films
Psychology professors can also use feature films in class in substantive and engaging ways. As an undergraduate psychology major, I (IZM) was asked in my abnormal psychology class to diagnose characters in films having one or more mental illnesses and to compare and contrast the way the illnesses were portrayed in feature films compared to what I learned in class about the illnesses. Because students were required to apply the knowledge they had learned about mental health diagnoses to determine the diagnosis or diagnoses of characters portrayed in films such as Silver Linings Playbook, The Three Faces of Eve, Rain Man, and Fatal Attraction, my classmates and I felt that we learned more from this assignment than by simply reading about the mental illness in class, as we were required to use and apply class knowledge to depictions of behaviors they were viewing. My fellow classmates and I viewed this assignment as a highly engaging assignment.

There is also exciting empirical evidence related to classmates’ and my own interest viewing feature films to learn about concepts in our abnormal psychology class. Over the last decade, Phillips (in press) has been investigating how students perform in abnormal psychology classes comparing “class as usual” versus watching a movie of abnormal behavior and discussing in class. Interestingly, across several studies, students viewing feature films outperformed control classes on chapter quizzes, with enhanced performance. Other researchers have found that such films have helped students “reflect on decision-making strategies” (Sanchez, Gutierrez, & Morales, 2010, p. 399).

Although feature films have been used in abnormal classes to illustrate various psychological disorders, feature films also easily lend themselves to courses in the field of developmental psychology. For example, there are a variety of films related to childhood and adolescence (e.g., Splendor in the Grass, Rebel Without a Cause, Stand by Me) as well as older age (e.g., Away from Her, Tokyo Story, The Trip to Bountiful). In addition, there are a variety of films that illustrate selected aspects of memory issues or problems (e.g.,
Memento, The Bird with The Crystal Plumage, Rashomon). Green (2011) has discussed the potential benefits of using films to teach psychological content in general.

Conclusions
For psychology majors, assignments involving creating their own films to more deeply understand concepts or watching feature films to compare to concepts learned in classes may be especially engaging, appear to promote deeper learning (and, when examined, have contributed to better retention of concepts). Such assignments also provide students with an understanding of the realities of the conditions or issues that they may be working with beyond graduate school as well as highlight how disorders or issues learned about in class are not always accurately portrayed in the media and may vary greatly across individuals in the real world. It is clearly important to provide students with a well-thought out choice of films to view (summary information and films’ ratings could be provided as well). Although the assignments we are discussing were done at the college level (allowing ratings of R and below to be used) this assignment could be used with younger students with age appropriate films. In all cases instructors should be well aware of the content of the films they are suggesting (see Green, 2011, for a helpful discussion of how to select films) and can also alert students to specific content that students might find objectionable. Giving students a choice of films to view would go a long way to remove any issues of objectionable content and allow students to watch films of greatest interest.

References


Making it Stick: Using Psychological Research to Improve Teaching across Campus

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As Roediger (2013) and others have pointed out, psychologists have been studying human learning for over 125 years but this research has only sporadically resulted in improvements in educational systems. While cognitive research does sometimes get translated and used in wider settings, there is also a strong tendency of colleges and universities to jump on trends that can best be described as non-supported (e.g., learning styles) and more often described as pseudo-science (e.g., the growing popularity of the StrengthsQuest Inventory).

At our small liberal arts college in the Midwest, a presidential steering committee developed an initiative to inspire intentional teaching and learning. Fearing the possibility of a new round of educational trends and aware of Roediger’s (2013) call to disseminate cognitive science, faculty members on this “theme team” developed a multi-year plan to use solid evidence to improve teaching across campus. Overall, the goal is to provide faculty with the support and resources they need to reliably assess and innovate in their classrooms.

Phase I of the program began during the spring of 2015, when team members presented a talk, entitled “Know Your Holes and Use Your Tools: What Science Can Tell us about Teaching and Learning.” This session was well attended and led to faculty members signing up to participate in Phase II which is currently in progress.

The major work of Phase II is happening through a faculty collaboration group which was formed to provide interested faculty with evidence-based strategies and to help them develop empirical methods for evaluating their own classroom initiatives. Make it Stick: The Science of Successful Learning was the summer reading. The facilitators conducted the following steps to maximize existing resources.

A Faculty Collaboration Grant proposal for $4,850 was written to support monthly meetings, provide reading materials, and increase professional development funds. Group leadership was expanded: two of the initial theme team members (a psychologist and a mathematician) continued in their roles and recruited two new leaders (a psychologist and a communications professor).
Invitations to join were sent to all 87 full-time faculty members. The enrollment goal was 10 faculty members and 4 facilitators. To encourage participation, faculty were offered an additional $200 in professional development funds.

Cross-campus representation was attained and enrollment goals were exceeded: 17 faculty (approximately 20% of the faculty) and 2 staff enrolled. Campus was well represented with 6 faculty from the humanities, 8 from the physical and natural sciences, and 7 from the social sciences. All ranks participated (6 instructors/assistant professors, 6 associate professors, and 9 full professors). Gender was also balanced (11 females and 10 males). Ten meetings were scheduled allowing for 30 minutes of presentation, 30 minutes of discussion, and 30 minutes dedicated to working on research ideas. Wine, cheese, and chocolate were provided.

A list of additional readings was selected. Topics included quantitative and qualitative research methods for the classroom, research ethics, course evaluations, technology in the classroom, assessing service learning, theories of intelligence, and race, culture and gender in the classroom.

Discussion topics were chosen. In addition to the assigned topics, recurring themes included assessment, advising students, mentoring faculty at various stages of their careers, questions of assessing for lifelong learning, and the importance of using data to make the case for liberal arts education.

Other campus initiatives were supported. Group members, including the campus Registrar and the Director for the Center for Academic Excellence, worked with others resulting in successes such as the Art Department revamping much of its curriculum due to Make it Stick. Additionally, group members will be working with the Diversity and Inclusion Steering Committee and are following up on data about retention rates of student athletes, especially student athletes of color.

Research projects were designed. A total of 12 faculty members are conducting research on pedagogy: 8 will present posters during our Opening Faculty Conference in the fall of 2016 and 4 will present at a faculty forum in the spring of 2017.

Phase III has begun with a fall opening planned for the Center for Teaching and Learning. The director will work individually with faculty and staff on pedagogical matters, student advising, and career mentoring. The director will also arrange or present talks and workshops focused on teaching with and for diversity. The underlying theme of this center will be “Using Psychological Science to Create a Stronger Campus.” This will happen in four major ways:
Applying methods and information gained from experimental and educational psychologists, methodological guidance will be provided to faculty and staff who engage in research on teaching and learning. Funding will be available to these faculty researchers.

Evidence-based research on learning and brain development will be disseminated to inform faculty, staff, and administrators of important cognitive and neuropsychological research.

Utilizing best practices from developmental and counseling psychologists, training sessions will be held to create campus-wide teams of advisors who use empirically validated strategies.

Applying methods and information gained from social and developmental psychologists, discussion sessions and individual mentoring meetings will be offered to foster career-long faculty professional development.

While the initial faculty collaboration grant has been rather successful, we faced several challenges. First, the text Make it Stick proved to be very inspirational to faculty, several of whom immediately adopted strategies suggested in the book. While this was a positive outcome, it also meant we were not able to properly assess the effectiveness of these changes. One major setback occurred due to current budgetary challenges for colleges in the state of Illinois. Due to the state budget impasse, our operating budgets have been significantly reduced and instead of having two directors (one to focus on research and pedagogy and one to focus on advising), we will operate with only one director. Finally, it is worth noting that discussions regarding qualitative versus quantitative research were much more heated than we would have predicted.

Overall, we knew that faculty were tired of being pushed to follow gimmicks and trends. We are optimistic that faculty and staff will continue to embrace empirically-based strategies that are provided to them.

References


Using Stories to Teach

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Story telling can be a highly effective teaching tool. Paul Zak's (2013, 2014) research on storytelling shows that personal and emotionally compelling stories engage more of the brain and therefore are better remembered in comparison to just stating a series of facts. Students will likely remember more from a lecture that incorporates stories than they will from one that is just a series of facts being presented. It is common to use stories when teaching, usually in the form of short stories as a way of providing examples. However, we could engage students more and facilitate a deeper level of learning and empathy (Zak, 2013) through creating a lecture that follows one very compelling longer story throughout a chapter, periodically connecting the lesson back to the story as the story unfolds. However, we must be careful to select the right type of story.

What makes a story personal and emotionally compelling? A very popular and compelling narrative is the hero’s journey in which an innocent is treated unfairly and a protector seeks to right the wrong, but can only do so by becoming a better person. Fifty percent of Hollywood movies follow this pattern as do the majority of the most-watched TED talks (Zak, 2013). Stories must capture our attention and transport us into the character’s world in order to keep our attention (Zak, 2013). They must be character-driven stories. Continually increasing tension maintains interest and increases cortisol which increases attention and oxytocin which increases empathy (Zak, 2013). Without rising tension, attention wanes and there is no increase in oxytocin or empathy (Zak, 2013). We pay attention to stories of struggles since we know we too will have struggles and want to learn how to get through them (Zak, 2013). When we identify with the characters we begin to feel what they feel, we begin to have empathy. We also begin to increase our production of oxytocin, which makes us more trustworthy, generous, charitable, and compassionate -- all characteristics we would like to infuse our students with (Zak, 2013). A happy ending causes a release of dopamine which contributes to a feeling of hope and optimism (Zak, 2013). Watching a video keeps attention and increases empathy better than just reading a story does so when teaching it is best to use videos, not just verbal descriptions (Zak, 2013).

The following are some practical suggestions for how a professor can incorporate these ideas into their lectures.

Find compelling stories that you can show in video format, stories that most people are not familiar with so there will be suspense about how the story ends. For example, films from
the annual Banff Mountain Film Festival World Tour, documentaries, or stories in the news work well. The Banff Film Festival is a festival of outdoor adventure films (hiking, skiing, kayaking, base jumping, rock climbing, cycling, mountain biking- everything; and from locations all over the world). It tours the United States in many locations in the spring and often sells out quickly. Usually the films end up on DVD, YouTube, or on Vimeo within about a year or so. You can visit their website (https://www.banffcentre.ca/banff-mountain-film-and-book-festival) to see what movies they showed in the past to get ideas of what is available now. Some of the films also have books written by the adventurers about the same story, which could give you more insight and information to discuss with your class.

Select pivotal moments in the story and edit those parts into clips that are 2-3 minutes each so you can space them throughout your lecture. For YouTube video editing, AnyVideo Converter (http://www.any-video-converter.com/products/for_video_free/) is inexpensive and simple to use. Be sure to place the video into the same folder your lecture is located in order for the embedded video to work properly.

Keep the story in logical order and move pieces of the chapter content around to fit the story if necessary.

Tie the story to your content and ask your students how they think the characters will handle various difficulties before revealing how they actually do. Get them wondering how the story will end to help build tension.

The process of incorporating these ideas into a lecture will vary in the time it takes according to your film editing skills and how thoroughly you want to adapt your lecture to fit with the story. To thoroughly adapt a lecture may involve creating multiple examples around the main story, creating clicker questions related to the story, and possibly even creating test questions that ask students to apply the concepts to the story.

To illustrate how I have done this in my teaching I would like to provide an example that I use when teaching motivation and emotion in an introductory psychology course. I use one story throughout the course of the chapter. It's called "Crossing the Ice" and was a winner of the 2012 Banff Mountain film Competition Grand Prize. (The full video for purchase: http://casandjonesy.com.au/shop/crossing-the-ice-documentary/) (A trailer of the video: https://www.youtube.com/watch?v=jjV2pSjRDw). Crossing the Ice is the story of Cas and Jonesy, two Australian adventurers planning to do something that has never been done before, to make an unsupported trek to the South Pole and back. It is a documentary that they film of themselves. I chose this particular documentary because Cas and Jonesy are very likeable, funny, and are doing something really ridiculous, especially given that they had never encountered snow before planning for this trek. I also chose it because I found their Facebook page which includes all sorts of additional videos that I could include in the lecture. There was a lot of material to work with which is necessary if you are wanting to make a lot of connections between the material in the text and the story.
I start the lecture by introducing Cas and Jonesy, showing a clip of them describing what they hope to do. I ask the students what they think might motivate Cas and Jonesy to take on this adventure and why they themselves might want to do something risky like this or not. Then I lecture the students about a variety of theories of motivation and ask them according to each of these theories how that particular theory might explain what is motivating Cas and Jonesy to take on this monumental task. We find out that there is a competition, someone else with a couple of days lead trying to do the same thing. This builds excitement and tension keeping students interested. There are also many difficulties to overcome with bad weather, food shortages, and nearly falling into crevasses and that adds to the suspense as well. Tension in storytelling is necessary to sustain attention and there is plenty of tension throughout this story (Zak, 2014). Most of what I do is relate pieces of the documentary to concepts in the text and ask students to apply the concepts to the story. I ask them how various theories might predict what will happen next. This is easy to do with Maslow’s hierarchy of needs. Will Cas and Jonesy make physical needs a priority or forgo injuries and near starvation to accomplish their goal and be self-actualized? If so, why? As the story progresses we shift to emotions and applying theories of emotion to what is happening in the story. I also ask the students about what they think will happen next or what decisions they would make given similar circumstances so as to encourage engagement and critical thinking. It has turned into my favorite lecture and a favorite of the students as well. They love the story and the surprise ending and they learn a lot. I have also noticed that when the lecture spans two or three class periods attendance is high. Students do not want to miss any part of the story once it has begun. It is the wisdom of The Thousand and One Nights applied to teaching, a story that inspires storytelling.

References


https://hbr.org/2014/10/why-your-brain-loves-good-storytelling/
Abstract

Students often feel uncertain about taking tests that involve writing, especially about how their writing will be evaluated. In the AP Psychology exam, 1/3rd of their final score is based on the free-response portion of the exam. One strategy for helping them understand the writing and scoring process, is having them play evaluator. This lesson incorporates training students to grade free-responses using College Board official rubrics, and evaluating other students’ free-responses collaboratively in small groups. I have used this activity for many years, and have noticed that their writing quality improves afterwards. They become more familiar with the grading process and are less likely to be accusatory if their score is lower than they expected. It encourages more independence and responsibility in the learning process.
Small Group Peer Grading To Improve Free Response Writing

Stefanie S. Scher
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Introduction

Students often feel uncertain about taking tests that involve writing, especially about how their writing will be evaluated. In the AP Psychology exam, 1/3rd of their final score is based on the free-response portion of the exam. One strategy for helping them understand the writing and scoring process is having them play evaluator.

This lesson incorporates training students to grade free-responses using College Board official rubrics, and evaluating other students’ free-responses collaboratively in small groups.

I have used this activity for many years, and have noticed that their writing quality improves afterwards. They become more familiar with the grading process and are less likely to be accusatory if their score is lower than they expected. It encourages more independence and responsibility in the learning process.

Method

- Students are given a code number to write on their paper instead of their name, to remain anonymous.
- A previously released AP Psychology free-response question is given to them to do.

2010 AP® PSYCHOLOGY® FREE-RESPONSE QUESTIONS

For each of the pairs below, use an example to show how the first term in each pair affects or is related to the second. Definitions alone without examples will not score.

- Serial-position effect . recall
- Functional fixedness . problem solving
- Operational definition . replication
- Double-blind research . bias
- Operant conditioning . superstiton
- Reinforcement . overjustification effect
- Myelin sheath . neural impulze

- Students get into groups of three and are given free-responses to grade.
- Students grade each free-response together, filling in a chart, writing a check for each point earned and an “X” for unearned points.
- When they are done, free-responses are passed on to the next group, assembly line style.
- The goal is for each free-response to be graded by at least 3 groups; each student is awarded the mean score that his/her free-response was given.

- The next class period, students are distributed a rubric released by the college board.

AP® PSYCHOLOGY 2010 SCORING GUIDELINES

Question 1

- We go over the rubric together, and then grade a sample one as a class.

- If a student is not happy with their score, they can look back to the rubric and show me why they think their free-response should have gotten a higher score with rubric evidence.

References

Magone (1996). states that peer editing benefits both the student and the teacher. Students benefit from hearing other student’s viewpoints and questions and by learning how to give positive criticism. Teachers decrease their revision time.

Phillipsen (2007), postulates that editing work can help students find problems in their own writing, decreasing dependence on the instructor to find all the mistakes.

Using peer grading, when well planned, allows students to make the transition from writing primarily for the teacher, to writing for a broader audience. This skill is especially effective for post-secondary school (“Using Peer Review”).


Using Peer Review to Help Students Improve Their Writing. Retrieved from https://teachingcenter.wwu.edu/resources/peering/editing/using-peer-review-to-help-students-improve-their-writing/
Concept Mapping and “V” Mapping: Tools to Promote Students’ Understanding

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Abstract

This workshop introduced the use of concept mapping and “V” diagramming techniques. Concept mapping is a way for students to flowchart the important concepts in a paper or textbook chapter. “V” diagrams can help students unpack the meanings of books and other works, and provide an excellent organizing pattern for writing scholarly papers. In addition, “V” diagrams can be used as rubrics for assessing the completeness and quality of students’ work. Participants developed concept maps of typical textbook materials and “V” diagrams of their teaching materials. We also discussed how to help students develop their own concept maps and “V” diagrams.

The easiest way to create concept maps or V diagrams is probably to use ordinary paper and pencil, but there are lots of tools available to help the more technologically inclined. For example, you could create them in PowerPoint (as I did for the workshop) or using a Google Doc. In addition, there are lots of resources on the web which can help in creating such maps. Some of these resources can be found on the web at http://cmap.ihmc.us/docs/theory-of-concept-maps and http://pictureitsolved.com/resources/practices/vee-diagrams/.
Workshop: Strategies for Getting the Most out of Your Academic Program Review

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Abstract

Academic Program Review (APR) is a fact of life for most academic programs. This workshop is designed to help faculty develop strategies to approach an Academic Program Review. We will consider multiple stages of the process, including examining your program and reflecting on it, preparing to write a self-study report, writing the report, finding appropriate external reviewers, what to do during the external team visit (and maybe a few things not to do!), and what to do after the APR is over, such as responding to input from reviewers and planning for change. Although department heads or chairs often take primary responsibility for an APR, ideally this should be an activity that engages the entire department. We will examine strategies for getting faculty input and buy-in to the APR process, and will focus on how you can reflect on and evaluate your own program. The goal of the workshop is to help faculty and programs make the most from the APR process and use it to help achieve their goals as a faculty, so that faculty may come to see an APR not as just an administrative requirement, but as a mechanism to help them achieve program goals.
Essential Skills for New (and Not-So-New) Instructors

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Abstract

Before you teach, what should you learn? This question is often pondered by both new instructors and those who supervise them. All too often, graduate students and new faculty begin a teaching assignment with little to no formal training for these important responsibilities. Fortunately, research has identified a lengthy list of characteristics that describe effective teachers. Unfortunately, new instructors cannot possibly attempt to emulate all these qualities at once! Our research suggests some interesting (and sometimes surprising) answers to questions such as: what are the most important skills for new teachers of psychology, and how can we help build them?

If you are new (or not so new) to the classroom, work as a supervisor or mentor to graduate students or new faculty, or teach undergraduates who may go on to a career in higher education, join us for this session. We will review the research on effective teaching and offer practical strategies and suggestions to help you focus on and build “essential” teaching skills.
The Writing of Psychology and the Psychology of Writing: Fostering Effective Writing

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Abstract

Effective writing is integral to an undergraduate education and, for many students, success beyond college. In many psychology curricula, however, writing is seen as an adjunct to content courses. In the psychology program at Ithaca College, we have designed systematic writing experiences as a core component of students’ education. From the first semester of study to the capstone experience, students systematically continue to develop and hone their critical thinking and effective writing skills.

In this workshop, we will describe the nature of student writing from the first course they complete in psychology, which includes introduction to research techniques and to APA style and culminates in the final senior seminar. The writing experiences include both laboratory and content courses. Students write technical laboratory reports and research papers, but they also write nontechnical papers critiquing or explaining research. The Psychology Department’s structure includes training for undergraduates who assist in the process by scoring some writing assignments using well-structured grading rubrics. In this workshop we will illustrate the plan for skill development in writing, demonstrate how the psychology department incorporates significant writing that does not overwhelm faculty time and departmental resources, and how to focus on critical thought and professional writing. In the workshop we will provide sample assignments and activities to incorporate writing skills in a range of psychology courses.

When students complete their psychology program at Ithaca College, they will have finished eight required courses with a significant writing component. As is evident, we place a strong emphasis on writing across the curriculum and believe effective writing skills and the ability to communicate clearly about psychological principles and research are paramount in the education and success of our students. In this workshop, we will provide an overview of how our program incorporates writing skill development across the curriculum. We will also provide suggestions for assignments and strategies for evaluating and providing feedback on writing assignments in an efficient manner and will solicit comments about effective strategies others have developed.
Teaching and Learning in the Digital Age: The Science of Learning Can Help

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Abstract

There are many descriptions in the research literature and public media of the use of technology to improve students’ learning, critical thinking, and other learning outcomes. What are the effects of these uses of technology and do they measure up to the claims made on their behalf? What do we know about how students learn in academic settings and, in particular, how they learn with technology? In this session, science of learning, science of instruction, and science of assessment are defined. Some examples of the application of psychological science to learning with technology (e.g., cognitive tutors, virtual environments, computer games) are briefly described. Next, three research projects are described in detail related to student learning that demonstrate how science of learning can be applied in academic courses with: 1) slideshow presentations (e.g., PowerPoint), 2) online lectures (using video capture technology), and 3) personal response systems (e.g., clickers, smart phones, and computers). Slideshow presentations that incorporate multimedia principles that are informed by cognitive load theory produced better learning outcomes than control slides that did not incorporate these principles. Online lectures that included embedded questions were associated with better exam performance than lectures that provided summaries of lecture content. When we applied Eric Mazur's click-discuss-click peer instruction approach, students learned lecture content better than when they were not quizzed in this manner. More important, when we replaced clicking with thinking (think-discuss-think), there was a further learning benefit over the click-discuss-click condition. Overall, the results from these and other studies performed in university courses document that it is how instructional technology is used that matters for student learning.
Bye-Bye Intro

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Abstract

Like most college and university students in introductory courses in other disciplines, most introductory psychology students—especially non-majors—tend to forget the specifics of what they learned surprisingly soon after the course ends. Further, the typical introduction to psychology does surprisingly little to alter permanently many of the long-held misconceptions about human behavior and mental processes that many students bring to the course. In this talk, I will review research on these depressing trends and propose that the best way to reverse them is to transform introductory psychology into a dramatically different course that focuses entirely on combating potentially harmful misconceptions. I will present a topic outline for the transformed course and describe some specific ways to organize and teach it that promote both active learning and critical thinking. Finally, I will describe a set of research strategies that could be used nationwide to assess both the short- and long-term impact of this new entry level psychology course in comparison to that of the more traditional format.
Careers beyond “Psychologist” for Psych Majors

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Abstract

Although psychology majors may want to become professional psychologists, the majority of students with a Bachelor’s degree in psychology are never employed as psychologists. What are some likely career paths beyond psychology for such students? What skills might prove helpful in such careers? How can students identify, develop, and document skills that will have utility for their chosen careers after college? This presentation will begin by reviewing some of the statistical information on career paths of psychology majors, including some surveys of career satisfaction. Next, we will introduce the O*NET, a government website that provides information about jobs, including kinds of preparation, skill requirements, and interest profiles. Much of the O*NET was designed by psychologists, so the site exploration can fit well in several courses, not just I/O psychology. After a demonstration of O*NET functions, we will review a homework assignment designed to familiarize students with O*NET and to start them thinking about how they might use it to their own benefit. Finally, we will examine surveys of labor outlook and employer surveys of significant job skills, and consider the kinds of actions that psychology majors can take while still in school (other than switching majors) that may result in better employment opportunities.
Seeing through Biology

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Abstract

When we are teaching, there are times when we must introduce “biological” aspects of our understanding of psychology. Some of our students, perhaps even many of our students, have a mindset that biology is always difficult, hard to grasp, or even perversely complicated. I’ll talk about four general strategies to help make biological processes more transparent for “bio-phobic” students: (1) figures that are worth a thousand words, (2) diplomatic teaching, where one tells the whole truth, but as slowly and simply as possible, (3) harnessing the power of narrative, our love of storytelling, and (4) the use of humor. While these strategies are helpful for teaching any topic, I’ll offer examples of tapping them for explaining biological processes at work in psychological phenomena.
Blood, Gore, and Video Games: Effects of Violent Content on Players

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Abstract

In today’s popular culture, the video game industry has established itself as a major force, surpassing the movie and music industries. Most people now play video games. They are played on consoles, computers, and handheld devices (including mobile phones). The top selling video games contain lots of blood and gore. Bushman will discuss a meta-analytic review of 381 effects from violent video game studies involving over 13,000 participants. The meta-analysis shows that violent video games increase aggressive thoughts, angry feelings, physiological arousal (e.g., heart rate, blood pressure), and aggressive behavior. Violent games also decrease helping behavior and feelings of empathy for others. The effects occurred for males and females of all ages, regardless of what country they lived in. The effects are robust and are consistent with psychological theory. The challenge is convincing college students that the effects are real, and that they are not personally immune to these effects. This is a big challenge. One possible solution is to not only discuss violent video game effects, but also discuss why people deny these effects. Thus, Bushman will also discuss six reasons why people deny violent video game effects: (1) fallacious reasoning (e.g., “I play violent video games and I’ve never killed anyone!”), (2) cognitive dissonance reduction (e.g., to reduce the discomfort caused by conflicting beliefs such as “I love playing violent video games!” and “Scientific studies show that playing violent games can be harmful!”), (3) psychological reactance (e.g., to restore freedom that arises from the belief that violent video games will be restricted or banned), (4) third person effect (i.e., people believe the media have a much stronger effect on others than on themselves), (5) denial from the media industry, and (6) so-called “balanced” reporting by journalists. The key is to get college students to rely on scientific evidence to answer questions about violent video game effects, rather than relying on hunches, gut feelings, instinct, intuition, and common sense.
Research Methods: An Employer’s Dream Course

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Abstract

With an emphasis on “outcomes” in higher education, there is a growing perception that the primary purpose of a college education is to provide career training that leads to high paying jobs (Hurtado & Pryor, 2006). Given the rising costs of college attendance and student debt, some question higher education’s role in adequately preparing students for the workforce (Casner-Lotto & Barrington, 2006). Implicit in this questioning is the idea that college graduates primarily acquire knowledge rather than marketable or employable skills (Fabris, 2015). While knowledge acquisition is an important aspect of an undergraduate education, developing employable skills such as teamwork, project management, communication, information literacy, and quantitative analysis are also valuable outcomes. However, students often fail to recognize where they can develop these skills in the curriculum (Martini, Judges, & Belicki, 2015). Students may believe that these skills are only learned in more “experiential learning” courses such as internships or service-learning courses. We will discuss how research methods classes by nature are skill-based courses that lend themselves well to helping students develop and strengthen the very skills desired by employers. Collaboration, project management, communication, information literacy, and quantitative analysis are all integral to designing and conducting a successful research project. In our talk, we will discuss how instructors can strengthen students’ marketable skills by intentionally integrating them into various research methods course assignments and activities, providing students with real world work-related experiences within the classroom. Given that potential employers often have a narrow conceptualization of the psychology major, we will also discuss how we must help students explicitly recognize their own skill development and be able to extrapolate and communicate the utility of these skills beyond the classroom setting. Our goal is to help instructors help their students develop marketable skills through a research methods course. We are not suggesting that methods professors should provide job training, as students can pursue many opportunities after graduation, but rather methods courses help students develop transferrable skills that can apply to most professional positions. We present three approaches for helping your research course better develop students’ employable skills. For each approach, we provide specific ideas and activities you can use to transform your class. This handout includes some specific activities and resources for transforming your class and helping students take ownership of their skills.
The Good Approach: A matter of emphasis
- Review your course, identifying the skills you want students to develop.
- Place a more intentional emphasis on developing skills and communicating that to students.
- Examine your current assignments and determining which skills you have students actually demonstrate.
- Determine which skills are missing or underemphasized and develop an assignment or activity to emphasize a new skill in your class.
- Encourage students to take ownership of skills they are learning.

The Better Approach: You’re already doing a good job, but want to do a bit more.
- Re-conceptualize or re-visit what you already do with an eye toward intentional skill development.
- Develop a list of employable skills you could potentially include in the class. Determine which are missing or underemphasized throughout the semester.
- Determine if the skill development in your class is a one-hit-wonder or if you are providing multiple opportunities for students to learn and demonstrate each skill in your class.
- Add or revise activities in the course to emphasize additional skills or further develop skills you already address.
  - For example, if you’re missing oral presentation/communication skills, consider adding an activity where students present to each other in small groups and/or the entire class.

The Best Approach: You’re ready to transform your class with skill development in mind.
- Think differently about methods courses to see them as opportunities to develop skills vs. learning content/facts.
- Restructure your class to empathize marketable skills. This means you may have to cut lectures down to make room for skill development.
- Skill development most naturally occurs through practicing the skills which will necessitate a greater emphasis on learning-by-doing. Less lecture, more activity.
- Skills you can develop along the way:
  - Decision making/problem solving/thinking more like a scientist (critical thinking)
  - Teamwork: a cooperative effort on the part of a group in the interest of a common goal
  - Project management: application of knowledge, skills, tools, and techniques to meet the project requirements.
  - Communication (verbal, written, group, individual)
  - Information literacy: the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the problem at hand
  - Quantitative analysis
- What a Skills Based Class Looks Like
  - Start with small toolbox
- Need to think scientifically
- Scientific method
- Ethics
- Measurement
  - Read and write about primary sources on a regular basis
  - Verbally present and lead a discussion on primary sources
  - Be a participant in research demonstrations and deconstruct the experience
  - Group lab projects on recurring basis
    - Generate research ideas and develops a research question
    - Make decisions about what is best, feasible, and how to implement
    - Gather and analyze data
    - Write a research report
    - Make a presentation of the study to the class
    - What’s missing?
      - Simply memorizing concepts and classes filled with lecture
- Take the leap!!

Resources to get you started:
- www.teachpsychscience.org
Ready or Not: Supporting Underprepared Students in Psychology

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Abstract

Do you ever feel that you’re not just teaching psychology, but also grammar, mathematics, reading, writing, and technology? Many of today’s students are academically underprepared. Some feel simply overwhelmed — not only by their academic responsibilities but also by obligations outside of class. Most of these students want to succeed in their classes, and many seem surprised when they are failing and unable to explain why. How do you help these individuals? You can encourage students to utilize the many campus resources available to them, but there are also steps you can take as an instructor to help them cultivate basic skills and stay engaged in their studies.

This workshop explores current trends in student preparedness and approaches offered by colleges and universities to address these issues (e.g., testing, developmental and remedial courses, college success classes, tutors, learning assistance centers). We also present methods to support students who are struggling in psychology classes because of reading, writing, critical thinking, and mathematics deficiencies. We discuss ways to engage students in the material, make content relevant to their lives, build relationships within the classroom, and support online learners. The goal of the workshop is to provide effective strategies for identifying and helping students who may struggle because they are not prepared for college level discussions, reading, or writing. Participants will describe their experiences with underprepared students in the classroom, share lessons they have learned, brainstorm about how they can use psychological principles to help these students, and offer ideas on classroom best practices.
No Programming Required! Gamification Techniques ANY Instructor Can Use to Engage Students and Assess Learning

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Abstract

Gamification is when the principles of game thinking are used to engage people, motivate action, and promote learning. There are many ways to create powerful learning environments using games, and not all have to take up a whole class period or involve virtual computer worlds. Come find out what the research says about the use of games in the classroom, including healthy versus unhealthy competition in the classroom, and the importance of matching the type of game to your instructional goals. The focus of this talk will be on the use of brief games that require either simple technology or no technology at all. You will leave with a set of guidelines for how to develop your own games, as well as a handy collection of existing games that are classroom ready. Who knew learning could be so much fun?
Bringing the Psychology of Social Issues to Life

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Abstract

In principle, students understand that the theories and research findings they learn about in our psychology classes are relevant to important social issues. These same students, however, may have little opportunity to translate these ideas into action. This talk will offer instructors concrete ideas for bridging this gap by (a) highlighting a range of assignments I have used in my introductory and social psychology courses to bring the psychology of social issues to life, (b) describing two courses designed to directly engage students at the intersection of social issues and psychological science, and (c) considering strategies for tweaking existing assignments and courses to make salient the relevance of psychology to social issues. Highlighted assignments include: examining the relative efficacy of different persuasion tactics to raise funds for non-profit organizations, synthesizing ideas from classic and contemporary articles to answer applied questions of the students’ choosing, and examining a single social issue over the course of a semester through the lenses afforded by different psychological perspectives. The two courses to be highlighted are a mixed-level (graduate and undergraduate students together) co-taught course titled Applied Social Psychological Research Methods, which requires a significant action research project; and a field-based course for non-majors titled Fair Science/Science Fairs, in which college students’ mentorship of middle school students’ science fair projects serves as a platform for thinking about access issues in the STEM fields. Most importantly, this session concludes with a group discussion about low-effort strategies instructors can use to integrate a social issues focus into existing assignments and courses while still addressing the core learning objectives we have for our students.
Mental Tattoos: Course Design for Skill Development

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Abstract

How do teachers create lasting change in their students’ understanding? How can we make sure students learn the content and the critical thinking skills we want them to learn? In this talk, I will review how learning science informs course design. I advocate for selecting only one or two key skills to develop over the course of a semester. I will give some practical advice about how to tattoo your selected skills into your students’ brains through activities and assessments. I will give examples of skills that colleagues and I have focused on as we have designed different courses in the psychology curriculum (including Introductory Psychology, Research Methods, content and upper-level courses). And you’ll have a chance to reflect on which skills are most important to you in the courses you design.
Psychological Science News You Can Use

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Abstract

This talk will offer not a main course but a buffet. It will ask: What are some of psychology’s most fascinating, provocative, newsworthy, life-relevant, and easily-communicated recent findings? What are newer discoveries and ideas that can make us proud to be psychologists and psychology teachers—and that we can take into classrooms with fresh excitement? In preparing this talk I will be asking myself: What have been fresh psychological news events that I can’t resist sharing with friends in conversation, and am eager to give away? And what psychological puzzles—what unanswered questions—arouse my fascination and curiosity?
New Ways of Thinking about Cognitive Development: Implications for Teaching

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Abstract

Introductory textbooks routinely present cognitive development as predominantly about Piaget. Students learn about his four stages, and quizzes assess understanding of words such as assimilation. At some point, a few alternatives are mentioned, usually information processing and Vygotsky. Some experiments are presented about how smart babies are, often including Baillargeon’s work. Then, the class goes on to the next topic.

Introductory textbooks also routinely discuss genes and environment. They present the obvious answer: interactionism. But they present this concept in a very general way, without discussion of what it really means and doesn’t mean. Then they go on to the next topic.

This talk will trace changing views of cognitive development and of genes versus environment. It will briefly overview the beginnings of psychology, the cognitive revolution, Piaget, and alternatives to Piaget, including Vygotskyan theory and information-processing work, but will concentrate on modern versions of nativism, and the ongoing debates about nativist and empiricism and about the roles of genes and environment.

The last part of the talk will discuss why to involve students in these debates, and how to do so in the absence of support from textbooks.
Let’s face it: most academics are terrible communicators. Why do the world’s most cerebral people find it so hard to convey their ideas? And how can we learn to do better? I suggest that the sciences of mind and language can provide guidance. Thoughtful writers and teachers should begin with a clear idealization of the simulated scenario in which they are communicating with their audience. And they must overcome The Curse of Knowledge – the inability to imagine what it’s like not to know what they do know.
Using Blogging in the Teaching of Psychology

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Abstract

As with many an instructor, one of my primary objectives in teaching psychology is to facilitate students’ active consideration of how the studies, phenomena, and theories we read about in class apply to daily life. In this presentation I will explore the ways in which I have recently begun to use student blogging as a way to pursue this objective. Specifically, I will discuss two ways I have incorporated blogging into my teaching of psychology: 1) a class blog on which I post content related to course material and students can respond and comment; 2) a personal blog assignment in which students are required to post weekly and consider events from their own lives through a social psychological lens. Advantages, challenges, and assessment of these exercises will be discussed, as will the applicability of these assignments for both in-person and on-line courses. The class blog has proven to be a particularly useful instrument in teaching an on-line version of my social psychology course, providing important opportunities for student/instructor and student/student interaction (much in the way that a discussion forum might); it has been a less effective endeavor in the standard in-person version of my course. The personal blog assignment has been more universally successful, enabling students to think in creative terms about the ways in which concepts from class apply to real-world situations, giving them voice to raise issues and perspectives that they might not otherwise have been able (or willing) to contribute in a large class setting, and providing me with yet another way to engage students in the course material outside the confines of our time together in the physical classroom.
Flipping the Psychology Classroom

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Abstract

One of the newest teaching trends is the flipped classroom. What is the flipped classroom and why should we flip? While it is often framed as flipping lecture and homework, it is more accurately defined as flipping from teacher-centered to learner-centered. In this sense, the flipped classroom is an approach, not a specific format. The flipped classroom approach encourages teachers to use their resources more efficiently and effectively to help students achieve the learning objectives for the course. The specific implementation of the flipped classroom will differ, but the approach fosters a mindful pedagogy that considers the needs of the learners and how to effectively promote learning, based on the objectives of the course and the science of teaching and learning. The flipped classroom allows for more differentiated and inclusive instruction, increased student-student and student-teacher interactions, and more class time for active learning and higher-order cognitive activities, which provide opportunities for students to get feedback on their learning and develop enhanced metacognitive skills. In short, the flipped classroom approach allows instructors to break from traditional patterns of teaching and re-imagine a class in which all students are engaged, active, collaborative learners. In this session, I will outline a series of questions that guide instructors in designing a “flipped” (or “semi-flipped”) course. We will explore some of the potential challenges of the flipped classroom approach and how to navigate these difficulties. I will review a range of possible classroom activities and teaching resources that are available to psychology instructors, and discuss the pros and cons of different instructional activities and the relevant research on their efficacy.
Why Talking to Your Car Can Drive You to Distraction

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Abstract

Everyone knows what distracted driving is. You can see it when a distracted driver runs a red light, drifts out of his or her lane of travel, looks but fails to see other vehicles, bicycles, pedestrians, or otherwise causes mayhem on the roadway. Driver distraction is increasingly recognized as a significant source of injuries and fatalities on the roadway. Indeed, studies have found that up to 50% of the crashes involved driver distraction in one form or another. Driver distraction can arise from visual/manual interference, for example when a driver takes his or her eyes off the road to look at or manually interact with a device. Impairments also come from cognitive sources when attention is withdrawn from the processing of information necessary for the safe operation of a motor vehicle. In the latter case, the driver’s eyes may be on the roadway and their hands on the steering wheel, but they may not be attending to the information critical for safe driving. Alarmingly, the least capable at multitasking are the most likely to use a cell phone while driving. In fact, we found that the frequency of cell phone use while driving was positively correlated with high levels of impulsivity and sensation seeking and negatively correlated with measures of executive control. We also found that a driver’s ability to self-regulate their multitasking behavior (e.g., hang up when the driving demands increase) was limited by the same factors that caused the driver to be distracted in the first place. Smartphones are proving to be a game-changing technology with regard to driver distraction. Not only can motorists use their smartphone to talk and text, but also the wireless technology allows them to navigate with GPS, stream music, search the internet, engage using social media, and interact with other “infotainment” systems. Working with AAA Foundation for Traffic Safety, we developed a rating system for measuring cognitive distraction with these new forms of distraction. Our studies show that the distraction potential can be reliably measured, that cognitive workload systematically varies as a function of the secondary task performed by the driver, and that some activities, particularly many of the newer voice-based interactions in the vehicle, are associated with surprisingly high levels of mental workload. Our research establishes that voice-based interactions in new vehicles have unintended consequences that adversely affect traffic safety.
If I Can See So Much, Why Do I Miss So Much?

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Abstract

When you open your eyes on a new scene, you immediately see something. You can understand the basic ‘gist’ of that scene within a fraction of a second. You can remember that scene for days after only a few seconds exposure. Nevertheless, we can easily show that you are ‘blind’ or at least remarkably amnesic about very basic aspects of what you have just seen. Indeed, some of these demonstrations (think “gorilla”) are YouTube staples. Nevertheless, it is easy to create compelling classroom versions that will be effective with even the most experienced and jaded student.

These various forms of “blindness” arise from the capacity limits of the nervous system. Your ability to process the visual stimuli that land on your retina is severely restricted. Visual search tasks make this point very clearly. Think about a Where’s Waldo task. Waldo is right there, in front of your eyes. Yet, you need to search for him. Fortunately, you don’t search at random. There is a limited set of basic features (e.g. those red stripes) that can guide your attention, but until you direct attention to the object that happens to be Waldo, you simply do not know if he is present or not. The same principle holds even if the stimuli are much less crowded and less deliberately difficult. Indeed, in the real world, the processes of guidance are so effective that you often do not notice the searches of everyday life. So your hand finds the coffee mug or the fork without apparent effort, even though the search is similar in kind to your search for Waldo.

In our modern civilization, we have created socially important tasks like airport security and cancer screening that have very substantial visual search components. We want experts to do these tasks perfectly, but they are doing them with a human visual search apparatus that makes perfection unlikely, at best. Worse, these tasks often have properties (e.g., very rare targets) that make the tasks more difficult for humans. This talk will illustrate the problems, discuss the solutions, and, with luck, provide some good material for undergraduate teaching.
1. Do Community Engaged Activities Matter in Tenure and Promotion Evaluations?

2. The Psychology of Getting Hired: Bridging the Gap Between Academic Objectives and Professional Development

3. RMPA Faculty Mentor Program: Advice to Faculty from Faculty

4. Big Five Personality Traits and Teaching Enjoyment Predict Teaching Performance
Do Community Engaged Activities Matter in Tenure and Promotion Evaluations?

Eric Amsel, Valerie Herzog, and Brenda Kowalewski
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Presented at: Rocky Mountain Psychological Association
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Students and faculty at many universities are encouraged to take part in community-engaged activities. Support for encouragement comes from national models of effective curricula (AAC&U, 2009), legislative mandates (USHE, 2015), and university missions. For faculty, community-engaged activities are related to teaching (both through class activities and involving students in community projects), research (designing research which improves community), and service (offering professional service to community agencies and institutions). Such activities have been shown to positively affect student learning (Yorio & Ye, 2012), are alternative forms of academic research (Boyer, 1996), and remain a viable source of service.

Despite being encouraged, it remains uncertain whether community-engaged activities are valued in tenure and promotion evaluations of teaching, research, and service. There are a variety of reasons for this situation. Notably, the encouragement for community-engaged activities is relatively new, and the activities are not traditionally considered as valued forms of teaching and research in some departments. Moreover, community engagement activities may not be mentioned explicitly in tenure or promotion documents, leaving the tenure and promotion committees with little guidance about how exactly to evaluate such activities in each of the three traditional domains of teaching, research, and service.

The study addressed how reviewers evaluate community-engaged activities for promotion and tenure. Participants were 85 university faculty members (Male = 57%, Years of Service = 18 years, Tenured = 98%, and either an Associate or Full Professor = 96%) at an open enrollment regional university. Each had served in the past two years on a department and college Tenure and Promotion Committee. Participants completed an online survey, which included seven background questions, one practice scenario, and 16 randomly presented experimental scenarios in that order. The practice scenario was: A faculty member publishes a paper in a peer-reviewed journal based on community research work performed with students in a class. Participants then rated the hypothetical faculty's activity for its appropriateness in the activity in being placed in a tenure and promotion file and the weight or importance they assigned the activity (each on a 1-4 scale) in each of 3 areas of evaluation: Teaching, research, and service. Participants rated the hypothetical faculty high in all three areas in the practice scenario, suggest a willingness to use the same activity to evaluate in multiple areas. Participants then performed the same ratings for each of the 16 experimental scenarios which varied the presence or absence of each of four features.
1. **Community Impact (CI):** Whether or not an activity has a positive influence on the community
2. **Involving Students (IS):** Whether or not an activity includes students
3. **Class Activity (CA):** Whether or not an activity originated in a classroom
4. **Peer/Jury Review (PR):** Product or result of an activity is disseminated through a peer or jury review process or not so reviewed.

For example, the following scenario represents the presence of each of the features:

*Based on a classroom discussion, a faculty member runs a study with students from the class testing a plausible but overlooked possibility in an active area of research in the field. The results highlight an important new finding which was published in a peer reviewed journal and presented to directors of local community agencies who note how much it improves how the agencies function.*

The following represents the absence of each feature:

*A faculty member reports on an idea to study an important issue in the discipline. The idea is worked out and is presented informally to some fellow faculty members who provide feedback. The feedback is incorporated but the idea has yet to be pursued.*

Averaged ratings for each area were subjected to separate judgments (2) x Community Impact (2) x Involving Students (2) x Class Activity (2) x Peer/Jury Review (2) repeated measures ANOVA. Each analysis had 31 possible main and interaction effects, but the analysis only focused on the significant interaction effects involving Community Impact with a partial eta squared ($\eta_p^2$) of .15 or higher. A significant three-way interaction effect involving Community Involvement, Involves Students, and Peer Review effect above the criterion impact was found in each analysis:

- Activities involving students increase *teaching* evaluations, particularly when they impact the community and are not peer reviewed. Activities not involving students are rather lower in teaching, unless they are impactful and peer reviewed (see Figure 1).
- *Research* evaluations are higher when activities are peer reviewed, unless the activities involve students which lowers evaluations. Activities not peer reviewed receive higher research evaluations when community impactful (see Figure 2).
- Activities are rated higher for *service* when it impacts the community, but lowered if they are peer-reviewed and fails to involve students. Service activities having no community impact are rated higher when peer reviewed or involves students (see Figure 3).

The significant and powerful three-way interactions found in each area demonstrate that reviewers make complex evaluations of faculty activities. Although of primary importance in service, activities that impact the community were also shown to increase teaching and research evaluations (albeit minimally). Curiously, community engaged activities were rated lower in teaching and service when peer reviewed. Similarly, involving students in research was rated lower in scholarship when peer reviewed. This seems to punish faculty for being innovative by simultaneously engaging in multiple activities that are individually valued. It is unclear why individually valued activities are rather lower when so combined than when rated alone. We urge caution in interpreting the results of the study as the conclusions are limited to
the features of activities varied in the study. The addition of other important features in each area may alter the findings and conclusion of these particular features. The conclusions are limited to the university context in which the study was performed. The survey requires decontextualized judgments by participants which is different than actual reviewers on tenure and promotion committees who would have much more context about each faculty activity.

Fig 1: CI, IS & PR interaction on Teaching judgments.  
Fig 2: CI, IS & PR interaction on Research judgments.  
Fig 3: CI, IS & PR interaction on Service judgments.

References
The Psychology of Getting Hired

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Objectives and Professional Development
Presented at: National Institute for the Teaching of Psychology
For further information, go to: www.ter.ps/umdpsyc123

The Psychology of Getting Hired: Bridging the Gap Between Academic and Professional Goals

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More course information and evaluation data at www.ter.ps/umdpsyc123
RMPA Faculty Mentor Program: Advice to Faculty from Faculty

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In this session we invited new, junior, and senior faculty to participate in the RMPA Faculty Mentoring Program. An expert panel discussed mentoring and helped to mentor faculty in the nuances of academia. In this interactive workshop we hoped to establish relationships that extend beyond the conference.

Summary of Workshop
As discussed in previous RMPA meetings, the mentoring process can be highly beneficial, supportive, and ultimately allow us to be successful in our academic position. It is our hope that at RMPA, we can create and support a community of mentors and mentees as has existed informally for years. To this end, the purpose of the RMPA Faculty Mentoring Program (RMPA-FMP) would be to pair new faculty with senior and more experienced faculty members in their respective disciplines within the Rocky Mountain region. This relationship is intended to support new faculty by engaging in important conversations and other activities with a mentor in hopes to become more familiar with the nuanced implicit procedural knowledge that must be learned to be successful in academia.

Based on participant comments from past sessions, this workshop focused on challenges faced by faculty. Most importantly, this is a forum where faculty may freely discuss their challenges in a supportive environment. Among the discussants, all stages of career are represented (i.e., Assistant, Associate, and Full Professor) in addition to various types of institutions (i.e., community college, four-year teaching institution, private university, and a research oriented institution).

Below is a list of goals and topics of the workshop.

Goals and Topics for Discussion
1. We sought to provide an interactive workshop with relevant information and support for faculty, addressing areas of concern such as new faculty roles, creating scholarly collaborations, securing external funding, and the major activities associated with tenure;
2. We sought to provide each faculty participant an individual mentoring opportunity with a senior teacher/scholar who will provide direct feedback on a particular work in progress and related teaching and scholarly endeavors;
3. We sought to facilitate peer networking and collaboration activities among RMPA faculty. The FMP is an excellent opportunity for faculty to connect with distinguished scholars and teachers, network with new colleagues, and to learn more about achieving success as a professor.

4. We sought to facilitate the fit of mentors and mentees, this collaborative session will allow potential mentors and mentees to interact, discuss mentoring styles and goals, and seek a strong academic fit.

5. We sought to discuss how to adjust to the new environment and become active members of the university quickly.

6. We sought to address questions, concerns, and special needs in a confidential manner with no harm or risk.

7. We sought to discuss how to gain insight about teaching and career development from a seasoned veteran.

8. We sought to discuss short term and long-term career goals and professional interests.

9. We sought to discuss effective instructional techniques, course development and curricular issues.

10. We sought to discuss how to explore research and sponsored funding opportunities, and writing publications.

11. We sought to discuss general strategies for success in all areas of academia (i.e., teaching, scholarship, and service).

12. We sought to share information on instructional resources and Web sites useful to new faculty.

13. We sought to discuss student issues such as advising, motivating, and handling academic dishonesty.

14. We sought to share experiences on managing time, handling stress, and balancing workload effectively.

15. We sought to discuss how to prepare for tenure and promotion and career advancement.

16. We sought to address special needs, concerns, or questions and help in troubleshooting difficult situations.

Each panelist had an opportunity to discuss his or her views on the mentoring process and best practices and identify important topics. For example:

a. Presenter A discussed the nuances of balancing research, teaching, service, and family.

b. Presenter B discussed the inescapable tensions between scholarship and teaching as well as ways to see beyond this dichotomy, blend our teaching and research endeavors, incorporate more students into our scholarship, and hopefully increase our productivity.

c. Presenter C discussed her experiences with promotion and tenure.

We set aside time in the workshop for mentors and mentees to meet and discuss goals for their upcoming year (e.g., network, set dates for meetings, modes of communication, etc.).
### Big Five Personality Traits and Teaching Enjoyment Predict Teaching Performance

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Presented at: Midwestern Psychological Association  
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#### ABSTRACT

The Big Five personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism—have been shown to predict teaching performance. However, the role of teaching enjoyment as a mediator of the relationship between personality traits and teaching performance has not been fully explored. This study aimed to examine the role of teaching enjoyment in predicting teaching performance and to identify which among the Big Five traits contribute to teaching performance. We explored the role of the Big Five traits and teaching enjoyment in predicting teaching performance. The study included 280 teaching assistants who were enrolled in a teaching training program. The Big Five personality traits were assessed using the Big Five Inventory (BFI). Teaching enjoyment was assessed using the Teaching Enjoyment Scale (TEQ). Teaching performance was assessed through peer ratings and performance evaluations. Results indicated that extraversion, agreeableness, and teaching enjoyment significantly predicted teaching performance. The role of these traits in predicting teaching performance was mediated by teaching enjoyment. The findings suggest that teaching assistants who are extraverted, agreeable, and enjoy teaching are more likely to perform well in the classroom. Teaching assistants who are neurotic are less likely to enjoy teaching and their performance is less likely to be rated positively by peers. These findings have implications for the selection and training of teaching assistants, as well as for the development of programs aimed at enhancing teaching performance.
Section XVII
Professional Development for Students

1. A Class Designed to Facilitate the Accomplishment of Goals 4 & 5 of APA’s New Guidelines for the Undergraduate Psychology Major

2. Effectiveness of a Psychology Major Career Planning Course: Further Evidence

3. Developing and Sustaining a Student-Driven Learning Center in Psychology on a Regional Campus.

4. The Power of Authenticity

5. Integrating Professional Development across the Curriculum: An Effectiveness Study

6. Teaching a Seminar on Graduate School Applications and Careers in Psychology

7. The Why and How to Teach Professional Development to Undergraduate Psychology Students

8. Assessment of Career Development Outcomes in a Core Psychology Class

9. Strategies for Implementing Professional Development Goals in an Undergraduate Curriculum

10. A Career Planning Course Reduces Psychology Majors’ Career Decision-Making Difficulties
A Class Designed to Facilitate the Accomplishment of Goals 4 & 5 of APA’s New Guidelines for the Undergraduate Psychology Major

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This presentation describes B103 Orientation to a Major in Psychology, which is class designed to enable psychology majors to begin to accomplish Goal 4: Communication and Goal 5: Professional Development of the APA Guidelines for the Undergraduate Psychology Major: Version 2.0 by requiring them to strengthen their communication and collaboration skills as they create clear, comprehensive, compelling, and credible, and confident answers to the following crucial questions.
1. What occupations can I enter if I major in psychology?
2. Which of these occupations can I enter with a bachelor’s degree, and which will require me to earn a graduate degree?
3. What are the specific tasks I would perform in these occupations?
4. What specific sets of knowledge, skills, and characteristics (KSCs) must I possess to enter and succeed in these occupations?
5. How can I use both the curricular and extracurricular resources and activities of my undergraduate education to develop these KSCs?
6. Who can serve as a mentor to guide me in the identification, selection, and engagement in these resources and activities?
7. What strategies can I use to convince employers or graduate school admissions committees to hire me or admit me into their programs?

B103 students engaged in the following twelve activities as they answered the seven questions above.
1. Wrote 10 one-page papers in APA Style
2. Took 10 short quizzes that covered material from the textbook
3. Created a Career Plan A and a Career Plan B
4. Constructed a complete, semester-by-semester graduation plan
5. Presented a collaborative oral report on a campus resource or opportunity
6. Took field trips to our Advising Office and the university’s Career Center
7. Interacted with a panel of graduate students and graduate faculty
8. Provided catering to the class at least once during the semester
9. Created the resume or curriculum vitae they will need to accomplish their career goal
10. Combined their papers, graduation plan, and resume/CV into a poster
11. Presented their poster during a poster session on the final day of class
12. Provided catering for and invited an “honored guest” to the poster session
Effectiveness of a Psychology Major Career Planning Course: Further Evidence

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Presented at: Southeastern Psychological Association
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Abstract
Consistent with previous findings, psychology majors in a required career planning class increased in both perceived and actual career-related knowledge and in career decision-making self-efficacy. They also moved closer to achieving vocational identities by increasing self and career exploration and career decidedness. This study extended the results across different instructors and class formats.

Introduction
Career Planning for Psychology Majors is a required, one-credit course that is a co-requisite for courses in research methods and research tools. Its major objectives are to increase students’ (a) knowledge of career options for psychology majors, (b) confidence in their abilities to make appropriate career decisions, and (c) movement toward achieving their vocational identities. Thomas and McDaniel (2004, 2006) have demonstrated the effectiveness of the course by comparing students’ pre-course and post-course responses on questionnaires designed to measure these three objectives. The present study aimed to replicate these findings and extend them across two instructors using different class formats, specifically meeting twice per week for eight weeks versus once per week for 16 weeks.

Method
Participants were psychology majors (N = 100; 77 females, 23 males; mean age = 21.72 years) enrolled in a required “careers” course. The students completed the following questionnaires during the first and last weeks of the semester.

The Psychology Majors Career Information Scale (PMCIS) consists of six items measuring students’ self-perceived knowledge of psychology-related career paths. Each item is rated on a 5-point scale (strongly disagree – strongly agree). Sample items include the following: “I know how to go about preparing for, selecting, and getting admitted to graduate school.” and “I can identify several areas in the business world in which a psychology major may be valuable and I know how to pursue a career in business if I should decide to do so.”

The Psychology Majors Career Information Questionnaire (PMCIQ) has 15 items measuring students’ actual career-related knowledge. The questionnaire primarily addresses myths that many students have about career-related issues. The items are essentially true-false questions, most of which are false. They are rated on a 5-point scale (confident it is false – confident it is true). False items are reverse scored. Sample items
include the following: “Any psychology major who graduates with a 4.00 GPA can count on getting into almost any Ph.D. clinical psych program.” and “To enter a master of social work program (MSW) you must first have a bachelor’s degree with a major in social work.” All the items from both the PMCIS and the PMCIQ can be found in Thomas and McDaniel (2004).

The Career Decision-Making Self-Efficacy Scale (CDMSES) measures students’ confidence in their abilities to carry out the tasks necessary to make an appropriate career decision (Betz, Klein, & Taylor, 1996). It consists of 25 items, each beginning with the phrase: “How much confidence do you have that you could ...” Sample items include the following: “find out the employment trends for an occupation over the next ten years.” and “decide what you value most in an occupation.” Each item is rated on a 5-point scale (no confidence at all – complete confidence).

The Career Exploration and Decidedness Inventory - Revised (CEDI-R) was developed by Thomas, McDaniel, and Wagner (2005) to measure the important aspects of vocational identity. Achieving one’s vocational identity involves engaging in both career and self-exploration and then making informed decisions regarding a career path. Thus, the CEDI-R has scales for decidedness (9 items), career exploration (10 items), and self-exploration (8 items), with the latter two combined for a total exploration score. Each item is rated on a 5-point scale (not at all like me – very much like me). Sample items include the following: “I have made a definite decision about what my future career will be (decidedness).” and “I have used the career center or the internet to explore various career possibilities (career exploration).” and “I have spent a lot of time contemplating the “Who am I?” question and how it relates to my future career (self-exploration).”

Results and Conclusions

For each variable, the change between pre-course and post-course scores was evaluated using one-sample t-tests and also tested for instructor/class format differences. Pre-course and post-course means, as shown in Table 1, differed significantly on all scales, replicating earlier findings and further supporting the conclusion that the course is meeting its objectives. Differences on the PMCIS indicated that students believed they had gained career-related knowledge in the course and differences on the PMCIQ showed that they did, in fact, have more knowledge at the end of the course. Differences on the CDMSES demonstrated that students were more confident in their abilities to make good career decisions at the end of the course. Differences on the CEDI-R scales of Self Exploration, Career Exploration, and Decidedness demonstrated movement toward achieving vocational identity. Finally, the size of the pre-course vs. post-course changes did not differ significantly across the two instructors and class formats. Thus, this study extends previous findings and further supports the conclusion that a career-planning course can provide a valuable experience for psychology majors.

References


**Table 1**

*Pre- vs. Post-Course Means (Standard Deviations) for All Measures*

<table>
<thead>
<tr>
<th>Measures</th>
<th>PRE-Course Means (SD)</th>
<th>POST-Course Means (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Career-Related Knowledge (PMCIS)</td>
<td>15.66 (4.87)</td>
<td>26.10 (3.26)</td>
</tr>
<tr>
<td>Actual Career-Related Knowledge (PMCIQ)</td>
<td>49.40 (5.15)</td>
<td>58.52 (8.71)</td>
</tr>
<tr>
<td>Career Decision-Making Self Efficacy (CDMSES)</td>
<td>94.19 (16.74)</td>
<td>103.13 (15.53)</td>
</tr>
<tr>
<td>Overall Exploration (CEDI-R)</td>
<td>47.07 (8.44)</td>
<td>54.03 (7.32)</td>
</tr>
<tr>
<td>Career Decidedness (CEDI-R)</td>
<td>29.68 (9.92)</td>
<td>34.47 (8.42)</td>
</tr>
</tbody>
</table>

*Note:* all comparisons significant at $p < .001$ level.
Developing and Sustaining a Student-Driven Learning Center in Psychology on a Regional Campus.

Barbara B. Oswald and Kathryn H. Weidner
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Presented at: Southeastern Teaching of Psychology Conference
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This abstract describes the development and preliminary outcomes assessment of a student-driven learning center on a Regional Campus. The Regional Campuses Center for Psychological Inquiry (CPI) was developed using a model from our main campus that offered peer-tutoring, peer-advising, and peer-led workshops promoting student success and professional development. Serving as a Student Associate (SA) in this type of learning center constitutes several high-impact educational opportunities identified by the Association of American Colleges & Universities Liberal Education and America’s Promise (LEAP) initiative (Association of American Colleges & Universities, 2015; Kuh, 2008), including offering common intellectual experiences, developing learning communities, working on collaborative assignments and projects, and completing internships. The student-faculty interaction, responsibility, and leadership roles given to SAs in a learning center, and the co-curricular events offered to all students, are in line with activities that engage students to promote academic and professional success (Hogan, Norcross, Cannon, & Karpiak, 2007; Stoloff, Rodgers-Good, Smith, & Brewster, 2015). For institutions that are trying to increase students’ experiential learning, the creation of a student-led learning center offers a low-cost and self-sustaining means to offer an experiential learning opportunity that goes beyond serving as a research assistant or classroom TA.

To develop the Regional Campuses CPI, a regional campus psychology faculty member volunteered to serve as Faculty Director (FD). The FD conducted a needs assessment in Fall 2014 via anonymous Qualtrics survey housed behind the university firewall emailed to 185 regional campus Psychology majors. Thirty-six (19.5%) responded, 100% of whom indicated they would use a CPI if available. The FD presented this data and idea for a CPI to the campus Office of Learning Assistance, who offered the use of shared space to house the CPI, and the FD applied for funding through the campus Center for Teaching and Learning, who granted $500 to purchase materials and to host events. The CPI was stocked with textbooks, learning resources (e.g., brain models, the APA Manual, the DSM-V), and advising and professional development materials (GRE prep books, books of graduate programs in Psychology, etc.). The FD sent an email invitation to all regional campuses Psychology majors and excellent non-majors enrolled in Psychology courses to apply competitively to serve as SAs. Four students applied, 3 psychology majors and one integrative studies major, with an average cumulative GPA of 3.39 on a 4-point scale. All were accepted, and SAs received 8 hours of training by the FD in advising for the major and appropriate tutoring practice. SAs scheduled 1-4 weekly office hours, and were tasked with developing programming to support the campus community. The CPI opened in November 2014 and
hosted an official Open House in December 2014. Eighteen visitors came to the Open House, which was considered a success.

In Spring 2015, all four SAs returned and one new SA joined (psychology major, 3.3 overall GPA). The five SAs kept a total of 26 office hours each week. In addition to offering peer tutoring and advising, SAs developed and hosted a week of programming to support Brain Awareness Week, and two workshops: “How to be a Successful Major: Advice from a Graduating Senior” and “Advising for the Psychology Major.”

Outcomes
Descriptive data analyses suggest success for this student-driven learning Center in Psychology. Between Fall and Spring semesters 2014-2015, thirty-four students visited the CPI (18 at the Open House), and 107 participated in programs sponsored by the CPI. Of the 16 students who used the CPI outside of the Open House, six came for tutoring, one visited for computer assistance with SPSS, and 9 came for advice about the major. Students who came for tutoring visited 2-5 times over the semester. Of the 4 students who came for tutoring in Introduction to Biopsychology, 3 earned A’s and one earned a B+. One student who came for tutoring in Introduction to Psychology earned a C and one earned a C-, but each earned their highest scores on work completed after visits to the CPI. Of the 107 students who attended events and workshops (not including the Open House), 43 (39%) attended for extra credit.

For students who served as SAs (n=5), 100% (2/2) of our graduating seniors gained successful admission to competitive graduate programs. Of note is that these students developed programming to support the CPI, descriptions of which they were able to include in their applications. Overall GPA of the non-graduating SAs increased slightly since joining the CPI, from 3.34 to 3.41, suggesting some improvement in GPA for students who served as SAs, although at present it is unknown whether GPA improvements were due to serving as Associates or other factors.

Recommendations
We offer the following recommendations for developing a successful student-led learning center on your campus:

● Conduct a needs assessment. Determine when students will use your Center and what programs/services they would use.

● Recruit student associates who can serve the needs identified in the assessment.

● Ask your department, Office of Learning Assistance, Tutoring Center, Advising, Career Services, CTL, and dean for space, money, and resources. Our experience is that anything to help students will be well-received.

● Ensure proper training in tutoring/advising: The Center must be run with authority and expertise, otherwise students will not use it (e.g., Filz & Gurung, 2013; Leung, 2015; Weidart, Wendorf, Gurung, & Filz, 2012).

● Hold weekly or biweekly staff meetings, to ensure SAs are on track with program planning and have resources they need to advise and tutor effectively.

● Keep records of EVERYTHING. Use this documentation for faculty annual reports and resource requests.
• Advertise, advertise, advertise. Offer extra credit, post signs, consider using social media. We have not yet used social media, but are considering it as one avenue to increase visibility of our resources and events.

References:


Engaging All Learners of Social Work, Human Services, Psychology & Education:

**The Power of Authenticity**

1. **Models**

   **Six Qualities of a Professional Learning Community**
   - Shared mission, vision, values, goals
   - Collaborative Culture
   - Collective Inquiry
   - Action Orientation / Experimentation
   - Commitment to Continuous Improvement
   - Results Orientation

2. **Authenticity at the Core**

   Authentic learning is a pedagogical approach that situates learning tasks in the context of future use. All three of the above models (PLC, PBL, & TBL) have elements at their core which encourage authentic learning. A list of eight characteristics they all share can be found in the Evidence of Effectiveness section.

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**S.H.A.P.E.**

Social Work, Human Services, Psychology and Education Biannual Symposium

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**Poster Project**

Teams of two to four students from four different disciplines (Social Work, Human Services, Psychology and Education) created a poster from class lecture topics. Approximately, 130 students submitted posters in Nov. 2012. Students then taught classmates and professionals in attendance about their area of study.

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**Evidence of Effectiveness**

1. **Reflection**

   All of the following quotations came from personal reflections of participating students.

2. **Authentic Activities**

   I was not expecting that many people at the event. What really interested me was the way people dressed up which made the poster presentation really professional. We actually got to present to President Henning which was very cool. I liked the positive attitude of all the professors that observed presentations and it was nice that the audience was my fellow students.

3. **Access to Expert Performances**

   Allowing us to see examples helped us know what needs for an effective poster and was very helpful.

4. **Multiple Perspectives**

   I also thought it was cool to see the posters from all the other majors classes like psych and human services. I learned a lot from other’s presentations.

5. **Collaborative Construction of Knowledge**

   I’ve never really had to make a poster, let alone a professional one. But as a team my partner and I really worked well together.

6. **Articulation**

   I felt like it got me out of my comfort zone and got me talking to people that I normally wouldn’t do. Every time I did it I got better at speaking and talking.

7. **Coaching and Scaffolding**

   I appreciated the feedback from my professor and students when I presented in class first. I felt we were given a reasonable amount of time to prepare for the poster. And the project was broken down into pieces.

8. **Authentic Assessment**

   The presentation was extremely beneficial to me because it allowed me to be in a teaching environment. I was able to utilize my presentation skills which is good because the fact that I will be teaching one day.

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**References**

Integrating Professional Development across the Curriculum: An Effectiveness Study

Natalie J. Ciarocco, Lisa M. Dinella, Christine J. Hatchard, Jayde Valosin
Monmouth University, West Long Branch, NJ

**Background**

- Though many students report that they are working in the field of psychology, few graduate schools or professional associations require such coursework.
- A number of professional psychology associations have developed educational materials and resources to help students better prepare for careers in psychology.
- The profession of psychology is continually evolving, with emerging ethical, technological, and legal issues that require ongoing education.

**Method**

- **Participants**: 299 undergraduate psychology majors.
- **Materials**: Modules are designed to address four main areas: career preparation, professional development, understanding the field, and understanding the role of psychology.

**Results**

**Hypothesis 1**: Students exposed to the career modules will report a higher commitment to psychology as a career, a better understanding of psychology as a discipline, and higher investments in the full experience of being a psychology major than those who were not exposed to the career modules.

**Hypothesis 2**: Students exposed to the career modules will report a greater awareness of professional development opportunities with the major than those who do not complete the career modules.

**Hypothesis 3**: Students exposed to the career modules will report a greater awareness of career options with a background in psychology than those not exposed to the career modules.

**Hypothesis 4**: Students exposed to the career modules will report a greater awareness of professional development activities, such as research, graduate school opportunities, and for-profit careers that are not exposed to the career modules.

**Discussion**

- Compared to participants who completed the career modules, students who were exposed to the modules reported higher levels of engagement in professional development activities and a greater awareness of career options available with a background in psychology.

- The current study did not measure the long-term effects of a modular professional development curriculum. Future research could explore the impact of career modules on student outcomes over time.

- **Conclusions**

  - This study shows that career modules are an effective way to increase student knowledge of professional development topics and under-standing and investment in the psychology major.
  - Given the effectiveness of modular professional development curricula, psychology programs should consider integrating career instruction to enhance student awareness.
Teaching a Seminar on Graduate School Applications and Careers in Psychology

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Presented at: National Institute for the Teaching of Psychology
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Problem Being Addressed

- Students entering Senior year without having finalized decisions for post-graduation activity.
  - Haven’t engaged in necessary research
  - Haven’t done field work
  - Don’t understand the nature of the graduate school application process in Psychology
  - Think all that’s necessary are good grades
  - Have heard repeatedly that “you can’t get a job with an undergraduate Psych degree.”

Course Strategies

- Expose students to various websites and supporting materials for the grad app process
- Encourage deep thinking regarding career focus
- Have invited speakers who are directors of local graduate programs
- A bit of “reality” tossed in for good measure...
  - Competitive nature of the application process
  - Majors CAN get relevant jobs
- Create a planning portfolio

Materials Covered

Top items required by grad programs & their relative importance

- GPA
- GRE
- Statements of purpose
- Letters of recommendation
- Practical experience and/or research
**Items in the portfolio**
- Self-assessment
- Course comparison with potential grad program
- Grad school planning sheets
- Drafts of CV and SOP
- GRE prep plan
- Job cover letter and resume
- Job search plan

**Student Reactions**
- Initially …. Intimidation & fear
- Comments – “wish I had known this when I first got here.”
- Their recommendations:
  - Add this seminar to the required core and present it within the first year after student declares
  - Add a seminar on APA writing to the core
  - Consider putting this course on the web for greater accessibility.

**Helpful Resources**
- Books through APA
  - The Insider’s Guide to the Psychology Major
  - Applying to Graduate School in Psychology
  - Finding a job with an Undergraduate Degree in Psychology
- GRE web-site
  - ETS – lots of free material
The Why and How to Teach Professional Development to Undergraduate Psychology Students

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Aaron S. Richmond
Metropolitan State University of Denver

Presented at: American Psychological Association
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Approximately 114,000 psychology majors received a bachelor’s degree in 2012-2013 (NCES, 2014), the vast majority of whom do not go to graduate school; presumably, they enter the workforce. Many of these students encounter employers who view them as entitled and unprepared (Chan & Gardner, 2013), and they have a high probability of receiving a job that doesn’t require a college degree (Vedder, Denhart, & Robie, 2013). As a result, there is an increasing need to educate undergraduate psychology students on the merits and application of psychology to the workforce setting through professional development courses.

The Evidence: The Need for Improved Departmental Support for Professional Development

In 2015, Hettich and colleagues studied the differences between student and faculty perceptions of how to advise and teach APA’s Guidelines for the Undergraduate Psychology Major: Version 2.0 (Guidelines 2.0) with specific interest in Professional Development. They electronically surveyed both faculty and students from across the country at all types of institutions of higher education. Some interesting and somewhat disturbing results emerged from this study. Hettich et al. found that faculty perceived that the most important elements of professional development to teach and advise were how to write effectively, how to work effectively in small groups, and how to think critically about social issues and problems. Faculty also viewed how to utilize the skill sets they developed as an undergraduate in psychology workplace settings as one of the more unimportant topics to teach and advise. In contrast, the majority of students felt that they needed advice and teaching in online resources about internship opportunities and how to apply these to the workforce, and in an explanation on career options. Students reported that they wanted a class or seminar in professional development. Furthermore, only 36% of students felt that their department was doing a good job on advising and teaching professional development. Overall, Hettich and colleagues concluded that there was a disconnect between the support and advocacy for advising, teaching and general services available for students and students’ expressed desire for education on professional development.

A Model for Supporting Professional Development
The undergraduate psychology curriculum at MCPHS University utilizes a model of professional development that addresses the issues identified through the survey conducted by Hettich and colleagues and meets the outcomes established in Guidelines 2.0. This model is structured, iterative, and student-centered; it spans the four years of the curriculum. Students are engaged in a process that is organized into four steps, beginning at the point of declaring the major and ending at graduation. Rather than telling students about careers, the instructor guides students through the exploration process. Not only does this take the pressure off the instructor to know every possible career path, it provides a process that allows students to pursue their individual interests.

Each of the four steps in this model includes a required 1-credit course and one or two 3-credit content courses, designed to move students one step closer to identifying a career path. At each step, students reflect on the achievement of professional development goals to date, determine areas in need of improvement, and set specific goals. Activities completed at each step are organized in an electronic portfolio with sections for self-assessments, reading responses, reflections, specific careers and graduate school information, resumes (updated at each step), cover letters (practice and real), evidence of skill development, and network members.

**Step 1.** In the 1-credit introduction to the major course, students engage in the process of discovering the breadth of the field of psychology, exploring the curriculum, and making thoughtful course selections. Simultaneously, in the Introduction to Psychology course, students survey the major themes in psychology.

**Step 2.** In the second 1-credit course, students engage in self-assessment, identify occupations of good fit, compare and contrast occupations, and explore careers through job postings. In the same semester, students take a Research Methods course in which they work collaboratively to generate an evidence-based recommendation for a fictional client. Principles of effective teamwork are taught, and students assess personal teamwork strengths and areas in need of improvement.

**Step 3.** Students take Applications of Research Methods for which they submit cover letters and resumes to work in specific roles on teams and further develop collaborative skills. In the next semester, students complete the third 1-credit course through which they refine career interests, identify potential Field Placement sites, and provide training in evidence-based interventions to students in another program (e.g., teach Magnetic Resonance Imaging students techniques for managing MRI-related anxiety).

**Step 4.** Students complete a required 3-credit semester-long Field Placement and simultaneously complete the fourth 1-credit course through which they prepare the materials needed to apply to graduate schools and jobs. In the final semester, students complete a Capstone course for which they deliver an extensive literature review in poster, paper, and presentation formats on a topic that leads to expertise associated with their intended career.

The structure of this model of professional development is truly developmental in that it supports the growth of students over the course of the curriculum. Career exploration is interwoven with coursework and experiential learning so that, at each step, students are able to reflect on and incorporate the accumulation of knowledge and skills as related to career options, and make thoughtful short- and long-term goals.
Conclusion
The need for incorporating professional development into the undergraduate psychology curriculum is evident. A thoughtful and systematic approach to incorporating professional development into the curriculum is recommended.

References
Assessment of Career Development Outcomes in a Core Psychology Class
Kristin M. Vespia, Ph.D., Haily Hummelmeier, B.S., & Mackenzie Wink

Abstract
One of APA’s (2013) learning outcomes for psychology majors is professional development, which includes career-related knowledge and behavior. We review an intervention that we developed to introduce career-related knowledge and skills into a core psychology class. We assess the extent to which students met the standards of competence in career development. Pre- and post-intervention surveys were administered to 46 students in the class. The results indicate that the intervention was effective in meeting the learning outcomes for career development.

Introduction
Psychology’s learning outcomes for the undergraduate major include career and professional development (APA, 2013). Departmental efforts often focus on student career counseling or introduction to the major’s course requirements, workshops and speakers, or providing online or printed career resources such as the Career Interest Inventory and Career Decision-Making Inventory (e.g., Apfel, Milsap, & Flannery, 2014; London, Sheen, & Davis, 2003). Potential concerns with existing approaches: faculty members do not always discuss career-related concepts explicitly, exposure to information about careers can be limited, and there is a lack of consistency or structure in career development instruction. Consequently, instructors may feel that it is not possible to teach career-related concepts within the existing curriculum. However, career development instruction is valuable to students. It prepares them for the workplace and for graduate school, enhances career-related knowledge, and increases their career success (Barrett, 2002; Sackett, 2003).

We describe an intervention to assess career-related knowledge and behavior. Our intervention was designed to meet the learning outcomes for career development and included a series of lessons on career-related knowledge and skills. The intervention was administered to 46 students in a core psychology class.

Participants
Participants consisted of 46 psychology majors (35 female, 11 male; 28 white, 8 black, 8 Asian, 2 other) who completed both the pre- and post-intervention surveys. The students were enrolled in a core psychology class.

Procedure
Two instructors collaboratively developed a career intervention that was delivered to the class. The intervention was based on the American Psychological Association’s (2013) learning outcomes for psychology majors, the National Career Development Association’s (2013) Standards of Competence in Career Development, and the World Association for Society and Education’s (2013) Standards of Competence in Career Counseling.

Instructors introduced the career intervention at the beginning of the semester. Students were informed that the intervention would be delivered in class and that participation was voluntary. The intervention included 10 lessons on career-related knowledge and skills. The lessons were delivered during the first 10 weeks of the semester. Students were encouraged to attend all 10 lessons and were given extra credit for attending all 10 lessons.

Results
The results of the assessment indicate that the intervention was effective in meeting the learning outcomes for career development. The students showed improvement in their career-related knowledge and skills.

Discussion
We believe that the intervention was effective in meeting the learning outcomes for career development. The intervention included 10 lessons on career-related knowledge and skills, and students were encouraged to attend all 10 lessons. The results indicate that the intervention was successful in meeting the learning outcomes for career development.

What Do Students Say?
Students were asked to rate their satisfaction with the intervention on a scale from 1 (very satisfied) to 5 (very dissatisfied). The average rating was 3.8 (SD = 0.8). Students were also asked to provide open-ended feedback. The feedback was positive, with students reporting that they found the intervention to be helpful and relevant to their future careers.

Table 1. Self-Reported Progress on Career Tasks from CR1 to CR2

Table 2. Anonymous Survey Responses About Career Development Experience

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I feel more confident in my career development.”</td>
<td>1.5 (SD = 0.8)</td>
<td>3.5 (SD = 0.5)</td>
</tr>
<tr>
<td>“I feel more prepared for graduate school.”</td>
<td>1.0 (SD = 0.3)</td>
<td>2.5 (SD = 0.5)</td>
</tr>
<tr>
<td>“I feel more prepared for the workplace.”</td>
<td>1.5 (SD = 0.8)</td>
<td>3.0 (SD = 0.6)</td>
</tr>
</tbody>
</table>

References


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Over the course of the last two decades the APA has increasingly emphasized the need for incorporating professional and personal development in the undergraduate curriculum (APA, 2013). Prior to this, undergraduate psychology programs were primarily focused on the academic and intellectual skills and neglected the development of interpersonal and intrapersonal skills, self-regulatory skills, and development a clear self-concept. Undergraduate courses in psychology can have a major impact on psychological development of tens of thousands of individuals that for the most part is mostly squandered.

We are associate professors at Metropolitan State University of Denver, specializing in experimental and clinical psychology, respectively. We care deeply about our students’ mental health, self-understanding, and workplace preparedness, and we try to infuse self-exploration and skill-building into the classroom, whether the class is Introduction to Psychology, Abnormal Psychology, Positive Psychology, or History & Systems. We believe that it is possible to meet the student outcome goals of self-regulation, self-monitoring, self-efficacy, and a meaningful life direction for life after graduation, as called for in the APA Guidelines for the Undergraduate Major (APA, 2013). This interest is shared by our department, as evidenced by the development of Positive Psychology as a regular course offering, and our department’s recent initiative to create a class, Careers and Professional Development in Psychology.

In the limited time allotted for a workshop at the RMPA pre-conference, we would like to explore classroom and departmental interventions that can cultivate personal and professional preparedness. Specifically, we explained what personal development and self-understanding might look like, why students need to cultivate inter and intra-personal skills, and practical things we can do in the classroom and in the department at large to help students grow personally and professionally. A portion of the workshop will be devoted to dissecting the rudiments of Cognitive Behavioral Therapy in a way that is easily comprehended by undergraduate students. The goal is to promote experiential exercises that give the students a sense of agency in regards to managing stress and building optimistic outlooks.

The session was presented via power-point, and was infused with engaging pictures to bring the learning lessons to life. Additionally, the session included active learning experiences that the audience can engage in from their seats. We solicited ideas from the
audience as to what would reinforce the value of a psychology degree. All audience members received a convenient and carefully crafted handout of session content to enhance their learning experience. As a result of attending this talk, attendees were able to: 1) Understand the indicators of student personal and professional success, 2) Describe the need for cultivating students’ personal and professional development, and 3) Meaningfully apply interventions that could lead to post-graduate life and workplace success.

References
A Career Planning Course Reduces Psychology Majors’ Career Decision-Making Difficulties

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Presented at: Association for Psychological Science
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Abstract

Psychology majors in a required career planning course completed the Career Decision-Making Difficulties Questionnaire. Pre-course vs. post-course comparisons indicated reductions in difficulties due to lack of information about the career decision-making process, the self, possible occupations, and ways of obtaining career information, as well as difficulties related to unreliable information and internal conflicts.

Introduction

Career Planning for Psychology Majors is a required, one-credit course that is a co-requisite for courses in research methods and research tools. In previous studies (Thomas and McDaniel, 2004; Bartlett, Thomas, Stephenson, & Foote, 2016), we have demonstrated the effectiveness of the course by comparing students’ pre-course and post-course responses on questionnaires measuring their knowledge of career options and confidence in their abilities to make appropriate career decisions. In this study, we examined changes in several types of career decision-making difficulties experienced by students.

Method

Participants included psychology majors (N = 100; 77 females, 23 males; mean age = 21.72 years) enrolled in a required “careers” course. The students completed the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, Krausz, & Osipow, 1996) during the first and last weeks of the semester. The CDDQ consists of 35 items, each rated on a 9-point scale (1 = does not describe me, to 9 = describes me well). It measures 10 types of career decision-making difficulties grouped into three major categories:

- Lack of Readiness: consists of three sub-scales including (1) lack of motivation, (2) general indecisiveness, and (3) dysfunctional beliefs.
- Lack of Information: includes four sub-scales measuring perceived lack of information about (1) the career decision-making process, (2) the self, (3) possible occupations, and (4) ways of obtaining career information.
- Inconsistent Information: has three sub-scales identifying difficulties due to (1) unreliable information, (2) internal conflicts, and (3) external conflicts.

Results

Pre-course and post-course means did not differ on the Lack of Readiness scale or any of its sub-scales. There were, however, significant reductions in the difficulties
reflected by the Lack of Information scale and each of its four subscales and by the Inconsistent Information scale and two of its three sub-scales (see Table 1).

Discussion

The primary goals of the course are to provide students with information about the career options available to psychology majors and to expose them to additional resources they can use to further their career-related knowledge. The course also includes exercises requiring students to explore their own career-related interests, values, and skills and introduces a process for making effective career decisions. Our previous research has demonstrated increases in students’ self and career exploration and in both perceived and actual career-related knowledge.

Thus, it is encouraging to find that students report fewer decision-making difficulties related to these “informational” issues following the course. In addition, the finding that students report fewer difficulties involving unreliable information and internal confusion suggests that they have made progress toward integrating their self and career-related knowledge and is consistent with our previous finding of increases in students’ confidence in their abilities to make appropriate career decisions.

Finally, the finding that there are no changes in the “readiness” issues of lack of motivation and general indecisiveness is unsurprising, given that the course focuses on providing information rather than addressing these more personal characteristics. It is worth noting that, in general, students did not report difficulties related to motivation (M = 2.50 on a 9-point scale). They reported considerably more difficulties related to general indecisiveness (M = 5.50), suggesting that at least some students may benefit from personal counseling in conjunction with the careers course.

References


Table 1

*Pre- vs. Post-Course Means (Standard Deviations) for CDDQ Sub-scales*

<table>
<thead>
<tr>
<th>Sub-Scales</th>
<th>PRE-Course Means (SD)</th>
<th>POST-Course Means (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lack of Readiness</strong></td>
<td>4.14 (1.12)</td>
<td>4.15 (1.14)</td>
</tr>
<tr>
<td><em>Lack of Motivation</em></td>
<td>2.47 (1.48)</td>
<td>2.60 (1.57)</td>
</tr>
<tr>
<td><em>General Indecisiveness</em></td>
<td>5.51 (2.07)</td>
<td>5.49 (2.04)</td>
</tr>
<tr>
<td><em>Dysfunctional Beliefs</em></td>
<td>4.38 (1.49)</td>
<td>4.32 (1.51)</td>
</tr>
<tr>
<td><strong>Lack of Information</strong></td>
<td>4.04 (2.10)</td>
<td>2.51 (1.46)*</td>
</tr>
<tr>
<td><em>Career Decision-Making Process</em></td>
<td>4.45 (2.43)</td>
<td>2.71 (1.79)*</td>
</tr>
<tr>
<td><em>Self</em></td>
<td>3.44 (2.18)</td>
<td>2.51 (1.74)*</td>
</tr>
<tr>
<td><em>Possible Occupations</em></td>
<td>4.52 (2.52)</td>
<td>2.57 (1.58)*</td>
</tr>
<tr>
<td><em>Ways of Obtaining Career Information</em></td>
<td>3.64 (2.18)</td>
<td>2.30 (1.44)*</td>
</tr>
<tr>
<td><strong>Inconsistent Information</strong></td>
<td>2.98 (1.48)</td>
<td>2.59 (1.44)*</td>
</tr>
<tr>
<td><em>Unreliable Information</em></td>
<td>3.24 (1.86)</td>
<td>2.57 (1.72)*</td>
</tr>
<tr>
<td><em>Internal Conflicts</em></td>
<td>3.52 (1.60)</td>
<td>3.07 (1.72)*</td>
</tr>
<tr>
<td><em>External Conflicts</em></td>
<td>2.18 (1.99)</td>
<td>2.17 (1.61)</td>
</tr>
</tbody>
</table>

*Note:* all p’s < .01; lower scores indicate fewer difficulties.
Section XVIII
Psychopathology

1. Insanity in Introductory and Abnormal Psychology Textbooks: A Content Analysis of the Rosenhan Study

2. The Four Foundational Principles for Abnormal Psychology: *Depression Quest*: Using gaming to promote understanding in Abnormal Psychology

3. Teaching Empathy for Schizophrenia Using Immersive Experience

4. Teaching Psychopathology to Graduate Students Through the Lens of Social Justice Training

5. The Normal Mind on the Abnormal Brain: Using Graphic Novelization To Enhance Understanding of Clinical

6. Neuroscience Content

7. Flipped Out: Methods and Outcomes of Flipping Abnormal Psychology
Insanity in Introductory and Abnormal Psychology Textbooks: A Content Analysis of the Rosenhan Study

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The Four Foundational Principles for Abnormal Psychology: M.A.P.S. of the Territory

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Despite improvement in the empirical foundations and organizational system for diagnoses, DSM-5 is still a target of significant criticisms (Frances, 2012; Paris, 2013). These important limitations of the DSM reappear continually throughout my abnormal psychology textbook (Burke, Trost, deRoon-Cassini, & Bernstein, 2016) and are strongly embedded in four foundational principles to bear in mind when studying abnormal psychology, as illustrated by the acronym M.A.P.S.—medical myths, attempted answers, prejudicial pigeonholing, and superficial syndromes.

**M = Medical Myths.** Despite the urgings of powerful drug companies and the potential increases in diagnosis of mental disorders in DSM-5 (Frances, 2012), pills are not always (or even often) the optimal first-line treatment for most named disorders (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012), with the exception of bipolar disorders (Smith, Cornelius, Warnock, Tacchi, & Taylor, 2007). Furthermore, the biological/medical model is only one narrow lens through which we view disorders, and the biological/genetic underpinnings have not been firmly established for any disorders (Paris, 2013). It is tempting to take the simplest route possible to explaining mental disorders; for instance, to view depression as resulting merely from low serotonin levels in the brain. But understanding mental disorders as diseases stemming from a single cause is oversimplified and sometimes just plain wrong.

Furthermore, with the removal of the multiaxial system (and Axis IV, which formerly listed psychosocial stressors), the DSM-5 emphasizes individual dysfunction far more than the harmful environments and social policies that impair people’s psychological adjustment. By focusing diagnoses exclusively on individual problems, mental health professionals risk blaming the victims of poverty, discrimination, unemployment, and abuse.

The more recent DSM-5 stacked on top of a French version of DSM-IV-TR
**A = Attempted Answers.** Far from being medical illnesses, mental disorders are just a collection of potentially interrelated symptoms—subjective observations by the person themselves indicating that something might be wrong. However, these symptoms often arise as the person’s attempted solution to a problem. For instance, delusions may create meaning for people who are depressed, compulsive behaviors (e.g., hand-washing) may reduce the anxiety caused by obsessional thoughts (e.g., worries about getting sick), children with autism may seek sameness/rituals to manage their discomfort, and children with ADHD may overstimulate themselves to “wake their brains up.” It is vital to understand why specific symptoms might emerge in specific situations and what function they might serve for the person who may have generated them.

**P = Prejudicial Pigeonholes.** Even in modern times, the labels included in each version of the DSM and first-line treatments are partly reflections of historical trends and sociocultural attitudes. For example, homosexuality was included as a mental disorder until its removal from DSM-III-R in 1987, and several scholars still argue that the remaining sexual disorders in DSM, now called paraphilic disorders, should be removed as well (Silverstein, 2009). As discussed below, pigeonholing someone, or unfairly judging them as belonging to a particular group, can have dire consequences.

One notable example of this effect is the claim that the diagnosis of mental disorders is gender biased. For example, DSM diagnostic criteria codify “masculine-based assumptions about what behaviors are healthy and what behaviors are crazy” (Kaplan, 1983), and this shows up especially in diagnosis of personality disorders. In one study (Ford & Widiger, 1989), psychologists read a case history that illustrated either antisocial personality disorder (APD; diagnosed more often in males) or histrionic personality disorder (HPD; diagnosed more often in females). Psychologists were either told that their case involved a female or male client. For the antisocial case, the psychologists failed significantly more often to diagnose APD for the female (15 percent) than for the male (42 percent). The reverse was true for the HPD case; the psychologists significantly underdiagnosed this disorder in males (44 percent) compared with females (76 percent). This and other research suggests that the diagnosis of personality disorders in DSM-5 may result in prejudicial pigeonholing using data that goes beyond the relevant symptoms of each client.

**S = Superficial Symptoms.** The last several versions of the DSM (III, IV, and 5) have had high interrater reliability in diagnoses because the diagnostic criteria are commonly based on superficial signs and symptoms. In other words, diagnosis is made typically using features that clinicians or clients can easily see/observe such as depressed mood, restlessness, or hypervigilance rather than by any deeper understanding of cause. Various photos (like the one below) in which cacti are diagnosed with mental disorders illustrate the key caveat that the DSM is based on observable syndromes rather than diseases per se (Paris, 2013). In our textbook, we explore abnormality behind the cactus to get at what causes these disorders and how to treat them, and not just how to spot them based on surface characteristics.
The goal of any good abnormal psychology textbook or course should be to get beyond the superficial cactus-like view of signs and symptoms, such as this photo of a cactus diagnosed with dissociative identity disorder. **Source:** Brian L. Burke, Atacama Region, Chile

To sum up M.A.P.S., the four foundational principles essential to any serious study of abnormal psychology, the diagnosis of mental disorders is frequently based on oversimplified medical assumptions and surface characteristics of human beings, as well as influenced by sociopolitical climate and stereotypes, rather than on a profound and real understanding of mechanism and cause. As Paris puts it (2013, pp. 183-184):

“Thirty-odd years after DSM-III, we are still in the dark about the nature of most disorders... Advances in neuroscience have not succeeded in explaining ANY mental disorder. Genetics has raised more questions than it can answer. Neurochemistry turns out to be much more complex than most people believed. And the beautiful pictures of neuroimaging will be seen by future generations as, at best, suggestive and, at worst, primitive. Clinical observation and consensus from experts, rather than hard facts, are still the guiding forces behind the manual.”
References


Depression Quest: Using gaming to promote understanding in Abnormal Psychology

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Presented at: Rocky Mountain Psychological Association
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This session introduced participants to Depression Quest, a free online game that allows the player to experience the symptoms of depression. Ways of integrating this activity into Abnormal Psychology and other classes that explore psychological disorders were discussed.

Depression Quest is a free, online game designed to raise awareness of the symptoms, expression, and experience of depression. The player reads scenarios about the main character, Alex’s, daily life and experiences and then makes a decision via multiple choice links about what Alex should do next. Depending on the choices made, the player may find Alex spiraling deeper into major depression, beginning to make progress toward recovery, or experiencing more consistent dysthymic symptoms. As the player advances, and depending on the story that unfolds, the multiple choice questions at the end of each page become more limited. For example, while four choices may exist, the two more adaptive responses are crossed out, thus, the player is unable to select them. This aspect of the game can be particularly frustrating but also instructive regarding the feelings of powerlessness that may accompany depression. This teaching take-out described how this game is integrated to an Abnormal Psychology class to demonstrate the symptoms and experience of depression.

Procedure
1. In class or via homework, students should become familiar with the symptoms of depression.
2. Use a lab to provide each student with the opportunity to participate.
3. Briefly introduce students to the game and allow them to play.
4. After ~15 minutes, bring group together for initial reactions:
   i. Prompts:
      i. What did you notice?
      ii. How did your choices change?
      iii. What symptoms of depression is Alex experiencing?
         1. We use the Comer Fundamentals of Abnormal Psychology book and I generally encourage them to connect the symptoms to the categories of: physical, motivational, emotional, behavioral, and cognitive.

5. Resume play until students complete (generally 30-40 minutes total)
6. Discussion prompts
Prompts:
How did your story end?
What do you wish you could have done differently?
Does this seem authentic, based upon what you know about the experience of depression?
How do you feel following this game?
Debrief
I usually end with a fun, physical activity which gives us the opportunity to talk about how exercise and dopamine are connected to mood.
Because I like Positive Psychology, I often give an extra credit option of completing the “Three Blessings”/Three Good Things activity for a week and then turning in a 1-page reflection of the experience.

Disclaimer: It is not recommended that students be assigned to play this game on their own, particularly if they have a history of depression. Many students have reported feeling sad upon completion of the game and expressed gratitude that it was completed in the context of a safe environment with debriefing. This activity can take up the entirety of a 75 minute session but may be adapted to a 50 minute format with less play time.
Teaching Empathy for Schizophrenia Using Immersive Experience

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Introduction

Stigmatization of those with mental illness is a national problem affecting the well-being of individuals diagnosed with severe mental illness (e.g., schizophrenia). The 1999 Surgeon General’s report identified stigma as a serious impediment to mental health treatment. It leads to discrimination and abuse, and denies people with mental illness full participation in society (U.S. Department of Health and Human Services, 1999). Particularly in rural areas, stigma concerns are a major issue for those with mental illness (Hoyt, Conger, Valde, & Weihs, 1997).

Because I teach in a college serving a predominantly rural area, one focus of my Abnormal Psychology course is stigma reduction. I use multiple methods to try reducing stigma, including emphasizing the biological origins of many mental illnesses, using video clips of high-functioning patients discussing their symptoms and experiences, and directly confronting the issue of stigma in lecture.

A simulation of auditory hallucinations (i.e., Deegan, 2016) has been used for training first responders and mental health care workers in understanding the experience of individuals with schizophrenia (Glass, 1997). The present research investigates whether the simulation would help increase my students’ empathy for individuals with mental illness to potentially reduce stigma.

Methods

Participants. Forty-seven students in an Abnormal Psychology class at the University of Arkansas were surveyed at the final exam about their empathy for people with schizophrenia and their experiences with a simulated auditory hallucination exercise. Thirty-four participants completed the exercise for extra credit points, and the 13 who did not formed a control group. Demographic data was not collected for the participants.

Materials and Procedure. Participants completed a survey that included five questions intended to tap empathy toward those with schizophrenia, an item measuring social distance from those with schizophrenia, and an item measuring prejudice toward those with schizophrenia.

The participants who completed the auditory hallucination simulation did so using their internet-enabled smartphones and wore sound-permeable headphones of their choosing. They played the simulation as a streamed audio file and listened to it while engaged in mundane everyday tasks such as talking with friends, eating, and watching television. Following the simulation, the participants completed four open-ended questions using Blackboard to assess their general subjective experience with the simulation.

Results
The five empathy measure items showed low internal consistency (Cronbach’s alpha = .58), and so could not be combined into one index. An exploratory factor analysis revealed that three items measuring perspective-taking loaded together in the factor analysis, and were combined to form an index of perspective-taking. The other two empathy measure items loaded independently, and were analyzed separately. Figures 1 and 2 graph means and standard error bars for the dependent variables.

The three items that loaded on a common factor were combined into an index of perspective-taking. Analysis of variance (ANOVA) showed that participants who completed the exercise reported more perspective taking ($M = 2.7$, $SD = 1.4$) than those who did not ($M = 1.9$, $SD = .6$), Welch’s $F(1,43.96) = 7.96$, $p = .007$.

![Graph of means for the simulation and control groups on dependent measures of interest. Error bars represent standard error of the mean.](image)

*Figure 1.* Graph of means for the simulation and control groups on dependent measures of interest. Error bars represent standard error of the mean.

For a question directly asking about empathy toward people with symptoms of schizophrenia, ANOVA revealed that those who experienced the simulation reported greater empathy ($M = 5.6$, $SD = 1.7$) than those who did not ($M = 5.1$, $SD = 1.4$), but the difference was not significant, $F(1, 45) = .96$, ns.

The last question in the empathy measure asked about intentions to avoid those with schizophrenia. ANOVA showed a marginally significant effect of completing the simulation on intentions to avoid people with schizophrenia symptoms. Those who completed it would avoid them less than those who did complete the exercise ($M = 3.6$, $SD = 1.3$ vs. $M = 4.4$, $SD = 1.4$), $F(1,45) = 3.63$, $p = .063$. 
Social distance scores were lower for those who completed the simulation than those who did not ($M = 1.9$, $SD = .74$ vs. $M = 2.5$, $SD = .52$), $F(1,44) = 8.6$, $p = .005$). Participants who completed the exercise showed significantly warmer feelings (less prejudice) toward those with schizophrenia than did those who did not complete it ($M = 68.4$, $SD = 13.2$ vs. $M = 57.0$, $SD = 13.8$), $F(1,45) = 6.92$, $p = .012$.

![Figure 2](image.png)

*Figure 2.* Graph of mean prejudice (feeling thermometer scores reversed) toward those with schizophrenia for the simulation and control conditions. Error bars represent standard error of the mean.

**Discussion**

The present research examined whether the use of an immersive perceptual experience simulating the auditory hallucinations associated with schizophrenia would increase empathy among undergraduate Abnormal Psychology students. Although empathy was not increased, the simulation does have an effect on perspective-taking. Participants who completed the simulation reported taking the perspective of people with schizophrenia more than those who did not complete it. Perspective-taking is an important foundation of prosocial behavior, creates a self-other overlap in cognitive representations, reduces stereotyping, and increases helping behaviors (Ku, Wang, & Galinsky, 2010).

The results showed that participants who completed the simulation perceived less social distance from people with schizophrenia symptoms, a finding consistent with the self-other merging that might be engendered by perspective taking. This self-other merging may work to reduce stereotyping and may also be at work in the finding in the present research that participants who completed the simulation showed less prejudice toward people with schizophrenia.

The present research used an extra-credit assignment. There are likely individual difference characteristics associated with students who are likely to complete extra credit assignments that may overlap with empathy and perspective-taking. For example, it may be that students who seek extra credit are more motivated to process information, and thus may be more likely to engage in perspective-taking (Hojat et al., 2001). Future research is planned that will explore the
effect of the simulations in a more controlled way.

In addition, the current research used a one-item measure of empathy. Future studies should use measures of empathy that are already validated, such as the Jefferson Scale of Physician Empathy (Hojat et al., 2001), which has been used in studying empathy for those with mental illness among medical professionals and students. This scale could be adapted for use by undergraduate Abnormal Psychology students. It would also be instructive to use a measure of self-other merging, such as the Inclusion of Other in Self Scale (Aron, Aron, & Smollan, 1992). A finding that the simulation engenders self-other merging would suggest the effects of the simulation occur through perspective-taking rather than empathy.

References


Teaching Psychopathology to Graduate Students Through the Lens of Social Justice Training

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Teaching psychopathology to clinical psychology graduate students is one of the key components of an APA-accredited program’s curriculum (American Psychological Association, 2006). The course includes the use of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, American Psychiatric Association, 2013) to demonstrate the current system for diagnosis, which is a biomedical orientation of psychopathology based on the categorization of signs and symptoms. The diagnosis serves to communicate with other professionals, clients, and sources of payment for services. The name of the diagnosis is a label, and psychiatric labels can lead to stigma, prejudice, discrimination and social rejection (Martinez, Piff, Mendoza-Denton, & Hinshaw, 2011). Incorporating social justice training into a psychopathology course allows students to explore their power and privilege in determining what diagnostic labels best describe what a client is experiencing, and gives students the opportunity to consider the intersection of multiple diversities with diagnoses (e.g., poverty, gender, ethnicity, religion, sexual orientation, disability, etc.). The purpose of this poster was to describe how social justice training was incorporated into a two-semester course in psychopathology taught to 39 first-year clinical psychology graduate students over a period of three years (Fall 2013 through Spring 2016).

Social justice training objectives included the expectation that all students would consistently use person-first language when speaking or writing about people diagnosed with mental disorders. Students were expected to demonstrate the ability to reflect on psychopathology topics through the lens of social justice. One technique used was entitled Social Justice Exit Slips, a form of providing students with “the opportunity to take time to think deeply, authentically, and reflectively” (Leigh, 2012, p. 189).

Students were assigned pertinent social justice readings (see references*). Class lectures and discussions were anchored in the context of diversity, equity, power differentials, stigma, prejudice, discrimination, and social rejection, etc. At all times in lectures and discussions, the client was viewed holistically, as a person who was someone with strengths, skills, and a diagnosis of a mental disorder. Person-first language was consistently used in lectures and expected in class discussions and assignments. Clinical case examples highlighted both diagnosis and clients’ reports of issues related to social justice (e.g., internalized stigma, prejudice by employers and medical personnel, fears of “coming out” to friends and family, fear of stigma and social rejection, and the intersection of multiple diversities and a mental disorder). A guest speaker with a doctorate in clinical psychology who was diagnosed with Bipolar I Disorder discussed stigma in the context of her interactions with medical professionals, graduate school professors, and graduate student peers. Social Justice Exit Slips were distributed in most classes.
Examples of Social Justice Exit Slips include:

- You will be learning how to diagnose mental disorders. Reflect on a time when you realized that a diagnosis could lead to stigma?
- Reflect on what Johnstone (2001) referred to as the “stigma of difference.”
- What kinds of microaggressions might someone with a somatic symptom disorder experience?
- I just had an interesting conversation with one of my supervisees. She was reluctant to give a client the diagnosis of any personality disorder due to the possibility that “it would be on their records forever and follow her.” Given the usefulness of diagnosis and the issues related to social justice, what do you think?
- Imagine you are in session with a person diagnosed with Narcissistic Personality Disorder. What stereotypes and prejudices will you bring into the room with you? What feelings do you have towards your client? Can you think of any famous people who seem to fit the diagnosis?

Year 1 students were provided Social Justice Exit Slips at the end of class; however, students complained that they didn’t have enough time and wanted to hear what others thought. Year 2 Social Justice Exit Slips were distributed before the mid-class break; but students complained that they were using the break to do class work and wanted discussion time. Year 3 Social Justice Exit Slips were administered at the beginning of each class. Students wrote their responses and then volunteered their reflections in class discussions, which were rich with descriptions of increased awareness of social justice issues relevant to those diagnosed with mental disorders.

The following were in response to the last Social Justice Exit Slip (May, 2016): “. . . How has this experience influenced your thoughts about the social justice issues related to psychopathology?”

- . . . I have been encouraged to step backwards and see a broader view of diagnosis. . . I got chances to consider the impact of having diagnoses and to see “persons” not just “disorders.”
- . . . It was helpful to ask what our feelings would be if we were to be in a room with a client who had the disorder that we were discussing. . . It made me think about my own prejudices, attitudes, and assumptions . . . .
- The discussions after were more beneficial than the slip for me.
- . . . it made me think about how each diagnosis comes with its own particular set of social justice issues.
- . . . it makes you think about your biases and taps into your own stigma towards psychopathology.
- I have enjoyed the fact that we don’t just look at a disorder as a diagnosis but rather how a person with a disorder may be affected by society and viewed by society [and] the mental health community.
- The influence will (and has been) geared towards meeting the client[s] where they are and how to treat the person first, instead of the diagnosis.

Using this technique of teaching psychopathology through the lens of social justice training was appreciated by the majority of the students in all three years. All students consistently used person-first language. The name of the Social Justice Exit Slip was changed to
Social Justice Reflection Slip and is now provided at the beginning of the class, followed by discussion.

**References**

(*Social Justice readings assigned in this psychopathology class.)


The Normal Mind on the Abnormal Brain: Using Graphic Novelization To Enhance Understanding of Clinical Neuroscience Content

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Abnormal psychology is a popular course at most undergraduate institutions. However, many offerings of abnormal psychology have been critiqued because the course is often taught in a lecture format, thereby limiting opportunities for students to apply course material. Also, the scope of material makes it challenging for professors to address issues such as decreasing stigma around mental illness (Kendra Cattaneo & Mohr, 2012) and increasing student understanding of contextual factors that shape psychiatric conditions (Lafosse & Zinser, 2002). That was certainly my experience when I first taught abnormal psychology.

Although students positively evaluated my lecture-based version of Psychopathology I, I was dissatisfied with several aspects of the course. Most notably, I did not feel confident I met my objective of challenging students to consider how social and systemic issues shape perceptions of mental illness. As a result, I felt that because of the format, course content had been reduced to a list of diagnostic criteria, leaving little time for acknowledging symptom variation and challenging stereotypes. To combat these shortcomings I flipped the course with the support of a grant from my college’s Cromwell Center for Teaching and Learning.

Flipped pedagogy involves moving lecture-based material outside of class so that in-class time can be used for “face to face engagement between students and teachers” (Forsey, Low, & Glance, 2013, p. 472). As such, I created two sets of materials for flipped Psychopathology I: out-of-class and in-class. The bulk of class content was delivered outside of class through video lectures. For the first iteration of the flipped course these lectures were simple, with my voice recorded over PowerPoint slides using the SnagIt application. Prior to class, students were required to watch between one and three videos and complete an online quiz.

In-class time was focused on application and discussion (Pluta, Richards, & Mutnick, 2012), which required me to create individual and group activities for each class meeting. Sample activities included students evaluating media depictions of psychiatric disorders for accuracy, writing vignettes of imaginary clients, and discussing the systemic factors that affect how clients manifest symptoms.

I evaluated the effectiveness of the flipped versus traditional instruction using data collected at two times: following a lecture-based course in Fall 2014 (N=27) and following a flipped-style course in Fall 2015 (N=34). I collected the following types of data at both time points: student test scores and grades; student course evaluations and responses to questions developed for the Web Learning Project (Calderon, Ginsberg, & Ciabocchi, 2012); and instructor reflections. Data from the traditional and flipped offerings of Psychopathology I suggested the pedagogical change affected outcomes in three domains: student learning, student engagement, and instructor experience.

**Impacts on student learning**
Researchers have suggested flipped instruction is successful because students learn and review pre-class material on their own time and at their own pace (McDonald & Smith, 2013). Many of my students agreed with this assessment, sharing on course evaluations that “I like how the videos were before class. It allowed for deeper understanding of the material because I can pause, write down questions, and review as needed.” Accordingly, students also rated the “adequacy of resources” as significantly higher than students in the lecture class, t(54)=−2.11, p=.04.

However the accessibility of material outside of class did not translate into higher grades for my students. In fact, students in the flipped class had significantly lower exam grades than students in the lecture-based class, t(58)=2.42, p=.02. What is more, student responses to the item “I learned a lot in this course” were lower in the flipped course (μ=4.3) than in the lecture course (μ=4.6).

It is possible that some of the student learning drawbacks of the flipped class were related to perceptions of the difficulty of the course. For example, in comparison to students in the lecture class (μ=2.54), students in the flipped class (μ=3.66) rated the course as having a significantly higher “workload,” t(56)=−6.02, p=.00. Students in the flipped class also rated the course as being more “difficult” (μ=3.45) in comparison to students in the lecture class (μ=2.81), t(55)=−3.19, p=.00. Further, student qualitative feedback suggested the flipped style made learning more difficult for some students because of the increased responsibility the students felt to carefully review out-of-class material.

**Impacts on student engagement**

The fundamental purpose behind flipped instruction is to use in-class time for active learning. However students in the flipped course (μ=3.22) rated the “learning value of in-class materials” significantly lower than students in the lecture course (μ=3.81), t(56)=2.326, p=.02. Based on these data, it seems that my implementation of flipped pedagogy may have fallen short because of how I structured face-to-face meetings.

With that said, data also suggested students interacted more in the flipped class, which may have facilitated student engagement. Students in the flipped course (μ=4.44) rated the amount and quality of “interaction with other students” as significantly greater than students in the lecture course (μ=3.04), t(56)=−6.06, p=.00. Student comments reinforced these data, with one student noting “I like that we get more time to ask questions in class,” and another mentioning that “the interaction during class time helps to solidify the information.”

**Impacts on instructor**

Researchers who study flipped instruction routinely note how demanding it is on instructors to flip courses. That was certainly my experience in flipping Psychopathology I. Similar to the experiences of other instructors, it took considerable planning and preparation for me to design engaging, interactive in-class activities (c.f., Halonen, 2005). I also required a great deal of lead-in time because of the need to record and edit lectures in advance of class meetings. This was complicated because of the limited technical support available to me.

Despite these issues, I also found the flipped course had multiple strengths. Because students could access and review the lectures before class, they were less concerned with taking notes in class. This freed the students to contribute to discussions and engage fully in activities. I also found the flipped class provided students with increased opportunities to consider more nuanced issues related to psychiatric disorders. In particular, because the students were
introduced to course content prior to class, they were more prepared to apply and critique that material in class, opening discussions about systemic forms of privilege and oppression that affect psychological health and illness.

References


Section XIX
Research Methods

1. Research Methods: An Employer’s Dream Course

2. The Marriage of Statistics and Research Methods

3. A Tale of Two Cohorts: Making class-“room” to accelerate student preparedness for laboratory research in the 21st Century

4. Using Collaborative Learning and the Three Claims to Teach Research Methods in Introductory Psychology
With an emphasis on “outcomes” in higher education, there is a growing perception that the primary purpose of a college education is to provide career training that leads to high paying jobs (Hurtado & Pryor, 2006). Given the rising costs of college attendance and student debt, some question higher education’s role in adequately preparing students for the workforce (Casner-Lotto & Barrington, 2006). Implicit in this questioning is the idea that college graduates primarily acquire knowledge rather than marketable or employable skills (Fabris, 2015). While knowledge acquisition is an important aspect of an undergraduate education, developing employable skills such as teamwork, project management, communication, information literacy, and quantitative analysis are also valuable outcomes. However, students often fail to recognize where they can develop these skills in the curriculum (Martini, Judges, & Belicki, 2015). Students may believe that these skills are only learned in more “experiential learning” courses such as internships or service-learning courses. We will discuss how research methods classes by nature are skill-based courses that lend themselves well to helping students develop and strengthen the very skills desired by employers. Collaboration, project management, communication, information literacy, and quantitative analysis are all integral to designing and conducting a successful research project. In our talk, we will discuss how instructors can strengthen students’ marketable skills by intentionally integrating them into various research methods course assignments and activities, providing students with real world work-related experiences within the classroom. Given that potential employers often have a narrow conceptualization of the psychology major, we will also discuss how we must help students explicitly recognize their own skill development and be able to extrapolate and communicate the utility of these skills beyond the classroom setting.

Our goal is to help instructors help their students develop marketable skills through a research methods course. We are not suggesting that methods professors should provide job training, as students can pursue many opportunities after graduation, but rather methods courses help students develop transferrable skills that can apply to most professional positions. We present three approaches for helping your research course better develop students’ employable skills. For each approach, we provide specific ideas and activities you can use to transform your class. This handout includes some specific activities and resources for transforming your class and helping students take ownership of their skills.
The Good Approach: A matter of emphasis

○ Review your course, identifying the skills you want students to develop.

○ Place a more intentional emphasis on developing skills and communicating that to students.

○ Examine your current assignments and determining which skills you have students actually demonstrate.

○ Determine which skills are missing or underemphasized and develop an assignment or activity to emphasize a new skill in your class.

○ Encourage students to take ownership of skills they are learning.

The Better Approach: You’re already doing a good job, but want to do a bit more.

○ Re-conceptualize or re-visit what you already do with an eye toward intentional skill development.

○ Develop a list of employable skills you could potentially include in the class. Determine which are missing or underemphasized throughout the semester.

○ Determine if the skill development in your class is a one-hit-wonder or if you are providing multiple opportunities for students to learn and demonstrate each skill in your class.

○ Add or revise activities in the course to emphasize additional skills or further develop skills you already address.

    For example, if you’re missing oral presentation/communication skills, consider adding an activity where students present to each other in small groups and/or the entire class.

The Best Approach: You’re ready to transform your class with skill development in mind.

○ Think differently about methods courses to see them as opportunities to develop skills vs. learning content/facts.

○ Restructure your class to empathize marketable skills. This means you may have to cut lectures down to make room for skill development.

○ Skill development most naturally occurs through practicing the skills which will necessitate a greater emphasis on learning-by-doing. Less lecture, more activity.

○ Skills you can develop along the way:

    Decision making/problem solving/thinking more like a scientist (critical thinking)
Teamwork: a cooperative effort on the part of a group in the interest of a common goal

Project management: application of knowledge, skills, tools, and techniques to meet the project requirements.

Communication (verbal, written, group, individual)

Information literacy: the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the problem at hand

Quantitative analysis

What a Skills Based Class Looks Like

Start with small toolbox

- Need to think scientifically
- Scientific method
- Ethics
- Measurement

Read and write about primary sources on a regular basis

Verbally present and lead a discussion on primary sources

Be a participant in research demonstrations and deconstruct the experience

Group lab projects on recurring basis

- Generate research ideas and develops a research question
- Make decisions about what is best, feasible, and how to implement
- Gather and analyze data
- Write a research report
- Make a presentation of the study to the class

- What’s missing?
  - Simply memorizing concepts and classes filled with lecture

- Take the leap!!!
Resources to get you started:

- www.teachpsychscience.org

- Lewandowski, G. W., Jr., Ciarocco, N., & Strohmetz, D. B. (2016) Discovering the scientist within:

Psychology faculty members and administrators recognize the natural combination of undergraduate research methods and statistics courses. These two topics appear as standard requirements for Psychology Majors and often are taught in sequence. Several institutions have changed their curricula to include integrating statistics and methods into one course in recognition of their overlap. Integration allows one topic to support the other, reinforcing student learning.

Integrating the two courses requires faculty discussions related to new course preparations and calls for rethinking approaches to teaching. Certainly, instructors face a daunting task when integrating courses that have established, comfortable content and a plethora of strong textbooks. However, preparing for an integrated course offers a chance to consider the question: “What do students need to know about design and analysis in today’s classroom?” We suggest that covering methods and statistics together offers a chance to streamline teaching, omitting information that does not directly apply to student research questions and expanding designs and analyses likely used by undergraduates. Instructors have the opportunity to reinvent their approach to two foundational topics.

A substantial benefit to teaching statistics and methods in tandem is that students are more likely to remember what they are taught in both classes. One of the problems facing methods teachers is that we often have to help students recall (or even re-learn) material learned in statistics classes. Recalling the details of statistical analysis is a challenge when faced with the very different task of applying an analysis to newly learned research designs. An integrated course allows students to learn a new design and discover approaches to data analysis in a meaningful, complete unit. For example, students can learn about two-group designs followed by analysis using a $t$-test in one module rather than discuss nuances of two-group designs and search through statistics books and notes to recall analyses from a previous term. An integrated course alleviates cognitive burden. Students no longer have to recall older material and use it in what appears to students to be an entirely different context. They learn the relevant material for design and analysis in a way that promotes retention of the material because they work through problems from beginning to end.

In the session, we also discussed ways to streamline an integrated course. We suggested that instructors (1) abandon hand-calculations and spend the regained time on theory, designs, and activities to engage students in the research process, and (2) reorganize topics
and omit content with a low likelihood of student use. We shared a handout of student-engagement activities, including data-collection exercises with minimal risk (we obtain IRB approval prior to any data collection at our institution). With more classroom time, we also require students to interpret SPSS output and practice writing in APA style. An emphasis on SPSS encourages students to analyze data in a real-world approach. Although we focus on SPSS for data analysis, we explain each step to avoid a mere point-and-click approach to data analysis.

Although we now omit hand-calculations in our integrated approach, we understand the drive to give students insight into the math behind the output. (Dr. Wilson advocated for more than 20 years over the necessity of teaching students hand calculations, but she is willing to admit a change is needed.) As technology advances and we focus on real-world behaviors, we concede that it simply is not as important that students know the "why" behind the statistics to the point of being able to calculate equations by hand. As researchers, we rarely calculate our statistics by hand. We want to train our students to be researchers; a purpose at the heart of our proposed integration.

To further streamline an integrated course, we omitted some of the statistical procedures typically covered in stand-alone statistics books, such as z-tests and single-sample t-tests, because they are not typically used to answer research questions in the real world. By omitting these types of infrequently used tests, we have more time to spend on basic, commonly used statistical procedures, including multiple regression and the two-way, between-groups ANOVA. Such straightforward approaches are likely to be used by students when completing class projects or, one day, in their own independent research.

In our session, we proposed a modified order of traditional statistics chapters, allowing instructors to address research questions by building from simpler to more complex research designs. Relevant methodology questions are addressed in the context of the design in which they occur (e.g., order effects with repeated-measures designs).

- The scientific method
- Ethical research
- The basic topics and terms associated with statistics and research methodology
- Research questions addressed by simple frequency – analyzed by chi square
- Data without grouping and measurement on two interval or ratio variables – analyzed by Pearson’s r and regression, including multiple regression
- Groups designs with different people in the groups – analyzed with the independent-samples t-test and building to the one-way, between-groups ANOVA
- Group designs with the same people in groups (or related people for the t-test) – analyzed with the related-samples t-test, then advancing to the one-way, repeated-measures ANOVA
- Given enough course time, cover the two-way, between-groups ANOVA
Conclusions

Traditionally, students are taught statistics and research methods in separate courses. The problem with this approach is that it does not teach students the critical-thinking skills researchers use in “real life.” When designing an experiment, researchers first ask a question. Next, an appropriate method is selected. Third, a useful statistic must be chosen. Research methods and statistics inform each other throughout the process of answering a research question and should be taught in tandem.

Our revised approach to teaching statistics and research methods is simple: Given a question, what methods and statistical procedures should be employed? After all, research is all about answering questions in an effective and efficient way. We hope to focus our efforts on teaching students exactly how we, as authors, conduct publishable research.
A Tale of Two Cohorts: Making class-“room” to accelerate student preparedness for laboratory research in the 21st Century

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Abstract

The talk, A Tale of Two Cohorts: Making class-“room” to accelerate student preparedness for laboratory research in the 21st Century, was inspired by the changing research environment and the apparent need for faculty who teach statistics and research methods to change with it in order to better prepare students to be “lab ready.” In this light, a key aim of this talk was to elucidate strategies that can be applied to bridge the overlap in the language used to describe statistics and research methods, as well as to present pertinent software in the classroom without substantially increasing the classroom hours required to do so. The talk focused on making class-“room” to integrate (1) the “parts” of science, and (2) appropriate technology. The key outcome for taking this integrated approach is to prepare students to be “lab ready”—thereby training the whole scientist. The “parts” of science specifically refer to understanding behavior as a “science,” which includes making efforts to bridge the overlap in the language used to describe methods (the “rules”) and analysis (the “data”). Two examples provided in this talk related to (1) variability, error, and individual differences, and (2) cause and effect and control. The examples given illustrated two key advantages of finding common ground in research methods and statistics in that doing so can help students understand (1) “why” they are working through the process of engaging in research methods, and (2) how research methods ‘fits’ with the bigger picture of engaging in science. Technology was introduced as the second key area of focus given its increasingly important role in the analysis of behavioral data. While many statistical tools are available, there are synergies between them, and the most popular of which in the behavioral sciences is the IBM SPSS® statistical package. A holistic approach was
introduced where faculty can present analysis in a way that encourages students to extrapolate the conceptual from the mathematical. Faculty are encouraged to translate data outcomes into how these appear in SPSS statistical output tables, and to provide repetition in instruction by allowing students to work with the same data set and outcomes by hand, in statistical software, and on their own using exercises and preset screencasts to aid their learning. In addition, faculty were recommended to use Excel® when possible to introduce data sets and examples so that students can “see” the data and the graphs side by side as the data are manipulated in real time. Doing so can incidentally teach students about this important software, and help them increase their proficiency using it, which is important inasmuch as students will need to be proficient with this software in a research lab setting. Integrating technologies in the classroom can (1) reinforce the importance of technology in research today, and (2) better prepare students to extrapolate the conceptual from the mathematical. Overall, the strategies and suggestions provided in this talk addressed apparent changes in the statistics and research methods classroom that are needed to more closely parallel the dynamic nature of a research laboratory environment. Making these changes can substantial help students become “lab ready” by developing their skills to more closely match the skills and knowledge necessary to meet the demands of the research environment in the 21st century.
Using Collaborative Learning and the Three Claims to Teach Research Methods in Introductory Psychology

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Some exposure to research methodology is usually a part of a course in introductory psychology. Most introductory psychology instructors and textbooks cover the basics of descriptive, correlational/predictive and experimental research strategies. One way to provide your students with a framework for understanding psychological research is to present the notion of there being three types of claims: frequency claims, association claims and causal claims (Morling, 2015). Given that the majority of students will not pursue careers in research, I find it useful to present research methods in introductory psychology using a consumer-based approach with the assumption being that all students can benefit from being critical consumers of research.

To teach my students in introductory psychology about the three claims, I use active and collaborative learning by having students work in pairs or small groups. The active learning cycle is comprised of three phases: concept exploration, concept introduction and concept application (Lawson, 2001).

Phase 1: Concept Exploration

During phase one, the instructor should ask students working in pairs or small groups to think about the three claims in order to establish a “need to know”. Most students will probably be unfamiliar with the three claims as they are not presented in most introductory psychology textbooks. Therefore, students will be exploring the three claims prior to knowing much about them. This phase might raise questions about the claims and help to identify misconceptions students may have about them. In the three claims active learning activity, I begin by asking students to work in groups to answer these questions:

1. What is a frequency claim?
2. What is an association claim?
3. What is a causal claim?

Phase 2: Concept Introduction

During the second phase, the three types of claims are introduced to the class by the instructor through a brief lecture. Claims are arguments that scientists and authors are trying to make. A frequency claim describes a specific level or rate of a single variable. For example, more than half of college students have “sexted” (i.e., sent sexually explicit
messages or photographs via text). In an association claim there are two variables that change systematically such that as one variable changes the other variable tends to change as well. For example, height and wingspan length are correlated. Finally, a causal claim also involves two variables. However, when making a causal claim one argues that a specific change in one variable influences the level of another variable. For example, sun exposure increases Vitamin D levels.

It is usually relatively easy for students to identify when they have a frequency claim because it only involves one variable. But students have some difficulty distinguishing association claims and causal claims because they both involve two variables. The difference is that an association claim involves two measured variables, and a causal claim involves one measured variable and one manipulated variable. A measured variable is one whose levels are observed and recorded such as intelligence quotient (IQ), anxiety, weight and memory. A manipulated variable is one that is under the control of the researchers. The variable is manipulated by assigning participants to the different levels of the variable.

When reading about research in the popular media (newspapers, magazines, etc.), the verbs used to describe causal claims sound more powerful and exciting than those verbs used in headlines and titles for association claims. Association claim verbs include phrasing like "is correlated with," "is linked to" and "may predict". Whereas causal claims use verb phrases like "affects," "prevents" and "increases". It is also a good idea to caution students that the popular press sometimes makes association claims sound like causal claims. If it is still not clear what kind of claim is being made after reading a newspaper or magazine article, it is a good idea to go to the scholarly source where the research was first published.

Phase 3: Concept Application

Following this mini-lecture, the concept application phase begins. In this phase students will need to take the knowledge that they have acquired about the three types of research claims and apply it to a new situation or problem. There are several ways that instructors can facilitate students’ collaborative application of the three claims. One approach is to provide groups of students with real or made-up headlines and ask them to identify the variable(s) in each claim, whether each variable is measured or manipulated (sometimes it is not clear based on the headline), and what type of claim is being made. Another application activity involves asking student groups to create their own headlines or find headlines by searching popular sources online that are examples of each of the three types of claims. A final collaborative activity is to provide students with short magazine or newspaper articles summarizing psychological research, and ask them to identify the variable(s), whether each variable is measured or manipulated and what type of claim is being made.

Conclusion

Morling’s (2015) three claims can provide a useful framework for teaching research methods in introductory psychology. Instead of teaching these concepts through passive lecture, I suggest a collaborative learning activity that implements the active learning cycle
approach. I have found that students are relatively skilled at identifying frequency claims because they only involve one variable being measured. However, students have some difficulty distinguishing association claims and causal claims in part because they both involve two variables. I would recommend providing students with plenty of examples of association and causal claims so that they feel comfortable with how they are different from one another. I have found it helpful to discuss the difference between two measured variables in an association claim versus one manipulated and one measured variable in an association claim. In addition, presenting examples of “association verbs” and “causal verbs” can help students differentiate them. Last, warning students that the popular media sometimes makes association claims sound like causal claims for impact will help them to be more savvy consumers of psychological research.

References

Section XX
Service Learning

1. Want to Internationalize Your Curriculum? Consider Taking a Class in Jamaica!

2. Using a Class Blog to Form a Virtual Community of Support for Undergraduate Interns and Community Service Learning Students

3. Expect the Unexpected: Challenges and Rewards of Service-Learning

4. Teaching Psychology through Social Action: Even a Done-in-a-Day Activity Can Make a Difference

5. Using Service Learning to Teach Classic Learning Theories

6. Service Learning and Research Methods: A Perfect Match

7. Service Learning and Freire’s *Pedagogy of the Oppressed*: A Dialogue
Want to Internationalize Your Curriculum?

Consider taking a class to JAMAICA!!

Joe Hatcher
Ripon College

Internationalizing is a Growing Emphasis

Halsey (2009) Undergraduate Education in Psychology: A Blueprint for the Future of the Discipline
Peace Studies in Jamaica: A Focus on Psychologically Relevant Service Learning
Hatcher, J. (2016)

Advantages of going to Jamaica

Not far, and reasonably inexpensive
English language spoken
Established program
A lot of help “on the ground”
Exposure to several types of diversity
Cultural
Racial
Socioeconomic
Fun! Climb the Peak!
Learn Jamaican dances!
Blue Mountain Coffee

Suitable for Several Different Courses

Cultural or Cross-cultural Psychology
Peace Studies

Your Partner The Blue Mountain Project

Service Learning Project in Rural Jamaica
Health and educational service projects
Long-standing program accustomed to US college visitors
Direct cultural contact: Live with families
Unique: Not a tourist, but a temporary member of the community

Hagley Gap, Jamaica

Only 12 miles from Kingston, as the crow flies
A World Apart in terms of culture
Rural, beautiful landscapes
Rustic. No hot water
Friendly people. Mostly farmers of coffee and other crops

Interested? Your Options...

Put it together yourself (I’ll help)
Partner with me in January of 2016
I plan a 9 day trip, negotiable.
Send your student(s) with me

Contact: Joe Hatcher
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Using a Class Blog to Form a Virtual Community of Support for Undergraduate Interns and Community Service Learning Students

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Presented at: Association for Psychological Science, 2016
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Abstract

Experiential learning offers opportunities for students to gain skills while actively applying material from their courses. Ideally, students have ample opportunity in facilitated in-person meetings, usually as part of a regular class meeting, to share and reflect on their experiences. However, class time is often at a premium, and experiential learning sometimes happens outside of traditional courses (e.g., individually supervised internships). Thus, students may not engage in the level of active reflection desired, and they may feel isolated and unsure who to turn to for support other than faculty supervisors. Class blogs can provide a shared, virtual space where students can interact with and support each other as they individually engage in experiential learning. Students can receive support and encouragement from each other, and individual experiential learning experiences can become more interactive. This also better allows students to learn from the experiences of their peers in addition to their own.
Using a Class Blog to Form a Virtual Community of Support for Undergraduate Interns and Community Service Learning Students

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THE CONTEXT

EXPERIENTIAL LEARNING
- Experiential learning can provide students with
- Context for in-class material
- Opportunity to explore potential career paths
- Career-relevant experience
- More common core requirement for psychology majors and general education requirements
- Can significantly add to education in psychology
  - APA Guidelines for the Undergraduate Psychology Major
  - Goal 3: Ethical and Social Responsibility in a Diverse World
  - Goal 4: Communication
  - Goal 5: Professional Development

THE CHALLENGES

INADEQUATE REFLECTION
- Class time at a premium
  - Experiential learning is often tied with classes with content/graded
- Experiential learning can take place outside of traditional class contexts
  - e.g., individually supervised internships

LACK OF CONNECTION
- Students may struggle to find connections to present and/or previous courses

FEELINGS OF ISOLATION
- Students may feel alone in their experiences
- May desire support from more than on-and-off-campus supplements
- May wish others could “normalize” their feelings and experiences

NARROW LENS
- Students may not have own assumptions and interpretations challenged
- Student can only experience a small array of what’s out there with a single experiential learning placement

A (PARTIAL) SOLUTION

A CLASS BLOG

THE CLASSES

UNDERGRADUATE INTERNSHIP SUPERVISION SEMINAR
- Junior and senior psychology majors completing for-credit internships are supervised on-campus in a group supervision setting
- Involves bi-weekly class meetings + ongoing consultation with the supervising faculty member
- Students complete a research paper related to their internship experience
- Students journal about their experiences throughout the semester

PSYCHOLOGY OF WOMEN
- A 300-level seminar-style course
- Honors, writing intensive, speaking intensive
- Involves 25 hours of community service learning (CSL) with women/rights
- Students select their own sites (pending instructor approval)
- Some class sessions are explicitly about CSL experiences
- Students journal about their experiences throughout the semester

THE BLOGS

- Class blog created on campus Wordpress platform
- Students create blogging accounts (if don’t already have)
- Students added to class blog as contributors
- They can write posts but can’t edit the site
- Students can write posts on their experiences
- Students must write one post per week or could be graded
- Students are allowed to edit their post within two weeks of posting

THE ASSIGNMENTS

- Write 10 journal entries about internship/CSL experiences
  - No more than 1 entry per week (Monday 12am – Sunday 11:59pm)
  - must be graded
  - Comment on a minimum of 2 journal entries per week
  - Have to do 20 comments total (graded 2 peer week)
  - Have to be substantive (not just “looks so nice” or “the best”)
- Students received feedback on each journal entry from me via comments in our course management system (Canvas)
- Allowed commenting to be a peer process
- Provided text-based feedback on journal quality
- Could address individual concerns with students and prompt in-person meetings

SUCCESSES

- Journaling was taken seriously
- Posts read and commented on by peers
- Journaling wasn’t left until end of semester
- Limited how many posts could be graded in a given week
- Did allow room for a few weeks with no posts
- Created an active online community
- Related to assignment to comment as have not had similar buy-in previously without this requirement
- Class discussions could continue outside of classroom hours
- Discussion could be between students rather than moving through professor

DRAWBACKS

- Lots of record keeping
- Constant feedback stream to students
- Easy for students to fall behind on posts and/or comments
- Not all comments are helpful, supportive, and/or connected to course
- Sometimes peers offer poor, and even inaccurate, advice and information
- Need to be comfortable with blogging platform
- Faculty and students
- Hard to do without on-campus learning technology support

STUDENT FEEDBACK

Another plus was that I got to learn to the site and about the site and about the experience when I just finished stating which posts was the one.
I loved having the class blog as allowed us to interact with each other more frequently.
I never even knew when we had class.
It was easy to use, and I totally enjoyed it.
I thought that it was useful, but didn’t get to the site to blog.
I thought that it was a good support system because I was able to get things on my mind and to share thoughts.
I thought that it was a good experience to have the blog.
I like the idea of blogging, but I didn’t really like it.
It was kind of cool to see it in the blog.
I didn’t get to read it, but I did learn about it.
I didn’t really like it.
It was a way to get feedback from our classmates and see that many times, they were having similar experiences.

THE COMMENTS WERE INCREASING SUPPORTIVE

Comments were being more encouraging.

THE ASSIGNMENTS WERE BECOMING MORE CHALLENGING
Expect the Unexpected: Challenges and Rewards of Service-Learning

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Presented at: Rocky Mountain Psychological Association, 2016
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Service learning has been designated a high-impact teaching practice (Kuh, 2008), and a growing body of research supports that getting students out of the classroom and into the community can yield a variety of benefits. Students’ course mastery, professional development, and personal growth all may be powerfully affected by community-based learning. When students have opportunities to engage—in intentional and professional ways—with community members, they can build interpersonal relationships that alter preexisting beliefs, bridge racial and socioeconomic divides, and foster socially responsible behaviors. However, creating effective service learning experiences can be fraught with messy challenges for both the instructor and the students.

Often the complications of service-learning occur in the early phases, when instructors and community partners are just beginning to work together, and/or when students are first venturing out into the field, their roles and responsibilities uncertain. Sometimes, though, even well-established, effective partnerships can face unanticipated situations. Because service learning trades the controlled and steady classroom environment for the unpredictable real world environment, students may encounter hurdles, hardships, and happenings that were not covered on the syllabus or included on the study guide. Such challenges have the potential to derail the service-learning experience...or to strengthen and enrich it.

During a recent semester, students who were part of an ongoing service-learning partnership were confronted with two back-to-back deaths at the community organization. One was a suicide, and the other was a potential homicide. Naturally, these were devastating losses at the service site, and the class questioned whether the service-learning would be terminated as the agency worked to recover. Instead, though, the course/community partnership became more important than ever, as students provided valuable support and reaped the kind of on-the-ground learning that cannot be gleaned from a textbook.

In this presentation, one instructor and three students shared their experiences navigating through unexpected crises and reaching unanticipated outcomes in the context of service learning courses. They shared some keys for creating success, via both the student perspective and the instructor perspective.

This included:
• building lasting and mutually beneficial partnerships with community organizations;
• attending to ethical awareness and adherence to APA standards;
• creating opportunities for structured and unstructured student reflection and selfevaluation;
• fostering flexibility, creativity, and compassion; and
• maintaining consistent communication.
Teaching Psychology through Social Action: Even a Done-in-a-Day Activity Can Make a Difference

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Using Service Learning to Teach Classic Learning Theories

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Service Learning and Research Methods: A Perfect Match

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A Research Methods course provides a perfect platform for integrating service learning (Potter, Caffrey, Plante, 2003; Sharon, 2013). Service learning integrates community service and academic study (Ehrlich, 1990). Specifically, students perform a service for the community that allows them to get real world experience which complements and informs what they are learning in the classroom. The benefits of service learning include helping students to learn about social issues and assisting with problems in their community. In addition, community service makes students more employable upon graduation (Torres & Sinton, 2000).

There are three main components to developing a service learning component to a college course. First, the instructor must find a community partner where students can perform their community service. Second, the instructor needs to set the objectives of the community service to map onto the learning objectives of the course. The last component involves having students discuss and process their experiences within the field to gain a deeper understanding of their experiences tie into course material (Corporation for National and Community Service, 1990).

This presentation will provide resources and examples on each of these components to help instructors new to service learning.

Research methods classes across a variety of fields (e.g. psychology, sociology, communication, etc.) lend themselves to incorporating a service learning component. Specifically, most research methods courses have a research project where students collect, analyze, and present their research. Many non-profit organizations desire program evaluations or help answering questions relevant to the organization but may not be able to afford large scale professional research consultants. Thus, research methods classes can help to assist community partners with their program evaluation needs. A number of past studies have shown the benefits of including a service learning component into their research methods course (DePrince, Priebe, Newton, 2011; Fleck, Hussey, Rutledge-Ellison, 2016; Potter, 2003; Sharon, 2013). Fleck et al. (2016) found that students both prefer service learning to no service learning in a research methods course and learn more in the
service learning course. In addition, DePrince et al. (2011) found that students felt the community engagement enhanced their understanding of course material.

This workshop assisted faculty who are new to service learning or have who have never incorporated service learning into their research methods courses. This workshop had three main goals. First, we briefly reviewed the benefits of incorporating service learning into courses in general and research methods courses specifically. Second, we outlined the steps that need to be taken when developing a service learning component to research methods. Lastly, we highlighted two examples incorporating service learning into research methods courses. One research methods course collected data from the Boys and Girls Club and the other from the Children's Museum of Denver.

References
Service Learning and Freire’s *Pedagogy of the Oppressed*: A Dialogue

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In recent years there has been a significant focus on service learning pedagogy. Service learning is an academic or course related activity that has the dual aim of enhancing student learning and meeting the needs of the community (Eyler, Stenson, Gray, 2001). American philosopher, psychologist and educational pioneer, John Dewey is often regarded as the “father of service learning” (Deans, 1999). Dewey’s focus on experience and learning is the foundation for pragmatism, which has influenced the development of service learning. Similarly, Brazilian educational philosopher Paulo Freire espoused a method of education in which the learner is experientially engaged (Freire, 1970).

In his seminal work, *Pedagogy of the Oppressed*, Paulo Freire (1970) debunked the “banking” method of education, in which information is “deposited” into learners. He instead proposed an educational model in which the learner co-creates the learning environment with the educator (Freire, 1970). The learner is both transformed by and transforms the material. Freire and Dewey both espoused the importance of the experiential process in learning. Where Freire and Dewey depart is that while they both saw experience as essential to the learning process, Freire specifically viewed education as a means interrogating power differentials and critically dismantling hegemonic systems (Deans, 1999). There is a critical pedagogy that emerged in Freire’s approach.

Education theorist David Kolb, built upon Dewey’s ideas regarding experiential learning and developed The Experiential Learning Cycle (Kolb, 1984). Kolb (1984) posited that there are four stages to service learning: experience, reflecting, abstract conceptualization and active experimentation. These stages are not only applicable to Dewey’s approach to experiential learning, but Freire’s as well.

**Application of Freire’s principles through the lens of Kolb’s Experiential Learning Cycle**

The professor/presenter taught a course in which the students consulted with an arts-based community partner. The professor/presenter taught the course through multilayered lens of Kolb’s Experiential Learning Cycle and Freire’s critical pedagogy.

Kolb’s Experiential Learning Cycle
1. Experience – The students were tasked with defining and developing a program that would meet the needs of the community partner.
2. Reflecting – Throughout the process the students had to take a step back and reflect on what had already been done and what was learned in order to understand the next step.
3. Abstract conceptualization – As the students reflected on the work they had done, they would continue to go back to the literature and best practices to make sure their work was aligned with standards in our field.

4. Active experimentation – The students developed a program that met the needs of the arts based community partner.

Freire’s Critical Pedagogy
Throughout the process there were several instances and decision points at which having Freire’s liberatory educational principles in mind were critical for the professor/presenter. First, we chose a community partner that served a group of children of a marginalized ability status. Second, there was a delay in connecting the community partner. In the interest of transparency, the professor/presenter shared this part of the process with the students. Third, given the time delay, once connected with the community partner, the students needed to make a quick decision regarding which project they would develop. The professor/presenter had many ideas, but decided to let the students take the lead in the decision making process, empowering them to make the decision and ultimately take responsibility for the project.

Conclusion
In this presentation we explored service learning through the multilayered lens of Freire’s critical pedagogy and Kolb’s Experiential Learning Cycle (1984). The presenter offered the specific example of a recent service learning course she taught to more concretely explore this relationship. Participants were encouraged to offer their own courses as examples as well. We explored the following questions together:

- How are the principles of Freire’s work salient to service learning?
- How does service learning move away from the “banking” method?
- What are ways that service learning can perpetuate the “banking” method?
- Are there principles of liberation and social justice present in service learning? If so, how? If not, why not?
- How does Kolb’s ideas relate service learning and Freire’s principles?
- How is Kolb’s cycle related to Freire’s principle of dialogue?

Service learning is an important facet of teaching and learning psychology. It is critical that we continue to explore and deepen our pedagogical approaches to service learning.

References


1. Cover Stories


3. Sex it up: Activities for Teaching Human Sexuality

4. Embedding Research into Social Psychology

5. #FeedTheDeed: Learning the Psychology of Prosocial Behavior Through Random Acts of Kindness

6. Application Challenge: Using Social Psychology to Improve Real World Problems
I use four puzzles in PY321 Interpersonal Relationships to illustrate different types of families. The students have a “competition” to see who can put these small puzzles together the fastest. The students don’t know that there are differences between the groups. One group has missing pieces to their puzzle. One group has no puzzle cover to follow. One group has the wrong puzzle cover to follow. One group has everything normal. Once all the groups are finished putting their puzzles together we process the differences between the groups and how those differences relate to families. The group with the puzzle pieces missing is like a family that has some healthy components, but maybe is missing emotional expression, or an individual in the family. The group that has the wrong cover is a family that has the wrong model or vision for the family, like an idea that they have to be the “perfect” family. The group with no cover is a family with no model where the parents had no healthy model, or where addiction or abuse was involved. The group with everything normal is a healthy well-adjusted family. We then discuss what challenges exist for each type of family and how those challenges impact dating, engagement, and marriage.
“Live form Atlanta”: Introducing Latané and Darley’s (1970) Five-Stage Model of Helping

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Normally, before my Social Psychology class I am hanging around at the front, getting ready, checking my notes, talking to students, and starting on time. So when I begin the lecture on prosocial behavior, it is unusual when I do not start on time. Students generally wait and then…I still do not start. I wait until somebody mentions or asks, “When are we starting?” Typically it takes 5 to 15 minutes before somebody “helps.” I thank them for helping me, and I introduce the classic five-stage model of bystander helping proposed by Latané and Darley (1970). I use what just happened as an example to the model.

Stage 1: Does the bystander notice the situation? I mention that many students knew class should have already started but some may have been oblivious.

Stage 2: Some students may have noticed we had not started but then thought that Dr. Bartsch knows what he is doing. Other might think that Dr. Bartsch has forgotten what time it is and needs some help.

Stage 3: Does the bystander take personal responsibility to help? Some students may have noticed we had not started on time and thought Dr. Bartsch may need some help, but then they may have thought it was not up to them to help. Others may have felt some responsibility to help which leads to the next stage.

Stage 4: Does the person know how to help? Some students may have noticed we had not started class on time, thought I needed a nudge to get started, felt responsibility to help, and then blanked on coming up with a way to help or what should be done. Others may have realized just saying something could be all the help that was needed leading to the final stage.

Stage 5: Does the person decide to help? Students may have noticed we had not started class on time, thought I might need a reminder, felt some responsibility, thought that they could say something, and then decided not to help. Perhaps they would be embarrassed, or they worried other students would be annoyed, or that they were simply fine with class not starting.

This outlines how I start teaching prosocial behavior. Here are some additional notes and suggestions:

- I do this exercise late in the semester when rapport is well established. I can envision doing this activity as an ice breaker to start the course, but I recommend having a good relationship with the class before doing this lesson.
- In parallel to this example, I discuss other examples of helping situations so they get the idea of the model from a variety of situations.
As I go through the stages, I also talk about other factors related to whether helping occurs such as the bystander effect, evaluation apprehension, pluralistic ignorance, etc. All in all, this lecture can take 45-75 minutes.

Finally, I can use this example as a way to discuss the strengths and weaknesses of this type of model including when is it accurate/not accurate, is it helpful to predict behavior, do the steps always go in this order, etc.

References
Sex it up: Activities for Teaching Human Sexuality

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When teaching a comprehensive human sexuality class, it is important to include important areas of class content that may be neglected and to provide classroom activities targeting these areas. First, it is very important to understand that students in your classroom have a diverse experience with human sexuality education. Many students may have no experience with formal education on sexuality at all. While some students may have taken a course in human sexuality before, their experiences can vary widely depending on the nature of the course they have taken (i.e., abstinence only versus comprehensive curriculum). As states and school districts vary widely in their requirements and norms for sexuality education, it is important that faculty be sensitive to this issue. We suggest that these differences in individual “starting points” can open the door for students to share their own experiences and give faculty the opportunity to learn more about their students’ perspectives. Comedic approaches to the topic, such as a segment from the popular program Last Week Tonight with John Oliver, can be useful in this arena. We also feel that normalizing the appearance of the body is very important. Websites and texts which promote self-reflection and acceptance, such as largelabiaproject.org, are very useful tools that can help students accept their bodies.

We believe it is also necessary to discuss diversity in the area of gender identity and sexual expression. Many online infographics and activities such as the Genderbread Person and Heterosexuality Questionnaire are easy ways to introduce topics that many students are often unfamiliar and at times uncomfortable with. In addition, a complete human sexuality class must include a discussion of love and healthy relationships. One resource, scienceofrelationships.com, can encourage students to consider how research and data can be applied to current popular culture examples. For example, the stereotypical media perspective on college students’ sexual relationships greatly overstates the prevalence of “hookup culture” and overestimates the frequency with which most college students have casual sex. Presenting students with ways that media portrayals and popular opinion do not actually match scientific data can help students gain an understanding of how a wide variety of behaviors are actually quite “normal.” Popular media depictions of uncommon sexual practices, such as sadomasochism and bondage in Fifty Shades of Grey, should also be discussed within the context of consent. Human sexuality classes must address what constitutes consensual activities in many diverse settings and teach students about safety and adequate communication between partners.

In addition, faculty should bring samples of contraceptive devices (e.g., IUDs, hormonal implants and pills, sponges, condoms) and menstrual products to allow students to better understand how these products work. Students will have diverse experience with these products. For example, men will likely have had little experience even examining menstrual products and women may not have had opportunity to inspect menstrual cups. Encouraging students to handle these items and look for them in retail locations (perhaps through a “scavenger hunt” assignment) can help them become more comfortable with these products and provide an
opportunity to discuss common misconceptions they may have. Samples can often be borrowed from the campus health office or community medical offices (e.g., Planned Parenthood). It is also important to promote campus health screenings for STI and HIV and describe what these tests are like. Many students will avoid getting STI exams or even sexual wellness checks because they do not know what to expect from the process and are afraid. By discussing what happens during sexual wellness tests for men (e.g., hernia check and prostate exam) and women (e.g., PAP smear, pelvic exam), students can feel more comfortable seeking out these exams. Passing around actual items desensitizes the vocabulary for the class; for example, allowing students to see a speculum firsthand can remove a lot of the “scary” factor of pelvic exams.

It is also important for faculty to promote their campus gender related resources and sexual harassment training programs. For example, Fort Lewis College offers Safe Zone, a free LGBTQ Ally training program for all students, faculty, and employees. Many other colleges and universities offer similar programs. We recommend that faculty purposefully consider including current events, current research, and historical and cultural background information on sexual practices. Some specific topics that can spur a great deal of discussion are genital modification, trans athletes, sexuality across the lifespan, and unethical research in sexuality. Older resources such as the Vagina Monologues and films that address sexual topics are still recommended.

Overall, we emphasize a hands-on approach to sexuality education that would complement a text while better informing the student. We have assembled a document listing resources and activities (including those mentioned above) that you may consider, which you can access here:
https://www.fortlewis.edu/Portals/35/Human%20Sexuality%20Resources_Oct%202015.pdf
Embedding Research into Social Psychology
Jessica J. Sim & Sarah Jaech, Psychology Department

Encouraging students to engage in scientific inquiry and critical thinking in a foundational course.
- American Psychological Association’s (APA) Learning Goal 2 for undergraduate psychology majors.
- Use scientific reasoning to interpret psychological phenomena.
- Demonstrate psychology information literacy.
- Engage in innovative and integrative thinking and problem solving.
- Interpret, design, and conduct basic psychological research.
- Incorporate sociocultural factors in scientific inquiry.

Scaffolding Activities
- To support the process, workshops were held in class to offer tools and resources on how to:
  - read journal articles and digest empirical research findings (instructor);
  - navigate psychology databases (Murphy Librarian);
  - format APA-style research proposals (Writing Center tutors);
  - analyze data in SPSS (instructor with brief introduction by Statistical Consulting Center tutor);
  - create and present conference posters (instructor with assignment to evaluate posters at the UWL Celebration of Student Research & Creativity 2015).

Implementation
Participants:
- 23 undergraduates (16 majors, 5 minors, 2 neither) participated in both sections of Social Psychology (PSY 24).
- 51 survey respondents (14 male, 36 female, 1 unspecified, 43 White, 1 Asian, 1 Hispanic or Latino, 5 other, 1 unspecified; mean age = 20.92 years).

Procedure:
- In groups of 4.5 students, wrote an APA-style research proposal to replicate an influential study in social psychology.
- Conducted the entire study during the semester;
- Presented their findings as a poster in class.

Students picked the study from two seminal articles:

Scaffolding Activities
- Groups also completed a series of worksheets to guide them through the steps of the study with emphasis on producing a detailed research proposal:
  - Introduction (e.g., literature review);
  - Method (e.g., study design including tutorial on protecting human research participants);
  - Results and Discussion (e.g., findings and limitations).

General Perceptions
On a 1-5 scale (1 = not at all, 5 = very much), to what extent has this course helped you to:
- describe common failures in thinking that impair accurate conclusions and predictions? (M = 4.19, SD = .748);
- read and summarize general ideas and conclusions from psychological sources accurately? (M = 4.14, SD = .798);
- interpret, design, and conduct basic psychological research? (M = 4.26, SD = .896);
- replicate or design and conduct simple scientific studies to confirm a hypothesis based on operational definitions? (M = 4.11, SD = .722);
- describe how individual and sociocultural differences can influence the applicability/generalizability of research findings? (M = 4.11, SD = .772).

Teaching Reflection
The poster presentations were professional and engaging; students were well-prepared and thoughtfully responded to questions.
- Some groups were able to replicate the classic findings; most groups had weak effects due to the difficulty in recruiting sufficient sample sizes.
- Obstacles:
  - Group dynamics and project management:
  - Variety exposure to research methods and statistics:
  - Tight timeline and rushed pace:
  - Need for more teacher group interaction and feedback.

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#FeedTheDeed: Learning the Psychology of Prosocial Behavior Through Random Acts of Kindness

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Application Challenge: Using Social Psychology to Improve Real World Problems

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Section XXII
Scholarship of Teaching and Learning

1. Predictors of Performance in General Psychology
2. Using Exemplars of the Gold Standard in SoTL for Psychology to Inspire Your Own SoTL Work
3. Becoming Psychologically Literate: Responding to Those with Symptoms of Depression
4. Can Inquiry-Based Instruction Improve Higher-Level Learning and Perceptions of Teacher Effectiveness?
5. Clearing out the clutter: Effects of in-class anxiety-reduction exercises on mood and performance
6. Designing a measure for instructor humor use in the classroom: Taking the first steps
7. Do Cartoons on Syllabi affect Student Perceptions of Professors?
8. Academic Achievement: What Students Perceive as Helping and Hindering Their Performance
9. Read Your Book! An Investigation of Student Textbook Reading and Perceived Importance
10. Is It Art? Or, Is It All About Me?
11. Beyond Social Media: Library Instruction for Psychology Seniors
12. The Ins and Outs of Publishing and the Scholarship of Teaching and Learning (SoTL) in Psychology
13. What is meant by cognitive structures? How does it influence teaching – learning of Psychology?
| 14. | Puppy Power? Applying the Effect of Viewing Cute Images on Task Performance to the Classroom |
| 15. | Targeting Students’ Strategy Use for Large Scale SRL Intervention Initiatives |
| 16. | SPSS Use in Psychology Graduate Programs |
| 17. | Addressing Varied Levels of Readiness in the College Classroom |
| 18. | Weight bias intervention in a general psychology class |
| 19. | Learning analytics: Predicting student performance |
| 20. | Showing Up is a Quarter of the Battle: Class Attendance Predicts Exam Performance and Final Grades in Undergraduate Psychology Courses |
| 21. | Big Five Personality Traits and Teaching Enjoyment Predict Teaching Performance |
| 22. | Building Successful Groups for Collaborative Learning Activities: The Importance of Trust |
| 23. | The Psychology Capstone as an Interdisciplinary Course: A Case Study |
| 24. | Assessment of Career Development Outcomes in a Core Psychology Class |
| 25. | How to Put on a Successful Conference Showcasing Student Research and Creativity |
| 26. | Trading Effectiveness for Efficiency: Methods of Classroom Quizzing |
| 27. | Classroom Behavior and Non-Cognitive Factors Related to Course Success for Potential Early Identification of Students Who Need Teacher Intervention |
| 28. | Does Placing Questions in Order of Difficulty Affect Exam Performance? |
| 29. | Skills in Scientific Methodology: Are Faculty and Student Perceptions Related? |
| 30. | From Passive Learner to Active Participant: Examining the Effectiveness of Inter-Teaching |
| 31. | Psychology’s Burning Questions |
| 32. | Russell Crowe is a Better Teacher than You: How Movies Outperform Lectures and Paper Assignments |
| 33. | Students of Positive Psychology: Are They Flourishing? |
| 34. | Improving Undergraduates’ Understanding of the Skill-based Learning Fostered by Course-based Assignments |
| 35. | It’s Time for the Talk: A Comparison of the Effects of Two Undergraduate Courses in Human Sexuality |
| 36. | Enriching Psychology Courses: Using Hands-On Real World Application to Promote Reflective to Promote Reflective Learners |
37. Gluttons for Punishment? The Impact of a Group Project, Cumulative Exams, Reading Quizzes, and iClickers in a Class of 400 Introductory Psychology Students
38. Mindset and Student Attitudes Toward Feedback
39. The effect of publisher provided intermittent quizzing on student exam scores
40. Are Open Educational Resources Effective in Teaching Introduction to Psychology?
41. The Effect of Professor “Hotness” and Gender on Student Ratings of Instruction
42. Stress and Turnover Intention in College Students: The Mediating Role of Burnout
Predictors of Performance in General Psychology

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Presented at: Association for Psychological Science, 2016
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Abstract

Actively retrieving information from memory produces better long-term retention than repeated study of the same information. Frequent testing of the material can be used as both an assessment and learning tool in the classroom. In this study various types of teaching evidence and demographic information were gathered from Introductory Psychology students and used to predict student performance on a cumulative final examination. Better performance on unit exams administered throughout the semester predicted better performance on both the multiple choice and short essay sections of a cumulative final exam, providing evidence that actively and successfully retrieving information from memory produced better long-term retention of the material. Results also support previous findings that women have better writing ability than men that manifested in short essay performance—women performed better on the short essay questions than did men.

Supporting References
Predictors of Performance in General Psychology
Cynthia S. Q. Siew & Marsha J. McCartney, PhD
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Background
- The testing effect, or retrieval practice, shows that actively retrieving information from memory produces better long-term retention than just repeated study of the same information (Carter & Fehlner, 1992; Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2005; Roediger & Butler, 2011, Roediger & Karpicke, 2008).
- While successful retrieval is the most effective, even unsuccessful retrieval with feedback can produce long-term retention (Roediger & Butler, 2011; Roediger & Karpicke, 2008).
- Testing, especially frequent testing, can be used as both an assessment and learning tool, and foster deeper understanding of the material (Roediger & Butler, 2011).
- What types of teaching evidence gathered from students throughout the semester can significantly predict their performance on a cumulative final exam?

Variables

Outcome variables
Multiple choice and short essay scores on the final

Predator variables
Performance on unit exams, performance on chapter quizzes, attendance at the review session, attendance in class, and demographic variables (Gender, Ethnicity, and Parent Education)

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<tr>
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<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>Chapter Quizzes (%)</td>
<td>74.03</td>
<td>15.86</td>
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<tr>
<td>Unit Exams (%)</td>
<td>74.91</td>
<td>11.15</td>
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<tr>
<td>Final Exam-Multiple Choice (%)</td>
<td>66.08</td>
<td>13.16</td>
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<tr>
<td>Final Exam-Short Essay (%)</td>
<td>66.43</td>
<td>17.44</td>
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Table 1. Descriptive statistics for predictors and outcome variables.

Demographic Variables
- Gender
  - Females = 83, Males = 55
- Ethnicity
  - White = 107, Other = 11
- Parent Education
  - Bachelors and above = 94
  - High school and below = 54

Table 2. Descriptive statistics for demographic variables.

Methods

Participants
- One hundred and thirty eight undergraduates enrolled in four sections of General Psychology (Fall 2015) at the University of Kansas participated in the study.

Course Information
- Four unit exams (non-cumulative, multiple choice) were administered throughout the semester.
- Chapter quizzes (multiple choice) were administered at the end of each chapter.
- In the last week of classes students attended a review session in preparation for the cumulative final examination.
- The final exam consisted of a multiple choice section (70 questions) and a short essay section (4 questions).

Results

A random-effects multilevel model was fit to the data. The random effect of Section was included as students were nested within four different sections.

Multiple Choice Performance
- Unit Exam was a significant predictor of multiple choice performance on the final exam, t-value = 6.68, p < .001
- Students who did well on the unit exams tended to do well on the multiple choice section of the final exam.
- No other variables were significant

References

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Using Exemplars of the Gold Standard in SoTL for Psychology to Inspire Your Own SoTL Work

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In recent papers (Wilson-Doenges & Gurung, 2013; Wilson-Doenges, Troisi, & Bartsch, 2016), scholars have made a case for the use of benchmarks for the scholarship of teaching and learning (SoTL), setting aspirational goals for researchers (i.e., a gold standard). In order for SoTL to embody the rigors associated with other scientific research, and for the research to earn the same respect as other psychology discipline-specific research, following these standards of research methodologies is key.

To assist SoTL researchers with meeting these aspirational goals, we describe some exemplars from current SoTL psychology research that achieve these benchmarks. We encourage researchers to examine these exemplars and be inspired with how researchers can design SoTL research.

**Benchmark 1: Theory-based research**

Research should be grounded in current theories and past empirical research. Too often researchers first attempt to find a theoretical explanation after analyzing their data, or even worse, do not make any connection to theories related to teaching, learning, or psychology. Dunlosky, Rawson, Marsh, Nathan, and Williams (2013) provide an example of using theories related to the testing effect as a basis in forming their hypotheses. Similarly, Troisi (2015) uses self-determination theory as a starting point for his work.

**Benchmarks 2 and 3: Longitudinal designs and true experimental designs**

To examine the effectiveness of learning interventions, researchers need to see changes compared to a good comparison group. Two designs with good comparison groups include longitudinal designs, which compare one group across time, and true experimental designs, which use random assignment to create similar experimental and control groups. Without any comparison group at all, one cannot know if any learning intervention had any effect. Simple pre-post tests or control groups without random assignment can lead to a host of threats to internal validity, making it unclear if the intervention caused any change.
Buch and Spaulding (2011) used a longitudinal design to study the effect of Psychology Learning Communities in six cohorts across the entire college career. Kernahan and Davis (2010) tracked the impact of taking a diversity class up to one year after the course. Balch (2012) used random assignment and told two groups of students to come to class at different times. Legg and Wilson (2009) examined the effect on student-faculty rapport of a welcoming message sent before the semester began, using random assignment to divide the students with the instructor blind to which students received the message. Poonait and Amadio (2010) brought the classroom situation into the laboratory to allow for more control and easy random assignment.

**Benchmarks 4 and 5: Large sample sizes with established power and samples taken from more than one institution**

Large sample sizes increase statistical power. Samples taken from more than one institution can help establish the generalizability of findings. We have placed these two benchmarks together as an example of how achieving one benchmark can assist in reaching another benchmark. Given class size at many institutions, it is not uncommon to have low numbers of participants in a classroom study, and therefore, relatively low power. However, by gathering data from multiple institutions the sample size and consequently the power can be increased. Furthermore, a common issue with SoTL research is the question or whether results from one institution would generalize to another. Gathering data from multiple institutions can answer that question. Gurung, Daniel, and Landrum (2012) used students from multiple universities. To facilitate researchers collaborating on data collection across institutions, the Society for the Teaching of Psychology ([www.teachpsych.org](http://www.teachpsych.org)) plans to initiate a method for researchers to ask for assistance in gathering data or express an interest in gathering data at their institution.

If gathering data from other institutions is not practical, there are still strategies for increasing power. For example, Thompson and Fisher-Thompson (2013) created two versions of an assessment to create a within-participant design instead of a less powerful between-participant design. Troisi (2014) used bootstrapping analysis to improve power with a small sample size.

**Benchmark 6: Advanced and multivariate data analyses**

When appropriate, advanced and multivariate data analyses can improve the conclusions made from the data. For example, controlling for important covariates can be useful in removing potential confounds. Additionally, a common weakness in SoTL research is the violation of statistical assumptions such as not adjusting for \( \alpha \) when having multiple statistical tests. Preckel et al. (2013) met this benchmark by using multiple predictors in a hierarchical analysis as well as controlling for other variables related to the dependent variable and screening scales to make sure they were reliable. Additionally, any scale validation will need advanced analyses (e.g., Renken, McMahan, & Nitkova, 2015; Rogers, 2015).

**Benchmark 7: High standards of ethics**

As with all research, SoTL research should engage in high standards of ethics with participants. Two common ethical issues in SoTL research include coercion and unequal benefit to students. Students may feel coerced if the instructor knows who did and did not participate. Franz and Spitzer (2006) avoided this problem by making the instructor blind to who was participating through the use of pseudonyms administered by teaching assistants. Ocker and Yaverbaum (1999) avoided the issue of unequal student benefit by
having a counterbalanced repeated-measures study in which all students were in the
control condition and the experimental condition.

**Benchmark 8: Mixed-method approaches**

Using both quantitative and qualitative data, and analyzing them appropriately, can
allow for a richer set of data and understanding. However, too often, only quantitative data
are used; or if qualitative data are gathered, they are only analyzed at an unsophisticated
surface level. Exemplars of a mixed-method approach include Bridges, Harnish, and
Sillman’s (2012) examination of the effectiveness of using blog assignments in a course,
and Knott, Mak, and Neill’s (2013) evaluation of intercultural competency training.

**Conclusion**

We hope these exemplars allow future researchers to make aspirational goals more
achievable through examining the real-life demonstration of possibilities.

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Becoming Psychologically Literate: Responding to Those with Symptoms of Depression

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One way to characterize the goal of an undergraduate degree in psychology is for students to become psychologically literate, meaning they accumulate and integrate a network of beliefs, attitudes, skills, and knowledge forming the basis for them to be responsible citizens who can solve psychology-related problems (McGovern et al., 2010). One example of citizen-oriented problem-solving in which psychologically-literate students may be involved is community-based mental health. Psychology graduates can be on the forefront of what Anthony Jorm (2012) describes as mental health literacy, which includes recognizing, advising, and supporting others who may be experiencing mental health problems. National surveys reveal that many of those experiencing mental health problems do not seek out professional help despite the impact that a proper diagnosis and treatment can have on patient suffering (Gabriel & Violato, 2010). Psychology graduates who are armed with knowledge about mental illness, skills to identify sufferers, attitudes to help others, and beliefs about their social and ethical responsibilities regarding how to help can serve as frontline resources to friends, family, and colleagues who are experiencing mental health issues. The purpose of the present study is to explore the development of psychological literacy involved in identifying and advising potentially depressed people.

Over 1000 participants were given the following open-ended scenario through an electronic questionnaire:
Your friend or close family member shares with you that he or she has been feeling down lately. The person reports a loss of interest in activities he or she used to enjoy and instead just stays at home, often sleeping for long periods of time. The person has seen a general practitioner to get a checkup, and the person received a clean bill of health. But the person still wants your advice. What advice would you give this person? Please be detailed.
All responses over the minimum 100 characters were coded on a 0 – 2 scale for psychological literacy (PL). No PL (0) responses showed no awareness of a potential mental health disorder, with participants recommending self-medication but not a second opinion by a mental health professional (e.g., *If you want to get over this funk you should check what you are eating, and try to eat healthier. Exercise and get into the sun a bit more. We both can go exercise together*). Partial PL (1) responses recognized the potential of a mental illness by suggesting a second opinion but continued offering self-medicating activities (e.g., *Try to think positive, perhaps go see a clinical psychologist. I would also recommend they try to identify what is making them feel this way when it began to occur. If they just are tired of the same routine find something new.*). Complete PL again involves the recognition of a potential mental illness, but without any self-medicating advice (e.g., *I would advise seeing a clinical psychologist or therapist. There may be something affecting them emotionally or mentally more than they realize and seeing a professional might help figure out and work through things.*).

Three coders each evaluated 25 responses and had an interrater reliability of .95. The coders then rated all the responses from the samples. A sample of 270 Introductory Psychology students (*Mage* = 22.9 years, 66% female) was collected at a regional university in the Rocky Mountain West. Participants earned research credit to fulfill course requirement. Participants completed the PL depression scenario and a 7-item Depression Conception Questionnaire (DCQ) (Amsel et al., 2015a) which measures participants’ tendency to believe depression is a mental weakness (scored 1) or a mental illness (scored 7). In addition, they completed a depression identification task and a series of questions about stigmatizing attitudes towards depression (Aromaa, Tolvanen, Tuulari & Wahlbeck, 2010). Higher scores on the Psychology Literacy scenario measure were associated with higher DCQ scores, a greater number of participants correctly identifying depression, and less stigmatizing attitudes. A second sample of 336 students (*Mage* = 24.8 years, 61% female) was collected from a variety of psychology courses from the same university as the first sample. Participants earned research or extra credit and included Freshmen (*N* = 142), Sophomores/Juniors (*N* = 123), and Seniors (*N* = 71) who were Majors (*N* = 76), Minors (*N* = 67), or neither (*N* = 193). In addition to the PL depression scenario task, participants completed six assessments serving as a general evaluation of their background in psychology (Amsel et al., 2015b). Higher PL scenario scores were related to higher scores on the single common factor emerging from a factor analysis of the six assessments.

The second sample was combined with a third sample of 447 non-college-educated adults (*Mage* = 23.08 years, 81% female) who were collected online through Qualtrics services and paid for their time. Three groups were formed from these samples: The Non-College group, a Lower Division Non-Psychology group composed of 154 freshmen and sophomores, mostly enrolled in Introductory Psychology (*Mage* = 21.9 years, 80% female), and an Upper-Division Psychology group with 91 junior and senior psychology majors and minors in advanced psychology classes (*Mage* = 28.2 years, 78% female). The PL scores were subjected to a 3 (Groups) by 2 (Sex) ANCOVA with Age as a covariate. Results revealed a main Sex effect *F*(1, 656) = 18.701, *p* < .001, with males scoring lower than
females. There was also a main Group effect, $F(2, 656) = 9.97, p < .001$, with Upper-Division Psychology Majors/Minors scoring higher than other groups, who were no different from each other.

Together, the results show that PL scenario responses can be scored reliably and validity for psychological literacy. Higher PL scenario scores were correlated with participants’ ratings conceptualizing depression as a mental illness (as opposed to a mental weakness), skills to identify depressed individuals, and greater background in psychology. A college education in general and a psychology major in particular are associated with higher PL scenario responses. The sex effect may be related to sex differences in the experience of depression (Hankin & Abramson, 2001), making women more attuned to helpful advice. Further research is more directly testing the forms of knowledge associated with PL and its relations to a college education in general and to majoring in psychology.

References
Can Inquiry-Based Instruction Improve Higher-Level Learning and Perceptions of Teacher Effectiveness?

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In a randomized control group experiment, we sought to investigate the effects of using inquiry-based instruction to enhance retention of higher-level learning and how students perceive teacher effectiveness when using inquiry-based instruction. Results were discussed in the context of past research and implications for classroom practices were provided.

Introduction and Literature Review
A myriad of research suggests that higher level thinking is critical at the post secondary level because it helps promote more effective application and transfer of course material (Dalai, 1994; Ormrod, 2006; Shell & Kleen, 1992). Very little research has been conducted which specifically addresses promoting higher level thinking in teaching of psychology. To date, Richmond and Kindelberger Hagan (2011) is one of two studies to address this issue. They found that active learning instruction promoted higher level learning in psychology over that of direct instruction. However, Richmond and Kindelberger Hagan used several different active learning teaching strategies (e.g., problem-based instruction, case-based instruction, situated learning, and inquiry-based instruction) to promote higher level learning without determining which type of instruction specifically contributed to the promotion of higher level learning. Building on this study, Richmond et al. (2015) conducted a field experiment to assess whether inquiry-instruction may have the same affect as Richmond and Kindelberger Hagan’s study on higher level learning. In both a field study and a controlled experiment, Richmond and colleagues found that inquiry-based instruction increased both lower and higher level learning of moral development theory. Building on and advancing this study, we sought to investigate the effects of inquiry-based instruction to increase lower and higher level learning of biology (animal characteristics). We also attempt to advance this line of research by measuring the perceptions of teacher effectiveness from students based on instructional type.

Inquiry-based learning is the processes that help students develop problem solving and critical thinking skills. Inquiry-based learning promotes transferring concepts that students learned and using them to solve new problems (Lane, 2002). There are key components that are required for the inquiry based learning process. First, teachers should try and activate prior knowledge of the students. Second, teachers should provide background information for the students. Teachers need to provide frameworks for the students so that
they can understand. Students must have a supporting structure which provides grounding for their creations, but does not limit their creativity (Healey, 2005).

Based on the lack of research that directly investigates the effects of inquiry-based instruction on level of learning, we posited two questions: (1) What is the effect of using inquiry-based instruction on higher and lower level learning compared to direct instruction? (2) What is the effect of using inquiry-based instruction on perceived teacher effectiveness compared to direct instruction?

Method

Participants

Data collection began in February, 2016. We planned to recruit 60-70 participants from an Introductory Psychology Subject Pool. Participants completed the experiment for partial course credit. We anticipated that gender would be equally distributed. We also collected basic demographic data.

Design and Measures

The design of the study was a 2(Instruction type: inquiry based vs. direct) X 2(Level of learning: low vs. higher) X 2(time: pre vs. post test) mixed factorial design. The first factor (between-subjects) was 2 that participants received inquiry-based instruction while other participants received direct instruction. The second factor (within-subjects) was that each student (regardless of instructional format) was assessed on both lower and higher level learning. The third factor was also within-subjects, in that all participants received both a pre and post-assessment of their knowledge of animal characteristics.

The dependent variables for this study was the knowledge assessments (both recognition and recall). The authors assessed the student’s higher and lower level knowledge of course material by giving them a 12-item multiple-choice pre and post-test. We also constructed 12 free recall questions to assess their content knowledge of the biology concepts. Three trained blind coders using Krathwohl’s (2002) updated taxonomy designated these questions into higher or lower level questions (92% agreement). To assess teach effectiveness we used the Teacher Behavior Checklist (TBC; Keeley et al., 2006) and the 6-item Professor-Student Rapport Scale (P-SRS; Ryan et al., 2011). To control for potential experimental bias, we used the 25-item Activity Perception Questionnaire (APQ) of the Intrinsic Motivation Inventory (Deci et al., 1994). Finally, we collected data on basic demographic variables (e.g., gender, ethnicity, etc.).

Procedure

Both conditions were evaluated in groups of 10-15 students. Both conditions initially received the pre-assessment of their content knowledge (5 minutes) followed by the lesson (30 minutes). Next, all participants received a distractor task to control for working memory affects (Hwang & Levin, 2002. For this task we used a word search in between the lesson and the assessment of their knowledge (3 minutes). Next, all participants received the APQ (5 minutes), TBC (5 minutes), and the P-SRS (5 minutes). Finally, all participants received both the recognition and recall measures of their content knowledge (10 minutes).
For the inquiry-based condition, participants worked in groups of three. They were instructed on how to use the Question Formulation Technique (GFT). The GFT is a 7-step procedure that firsts pose a question focus (a clear thought provoking question). The next step participants were informed of the rules for producing questions (e.g., ask as many as you can, don’t stop to discuss questions, etc.). Next, Learners are required to produce questions based on the prompt. Next, the learners are asked to improve their questions by categorizing them as open-ended or closed-ended, then discuss advantages and disadvantages of the questions and then asked to change the questions from one category to another. Next, student prioritize the questions and rationalize why they choose their order. Next, students research answers and finally the reflect on the work they have done.

In contrast to the inquiry-based condition students who received direct instruction experienced a standard lecture using PowerPoint, as suggested by O’Neill and MacMahon (2005). The instructor lectured the majority of the time with very little questioning. Students sat passively, listened and took notes but did not actively participate. There were no activities outside of the lecture.

Results
The data were collected in February and March. We planned to assess this question of whether type of instruction affects lower vs. higher level learning and retention of information taught. We used two mixed-factorial ANCOVAs on both the recognition and recall measures. First, we subtracted pre- from post-assessment multiple choice scores to calculate a knowledge gained scores. We also used the APQ as a covariate in the analyses. We ran a mixed-factorial ANCOVA for both the recognition and recall measures. To assess whether inquiry-based instruction affect teacher effectiveness, we ran two mixed-factorial ANCOVAs on both the TBC and the P-SRS scores using the APQ as the covariate.

Discussion
We plan to discuss the results of the data analyses within the context of the results from past research. Specifically, we discussed how these results are consistent and inconsistent with these results. Furthermore, we discussed the limitations and future research and the educational implications of this study.

References


Clearing out the clutter: Effects of in-class anxiety-reduction exercises on mood and performance

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Abstract
Test anxiety reduces performance on learning assessments for many college students. The purpose of this quasi-experiment was to test two different methods (focused breathing and expressive writing) for helping students reduce anxiety before an unannounced assessment. Students in an introductory psychology course (N = 242) engaged in either a focused-breathing or expressive-writing exercise either before or after the assessment. Students also self-reported their mood before and after the exercise. Results indicated that expressive writing before the assessment improved performance on the assessment relative to other conditions. However, focused breathing, either before or after the assessment, appeared to calm students. These findings are explained in the context of the Yerkes-Dodson law. In terms of practical implications, these findings can inform anxiety-reduction interventions.

Proposal
The issue of test anxiety, in which students engage in unproductive worrying during test-taking situations, is a common issue for postsecondary students (Richardson, Abraham, & Bond, 2012; Stöber & Pekrun, 2004). Students with high levels of test anxiety may have poorer assessment performance compared to students who have similar skill levels, but with low levels of test anxiety (Rothman, 2004). According to attentional control theory, the negative association between test anxiety and assessment performance is likely due to lack of focus on the assessment (Eysenck, Derakshan, Santos, & Calvo, 2007).

The purpose of this quasi-experiment was to test the effectiveness of two exercises to help students focus their attention: focused breathing and free writing. Both of these exercises have been noted in the previous literature to be effective in reducing test anxiety and increasing assessment performance (Brunyé et al., 2013; Hafenbrack, Kinias, & Barsade, 2014; Ramirez & Beilock, 2011). However, the relative effectiveness of these exercises has not been compared. In addition, the benefits of these exercises in an authentic, post-secondary environment are not well known.

Students in an introductory psychology course (N = 245) engaged in either a focused-breathing or free-writing exercise either before or after an unannounced quiz. Immediately following the exercise, students completed the Brief Mood Inventory Survey (BMIS; Mayer & Gaschke, 1988). Students who engaged in a writing exercise before the quiz performed better than did students who engaged in the writing exercise after the quiz, p = .001, Cohen’s d = .61. There was no difference in quiz scores for students who engaged in the focused-breathing exercise either before or after the quiz. Regarding mood, students reported feeling calmer after the focused breathing compared to the writing exercise, p <
.001, Cohen’s $d = .52$. Also, students reported feeling calmer if the exercise (either focused-breathing or writing) was after the quiz rather than before, $p = .02$, Cohen’s $d = .36$.

This study indicates that focused breathing appeared to calm students, but did not provide any benefit for performance. In contrast, expressive writing appeared to have no effect on calming the students, but did have an effect on quiz scores. Students who engaged in expressive writing before the assessment performed better than students in other conditions, despite their reported mood. This is contrary to the expectation that any noted performance benefits from these exercises would be due to reductions in anxiety. This differential relationship between anxiety and task performance could be due to the Yerkes-Dodson law (Broadhurst, 1959; Yerkes & Dodson, 1908), which states, there are optimal levels of arousal to facilitate performance on tasks that varies as a function of the difficulty of the task. Optimal levels of arousal on difficult tasks are lower than optimal levels of arousal on easier tasks (Anderson, 1990). This could explain how a higher level of arousal may interfere with performance on a difficult task, but enhance performance on an easy task (Anderson, 1994). Given that the assessment in this study was not challenging for the students, as performance was generally high (with an average percent correct of 87.9%), results could explain how a reduction in anxiety did not transfer to any improvement in performance on the assessment.

It was expected that expressive writing would increase feelings of calmness and decrease feelings of nervousness, but the findings did not support this expectation. One important difference between this study and previous work on expressive writing in academic contexts (e.g., Park, Ramirez, & Beilock, 2014) is that students in this study were not asked to turn in their writing due to student privacy concerns. Not collecting the writings is a limitation of this research due to the difficulty of supporting an explanation for the lack of benefit on mood. It is possible that students used the expressive writing for non-emotional subjects or as a study technique to recall class information. Writing about either of the proposed topics would explain why there was no indication of improvement of student mood.

Overall the results indicate that a writing exercise may help students organize their thoughts prior to a quiz. However, a focused-breathing exercise may help students relax. These findings indicate that in-class anxiety-reduction exercises may benefit students, but they may not be universally beneficial for all types of assessments.

References


The current authors investigated a measure for instructor humor use in the classroom. An Exploratory Factor Analysis using the Maximum Likelihood extraction methods for the different questions was conducted. Reliability for the four items measuring related/appropriate humor was .90 and reliability for the three items measuring non-relative humor was .78.

The topic of humor in educational settings has been investigated for the past several decades (Banas et al., 2011). As part of this investigation different components of humor in the classroom have been investigated. One area investigated is the frequency of instructional humor (how much humor is used by instructors in the classroom) (Neuliep, 1991). Another topic that has been investigated is the difference in the use of humor in the classroom with supporting concerns of instructor experience (Downs, Javidi, & Nussbaum, 1988) and humor orientation (Frymier et al., 2008). A third issue considers the different influences instructional humor can have in educational settings. Some of the different influences investigated include: the effect of humor on instructor evaluation (Wanzer & Frymier, 1999), the effect of humor on classroom environment (Torok et al., 2004), and the effect of humor on learning (Ziv, 1988).

Prior research has used different ways to examine humor and types of humor used by an instructor. The current study describes the development and testing of a questionnaire of humor used by instructors within classroom experience.

The study consisted of 195 undergraduate students (117 females and 78 males). Participant ages ranged from 18 to 25, with a mean of 18.91 (SD=1.29). One-hundred-forty-six of the participants were freshman, 24 were sophomores, 19 were juniors, and 6 were seniors.

Participants were asked how frequently their instructor uses relevant humor, non-relevant humor, appropriate humor, and inappropriate humor. The questions about relevant and non-relevant humor were asked three times using different wording examining reliability. Participants were also asked how frequently their instructor uses humor in general in the classroom, and also how frequently the instructor uses: self-disparaging humor, spontaneous and unplanned humor, disparaging humor-targeting others type of humor, and offensive humor. Those types of humor were first recognized in a qualitative study.
about instructor humor in the classroom that was conducted by Wanzer, Frymier, Wojtaszczyk, and Smith (2006).

An Exploratory Factor Analysis (EFA) using the Maximum Likelihood extraction methods with a varimax (oblique) rotation method for the different questions about humor types was conducted on data gathered from the 195 participants. The analysis yielded four factors. Factor 1 included the three items that asked about relevant humor in three different ways (using the words: relevant, promotes understanding, and related) and two additional items that asked about spontaneous humor and appropriate humor. Factor 2 included the three items that asked about non relevant humor (using the words: not relevant, doesn’t promote understanding, and not -related). Factor 3 included one item that asked about self-disparaging humor, and one item that asked about disparaging others (students). Those items had a low factor loading. Factor four included one item that asked about relevant humor, one item that asked about appropriate humor, and one item that asked about offensive humor. Two of those items (relevant humor and appropriate humor) also cross loaded with the first factor loading, but with a weaker value.

The spontaneous humor item had a low loading on the first factor loading and was dropped. With this item dropped, all of the relevant humor items loaded with one another. Appropriate humor also loaded with the three questions that asked about relevant humor. All of the non-relevant humor items also loaded together. This resulted in a two-factor solution: related/appropriate humor and non-related humor. Reliability for the four items measuring related/appropriate humor was .90 and reliability for the three items measuring non-relative humor was .78.

The items in the list that were related to different educational outcomes were:

Relevant/appropriate humor significantly predicted perceived verbal relatedness ($\beta = .66, p < .00$) but non-relevant humor was not a significant predictor ($\beta = .09, p = .08$).

Relevant/appropriate humor significantly predicted perceived non-verbal relatedness ($\beta = .41, p < .00$) but non-relevant humor was not a significant predictor ($\beta = -.11, p = .09$).

Relevant/appropriate humor significantly predicted affect ($\beta = .46, p < .00$). Non-relevant humor significantly predicted affect ($\beta = -.14, p < .02$) as well. Relevant/appropriate humor significantly predicted interest ($\beta = .37, p < .00$). Non-relevant humor significantly predicted interest ($\beta = -.22, p < .00$) as well.

The study highlights the importance of developing a systematic instructor humor questionnaire and provides suggestions for areas of improvement.

References


The purpose of this research project is to assess the impact that cartoons have when placed on course syllabi. Previous research has indicated that syllabi manipulations do influence students’ perceptions of professors. Saville, Zinn, Brown, and Marchuk (2010) looked at how syllabi detail would influence student perceptions of teacher effectiveness and found that students who viewed the detailed syllabus, as opposed to those who viewed the brief syllabus, were more likely to view the professor as effective. Additional research has discovered, that differentiating the amount of content and policy in a syllabus can also influence student’s perceptions (Jenkins, Bugeja, & Barber, 2014). The effect that syllabus tone has on perceptions has also been researched (Harnish & Bridges, 2011). They found that students who read a syllabus written in a more friendly tone believed the course would be less difficult than the students who viewed the syllabus written in an unfriendly tone.

In the current study, one hundred participants either viewed a Psychology of Group Prejudice syllabus that incorporated cartoons or one that did not. Students’ perceptions of the instructor including effectiveness, tone, and the instructor’s cultural sensitivity were measured. Independent samples t-tests indicated that there were no statistically significant differences between the syllabi in total scores or most of the variables when tested on their own. The only two significant differences were that the cartoon syllabus was rated greater than the control syllabus for the professor being happy/positive attitude/humorous: $t = -1.99, p = .049$, and on their rapport: $t = -2.03, p = .044$.

Although there seems to be little advantage to adding cartoons to syllabi, the syllabi used was exceptional and was student centered. Differences based on cartoon use might be observed for syllabi that are not as strong. Differences also might be seen in other content domains or based on other manipulations such as the use of quotations. Additional studies are currently underway to address these remaining questions.
Academic Achievement: What Students Perceive as Helping and Hindering Their Performance

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Research has consistently indicated that undergraduate students are spending little time reading their textbooks (e.g., Berry, Cook, Hill, & Stevens, 2011; Marek & Christopher, 2011) and studying (Babcock & Marks, 2010; National Survey of Student Engagement, 2015). Although faculty may believe these tasks are critical for academic success, the importance that students place on these activities is not clear. This symposium addressed students’ perception of factors they consider as helping or hindering their academic success. After a selective review of the literature, two studies were presented with the second study examining how academic entitlement related to student perceptions. Using factor analysis, Forsyth, Story, Kelley, and McMillan (2009) identified two major factors regarding student attributions for their grades received on a test. These factors were inhibiting causal factors (e.g., not motivated) and facilitating causal factors (e.g., book is clear). For each factor, some of the attributions concerned internal, controllable causes (e.g., I studied carefully), whereas others were external, uncontrollable causes (e.g., bad teacher). Dunn, Osborne, and Rakes (2013) found that students were more likely to attribute successful performance to internal causes and poor performance to external causes.

Several studies have examined students’ beliefs about which behaviors are most beneficial in their studying. Perlman, McCann, and Prust (2007) surveyed students on which of 59 listed behaviors they used and found helpful in attaining their desired course grade. The three top-rated behaviors were attending class regularly, completing required assignments on time, and paying attention during lectures and discussions. Carefully reading the textbook was rated number 10. Likewise, Berry et al. (2011) found that over 74% of students in finance classes thought that they would be able to earn a grade of C or better simply by attending class, without reading the text.

Following the review of the literature, two studies that examined student perceptions and used the same data base were presented. Participants were 272 (96 men, 176 women) undergraduate students enrolled in a general psychology class and recruited from a psychology research pool. Most students in the sample were 18-21 years old (92%), Caucasian (58%), and in their first semester of college (53%). As part of a lengthy survey, students completed items addressing grades and factors (e.g., work) that were perceived as negatively and positively impacting their general psychology grades. Additionally,

In Study 1, many factors perceived as negatively impacting grades (frequently or very frequently endorsed by roughly ½ of students) involved the students' own behaviors. These primarily concerned time management problems or issues with studying, such as “did not study as much as I needed to,” “spent my time studying for another course or needed to study for other courses,” and “difficulty managing time.” Approximately 1/3 of students also frequently or very frequently endorsed “did not know how to study.” In contrast, external factors, such as “bad teaching” and “too much work in the course,” were generally not viewed as contributing to a low grade. Further, most of the items that were perceived as negatively impacting grades (e.g., work and family issues) were negatively correlated with both reported mid-term grades ($r$ ranged from -.16 to -.47) and current estimated grades ($r$ ranged from -.12 to -.47). Factors perceived as positively impacting grades also usually involved students' own behavior, such as “class attendance” and “doing the homework.” However, having a “good/interesting teacher” was rated as the third highest contributor to grades. Most of the items perceived as helping with grades (e.g., studied hard and motivation) did positively correlate with both reported mid-term grades ($r$ ranged from .13 to .32) and current estimated grades ($r$ ranged from .18 to .34).

Not all students, however, are the same, and a recent focus of interest has been on variations in perceptions based on academic entitlement. Greenberger et al. (2008) described academic entitlement as “expectations of high grades for modest effort and demanding attitudes towards teachers” (p. 1193). Using the same data set as described above, Study 2 explored the relationship between academic entitlement and attributions. Academic entitlement correlated with a number of factors perceived as negatively impacting grades in general psychology. Some of these correlations included believing tests were too difficult ($r = .22, p < .001$) and having too much course work ($r = .30, p < .001$). Internalized factors associated with entitlement included lacking motivation to study or attend class ($r = .20, p < .001$) and believing oneself not smart enough in psychology ($r = .17, p < .01$). When asked about factors perceived to impact grades positively, several negative correlations were found. For example, these correlations included class attendance ($r = -.20, p < .001$) and motivation to do well ($r = -.22, p < .001$). In contrast, a positive correlation was found with luck ($r = .29, p < .001$). No statistically significant correlations emerged for factors such as tutoring, homework, financial issues, and work. These findings suggest that those who are higher on academic entitlement are more likely to have an external locus of control regarding academic issues.

This symposium illustrated the importance of studying student perceptions about academic performance and suggests how these perceptions may guide future interventions. For example, Study 1 found that many students viewed time management and lack of study skills as factors hindering their performance. Thus, early in their first year, providing students training in time management, as well as information about how to study for college-level courses might be helpful. The study on academic entitlement indicated that being higher on academic entitlement is associated with more external attributions, and, thus, may be an academic risk factor. There is a need, then, to clearly communicate with students about expectations and responsibilities of the faculty member versus the student, and perhaps provide students training to shift attributions for academic success and failure toward a more internal orientation.
References


Read Your Book! An Investigation of Student Textbook Reading and Perceived Importance

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The majority of college courses require textbooks. However, many professors report that students never seem to read them. The majority of students read less than three hours per week (Clump, Bauer, & Bradley, 2004) and 82% of Auburn University students and 78% of East Stroudsburg University students reported that they did not read their textbooks at all (Sikorski et al., 2002). Instructors find that students are not prepared to discuss assigned readings in class, leading to poor class discussions and an overall lack of participation (Sappington, Kinsey, & Munsayac, 2002). Instructors may feel the need to spoon feed students surface material from the text with little or no time to devote to a detailed analysis of the text material or a secondary source. Instructors may subtly communicate that the text is not necessary by providing highly detailed lecture notes covering every detail that might be asked on a test or making detailed study guides available a few days before a test to help students pass a course without opening a textbook.

In the current study, we asked students about the importance of reading the textbook to answer several questions. Do students believe textbooks are useful? Do they believe it is necessary to read the textbook to make passing grades on exams and in courses? Do they believe it’s the professor’s responsibility to motivate them to read the textbook?

Method

Students (N = 155) from Stephen F. Austin State University (N = 125) and Sul Ross State University (N =30) completed a self-report about the importance of textbook reading. Participants from Stephen F. Austin University volunteered as part of the Introductory to Psychology participant pool in which they received credit for their participation. Due to the size of Sul Ross State University, all students were invited to complete the survey and no credit was given.

The students consisted of 128 women and 27 men with a mean age of 21.7.

Results

Most students (88%) indicated that they purchased a textbook for their courses. The top three reasons for not buying a textbook was “textbook expense” (63%), “I just study the
professor’s lecture notes” (58%), and “I know I will not read the textbook” (53%). Most students (74%) reported that they spend one to two hours on one class reading assignment. Table 1 shows the percentage of student responses to specific survey items. Table 2 details the percentage of students who believe they can make a particular letter grade without using a textbook. Table 3 indicates the percentage of students who reported a particular academic ability.

Table 1
Student Attitudes by Survey Items

<table>
<thead>
<tr>
<th>Survey Prompt</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I routinely read the textbook in the majority of my courses.</td>
<td>8%</td>
<td>29%</td>
<td>43%</td>
<td>20%</td>
</tr>
<tr>
<td>I routinely use the textbook during class.</td>
<td>20%</td>
<td>41%</td>
<td>28%</td>
<td>10%</td>
</tr>
<tr>
<td>It is very important to read the textbook in order to succeed in the majority of my courses.</td>
<td>7%</td>
<td>27%</td>
<td>38%</td>
<td>29%</td>
</tr>
<tr>
<td>It is the professor’s responsibility to motivate a student to read his/her textbook</td>
<td>14%</td>
<td>44%</td>
<td>32%</td>
<td>10%</td>
</tr>
<tr>
<td>Professors should teach reading skills or reading strategies in their courses.</td>
<td>9%</td>
<td>44%</td>
<td>38%</td>
<td>8%</td>
</tr>
<tr>
<td>Professors should include questions on exams about content in the textbook that was not covered in class.</td>
<td>20%</td>
<td>38%</td>
<td>36%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Table 2
Letter Grades

<table>
<thead>
<tr>
<th>Survey Prompt</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most frequent grade you can earn on an exam if you ONLY study the aids provided in class and do NOT read the textbook.</td>
<td>20%</td>
<td>47%</td>
<td>25%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Most frequent grade you can earn in courses if you ONLY study the aids provided in class and do NOT read the textbook.</td>
<td>22%</td>
<td>46%</td>
<td>24%</td>
<td>7%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 3
Academic Ability

<table>
<thead>
<tr>
<th>Survey Prompt</th>
<th>Below Average</th>
<th>Average</th>
<th>Above Average</th>
<th>Well Above Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consider myself to be academically</td>
<td>2%</td>
<td>52%</td>
<td>41%</td>
<td>6%</td>
</tr>
</tbody>
</table>
Twenty-seven students made comments. Eight were positive comments related to textbook usage and importance (e.g., “I believe that reading the textbook reinforces the material learned in class.” “In a face-to-face setting, I strongly believe reading prior to class meetings is essential to understanding and engaging in the course. This allows the class time to become a conversational environment to learn from different perspectives”). However, 19 were negative comments related to textbook usage and importance (e.g., “Most professors say that it is impossible to pass their class without the textbook; however, I am making high Bs or As in all my courses and I rarely read the textbook.” “Some textbooks are just hard to read. Not as in it is difficult, but that it is boring.”). Of the 19 negative comments, 10 were spoon feeding related comments (e.g., “I think videos would really help instead of just reading the whole book. You could watch a couple of short videos and learn just as much but in less time.” “I believe that most coursework my professors provide is textbook-oriented; however, when professors merely go over content in the book it makes one or the other resources (professor or textbook) redundant in my studying.” “I do not use my textbook a lot, but I study all the material that I am given and still make the grades I need.”).

Discussion

Self-reported data from this study suggested that the majority of students read their textbooks for class (63%) and feel that reading their textbook is important to succeed in a course (66%). These data do not support the finding from Sikorski et al. (2002) suggesting that the majority of students do not read their textbooks. Due to the similarity in survey questions, it is hypothesized that the discrepancy between the findings may be due to the fact that participants in the current study did not consist of only freshmen and sophomores in Introductory Psychology courses. The 30 Sul Ross State University participants included some upper-classmen who may have better reading practices. Also, since the Sul Ross participants volunteered for the study for no credit, they may be more responsible students. Furthermore, our findings are based on a relatively small number of participants (i.e., 155) compared to the 1,178 participants that Sikorski et al. surveyed. Despite the majority of participants reporting reading their textbooks, 58% of participants stated that professors should not include questions on the exams about content from the book that was not covered in lectures. Further analysis of data suggested that professors may be adhering to students’ request not to cover reading material on the exam. The majority of these participants (92%) reported that it was possible to earn an A, B, or C on an exam and as a final grade in a course without opening the book. This data seemed to contradict the initial data suggesting that reading the textbook was important to succeed in class. Participants believed that reading was important; however, they did not believe that professors should include reading materials on examinations (67%). It is possible that students inherently understand the importance of reading, but may fear failure resulting from an assessment of knowledge acquired strictly from reading. It is important to recognize the limitations of this study. Since the data were collected by self-report, students may have overestimated their reading practices. Also, the survey did not include detailed items concerning students’ reading practices. For example, when students agreed
to the item “I routinely read the textbook in the majority of my courses,” it may be the case that they just skimmed it, did not read it entirely, or read it but did not understand the material. By increasing the level of specificity of the survey items in future studies, we may glean a better understanding of student reading practices.

References


Is It Art? Or, Is It All About Me?

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Presented at: Rocky Mountain Psychological Association
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The relationship of combining art and increasing social skills use is the focus of this ongoing research. Due to a lack of research findings, Epp (2008) investigated using cartoons as part of art therapy for students with autism. Currently there is still a lack of research that determines whether artwork with cartoons as the mode can provide statistically significant improvements in social behavior. The concept of using cartoons to develop social skills in students with challenging behaviors is being used to determine if using self-as-hero in a comic book focused on social skills is more highly motivating than the characters in social stories from published curricula.

It was predicted as students acquire artist skills that allowed them to include themselves in social stories the level of vocabulary use, conflict resolution skills, and forethought would increase. Researchers found that students had more positive reactions to themselves as characters than when imaginary characters were used. Several other variables also significantly impacted their use of conflict resolution skills.

Purpose of the Study
In this study art, which has already been shown to be effective for improving academic achievement, was used to examine the effectiveness of teaching social skills. Research also needs to be completed investigating the methods of art, such as graphic novels and cartoon creation, that are the most successful. This program was presented in a ten-week workshop format focusing on socially constructed concepts. The outcome of this program was to examine how hands-on activities influenced self-esteem and academic performance in science and math. Results have not been completed as of yet, due to participant scheduling. Based on the review of literature, we hypothesized that hands-on art workshop sessions will show improved self-esteem of the participants, and their interaction with others with similar interests in art and with similar social issues will increase their discussion and consideration of using social skills taught.

Ten participants (4th through 6th grade) were identified to participate in a cartoon creation-focused ten-week after-school program lead by an art teacher who is also studying special education, a faculty member in special education, and undergraduate volunteers. The criteria for selection youth had to be: 1) identified as at-risk in the area of social skill use (i.e., Tier 2 of the RtI model) 2) between the grades of 4 through 6, and 3) has an interest in art, and 4) participates regularly in the after-school program.
After School Program Description
The participants in the after-school program are in grades k-8. It is a program funded through the City of Greeley. The ten children/youth selected were in grades 4th, 5th, and 6th and participated in twice a week in two-hour sessions taught by the researcher with the assistance of the faculty member and volunteer college students. The participants initially worked in collaborative groups to learn specific features of cartoon drawing, completing hands-on projects designed to introduce them to storyboarding of their cartoon, various formats they could use, and creation of scenarios about social situations that they are involved with on a daily basis in and outside of school. Modules for each of the ten weeks were designed progressing through previous skills taught and accumulating in the final project of creating a comic book focused on a specific social skill development.

Instruments for Measuring Self-esteem and Social skills
Pre and post-tests included the Rosenberg Self-esteem Scale (RSES) and the Social Skill Rating Scale (SSIS, Gresham, 2007). The RSES (Rosenberg, 1965) consists of 10 statements, such as “I certainly feel useless at times,” that are answered on a 4-point scale ranging from strongly agree to strongly disagree. The scale is brief and thorough in measuring self-esteem.

The SSIS (Social Skills Improvement System) Rating Scales is designed to assess individuals and small groups in order to evaluate social skills, problem behaviors, and academic competence. The student forms will provide a comprehensive picture across school, home, and community settings. This tool includes current norms, improved psychometric properties, and subscale.

Method
This study used methodology previous suggested by researchers who used art in an art therapeutic settings to enhance the use of academic and social engagement. We took their suggestions seriously and implemented the use of teaching drawing of self-developed cartoons heroes as ways to implement the knowledge of social skill implementation.

As Epp (2008) observed, using art to teach social skills is especially important when working with children with autism because they respond better to visual cues than to facial expressions. One method currently being researched is using comic books, comics, or graphic novels, to help students visualize concepts in order to learn.

Although comic books have been available for over 80 years, (Yang, 2003), they have not been considered as useful in academic settings until recently. There is recent evidence that indicates using graphic novels or comics as part of the curriculum can improve academic achievement (Yang, 2003; Brenner, 2016; Bucher & Manning, 2004; Bitz & Emejulu, 2016).

Comic books can be used for more than improving how well students do in school. Using the comic book format can also be used to teach social skills. Brenner (2016) writes that comics can help children with autism better understand the clues to emotional behavior that they won’t get simply by reading text. Epp (2008) also suggests that since children with autism often withdraw from social situations, they have more difficulty developing the
kinds of skills needed for taking part in social settings, including the classroom. Visual cues are more useful for putting together information that leads to behavior training and cognitive teaching.

In addition to teachers presenting information in a visual context such as the comic book, they can introduce the concept of creating comics to allow students to express how they might react in social situations. This can help students identify what is correct behavior, but it also allows students a place to express their feelings in a creative way.

Pre and Post Results for the Rosenberg Self-Esteem Inventory
A dependent paired samples t-test was conducted to compare the pre- and post-intervention responses to the ten individual items of the Rosenberg Self Esteem Inventory.

Items on Rosenberg Self-Esteem Inventory
1. I feel that I am a person of worth, at least on an equal basis with others.
2. I am able to do things as well as most other people.
3. I feel that I have a number of good qualities.
4. I do not have much to be proud of.
5. I really feel that I am a failure.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. At times I think I am no good at all.
9. I wish I could have more respect for myself.
10. I certainly feel useless at times.

Results and Conclusions
The initial data analysis indicated that there is a significant improvement in responses to all ten items on the Rosenberg self-esteem inventory (p < .001) as determined by the paired samples t-test analysis for each individual item.

References
Beyond Social Media: Library Instruction for Psychology Seniors

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While students may have social media skills, they are often challenged by assignments requiring library research skills. Though there is a proliferation of professional literature devoted to library instruction and assessment, very little focuses on psychology-specific instruction. Of these few studies available, all are geared toward introductory psychology (Fitzpatrick & Meulemans, 2011; Klipfel, 2015; Sana, Fenesi, & Kim, 2011; Staley, Branch, & Hewitt, 2010). Can seniors still benefit from instruction? In this study, senior seminar students were presented with a library instructional program.

As faculty and librarians who frequently conduct sessions to help students with library skills, we need more precise evaluation of outcomes beyond the students' final papers. A previous large study conducted at McMaster University in Ontario presented a blended learning model (hybrid model) that combines online technology and face-to-face interactions between teacher and student (Sana et al., 2011). Another study at California State University San Marcos included four sections of an introductory developmental psychology course with a pre-test and post-assessment. This comparison revealed a significant difference in information literacy skills between groups participating in an instruction workshop and those who did not (Fitzpatrick & Meulemans, 2011). An article by Kevin Klipfel (2015) emerged as a very relevant and thought-provoking proposal of the “counselor librarian” idea and the Rogerian concept of authentic learning applied to the goal of effective information literacy instruction by librarians. This study continues the research on effectiveness of library instruction.

A series of steps was constructed toward the goal of the final paper. Both traditional (32) and non-traditional students (19) were presented with these steps, which included a pre-test on information on databases and resources in school and city libraries and the same test after the presentation. The prediction was that a planned sequence of steps including a group presentation of library information would increase scores on library skills from pre- to post-test.

After the first week of the term, this program began with a discussion in class about students’ topics of interest. Their topics were shaped by estimates of published research. Each student turned in a written paragraph describing the chosen topic for the research paper with questions on the topic. These paragraphs were given to a librarian two weeks before the librarian’s presentation, which was oriented toward the students’ topics. Prior to the presentation a library skills test was given. In the presentation students were given individual suggestions for their papers. Sample demonstrations of individual topic
computer searches were conducted. Each student was required to have two useful references before leaving the session. At the end of the session, the test was given again, followed by a short evaluation. The result of the paired difference test between the students’ pre-tests ($M = 16.56$) and post-tests ($M = 21.40$) was significant, $t(50) = 8.91$, $p = .000$. There was not a significant difference between traditional and non-traditional students. The presentation was effective in increasing all students’ scores, except one who received the same high score on both tests. Final papers were evaluated as to the use of library resources, with the majority of students rated as effectively using those resources in their papers. College students may have very little experience producing research papers using library resources. Breaking down the task into steps allowed the students to critically think in a focused manner and apply the library instruction to their specific topic. This framework provided students with incentives and success throughout the process. Library instruction in a context resulted in final papers that showed synthesis, a new outline from collected sources, rather than a string of research findings without sufficient central theses. We conclude that a sequence of steps with a group presentation that included individualized elements was effective in increasing knowledge of library research skills.

References
The Scholarship of Teaching and Learning (SoTL) is an important activity for many faculty members, and one that can be a valuable feature of a professional portfolio. Although faculty members may agree with this premise, they often have questions about publishing their SoTL (or publishing more generally), and whether or not their SoTL is valued in the tenure and promotion process.

As faculty members consider authoring articles, chapters, or books, there are pitfalls to publishing that can be avoided. Often, these pitfalls coalesce around an inability to manage time effectively. For example, faculty members may save writing for large chunks of time (e.g., summer), or until just before a deadline. Binge writing makes sense because our semesters are filled with classes, meetings, and other professional obligations. Just as we advise our students as they write papers in their courses, however, we suggest that faculty writing should be ongoing and consistent. Fifteen minutes of writing each day is better than no writing, and it will help you to prepare at least one manuscript (probably more) each year.

One way to ensure more consistent writing is to find partners who will hold you accountable. Those partners may be your research collaborators, for instance, and they can provide accountability for deadlines and peer review of your writing before it is submitted. Is the writing understandable to both psychologists and non-psychologists? Does the writing accomplish the author’s goals? Review by collaborators can increase the likelihood that we submit our best work. As a cautionary note, collaborators should be chosen carefully because not everyone has compatible work styles, expertise, or writing skills. Expectations should be defined and agreed to before a project begins, including matters like deadlines, duties, order of authorship, etc. We encourage faculty collaborators to review their “contracts” with each other in the interest of maximizing productivity, fit, and satisfaction. Few arrangements are less satisfying than collaborators who do not get along well, or whose work habits are so at-odds that writing suffers.

Accountability also comes through the editorial process. Journals and editors have specific expectations or requirements, and faculty members should know and follow them. Uncooperative authors—often those who are inflexible, uncordial, or defensive—will encounter long delays in seeing their work published, and an editor may be reluctant to invite them to contribute to future projects. The publishing process requires patience for
everyone involved, and following editor/reviewer suggestions and format requirements greases the wheels. In our years of authoring and editing, we have found two rules to hold true: (1) Readers are usually right, so accept most of what they say; and (2) editors are always right. Regardless of whether a manuscript is rejected or accepted, faculty members should act quickly. With rejection, improve the manuscript based on the readers’ comments and send the revision to a different outlet. With acceptance, return a revised manuscript to the editor quickly, and then move to your next project.

The publication process is lengthy, and it tests the persistence and patience of most faculty members. That is especially true for faculty members who want to author a book. However, there are many rewards associated with publishing, especially for faculty members who are interested in tenure and promotion. Scholarly productivity is a metric by which most faculty members are evaluated to some degree, and SoTL can be a central component of one’s research. SoTL facilitates student learning (Hutchings et al., 2011); builds a network of scholars with a common goal (Gurung et al., 2008); addresses demands to assess student learning; and responds to public interest in knowing that our teaching correlates with positive outcomes for our students.

In considering the pursuit of SoTL, faculty members should first know the value that their institutions place on SoTL. Some institutions may value SoTL the same as disciplinary research, whereas some may not. Similarly, institutions vary in the extent to which they support SoTL through funding, course releases, etc. Faculty members who have limited institutional support for their SoTL often must rely on external resources (e.g., the Society for the Teaching of Psychology’s Instructional Resource Award). Ultimately, faculty members interested in SoTL may find that they spend a lot of time looking for institutional support and educating their institutional colleagues about their work and its rightful place in the academy.

In addition to a lack of uniformity in how institutions value SoTL for the tenure and promotion process (cf. Secret et al., 2011), there are misconceptions about SoTL. For example, some people believe that because teaching is a mystical and sacred experience between professor and student, it cannot be studied scientifically. Critics of SoTL argue that we cannot empirically demonstrate the qualities of effective teaching that foster student learning; however, there are numerous resources dedicated to describing master teachers and the science of learning. Relatedly, because SoTL is just teaching, how hard can it be to conduct? The fact is, SoTL can be complicated because it requires time (i.e., courses may not be offered regularly); many participants to create appropriate experimental and control groups, and random assignment is likely impossible; and ethical concerns (e.g., informed consent of students enrolled in a course; withholding an instructional strategy from control participants).

The brave and tenacious faculty members who are not discouraged by low institutional support or misconceptions about SoTL will find a growing number of outlets where their manuscripts can be published. Such journals as Teaching of Psychology, Scholarship of Teaching and Learning in Psychology, and Psychology Learning and Teaching are just a few of the leading journals for SoTL. Other resources include SoTL conferences, blogs and social media, and the National Center for Case Study Teaching in Science. The importance of SoTL is clear to APA’s Division 2, and its members do much to support student learning and faculty effectiveness in the classroom. By carefully studying how we
teach and then sharing that research through publications, we will enhance students’ learning and equip them with the skills and knowledge that they need to succeed in life.

References
What is meant by cognitive structures? How does it influence teaching-learning of Psychology?

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Abstract

Metaphorical thinking is an innate mental skill of human beings which when practiced consciously can help us develop more efficient cognitive structures, or basic mental patterns, to process information. Similar to the physical training required of athletes, individuals need to practice metaphorical thinking to develop their cognitive structures. To continue the metaphor, just as a coach is an essential part of an athlete’s development, good teaching and learning is an essential part of this type of cognitive development for learners. Effective guidance in metaphorical thinking via content, activities, and assessment can improve learners’ information processing ability and cognitive structures improving their abilities to (1) make connections, (2) find patterns, (3) identify rules, and (4) understand abstract principles.

Introduction

Jean Piaget (1971) mentioned in his schema theory that the assimilation of knowledge occurs by linking present knowledge with prior knowledge by changing the cognitive structures that already exist and adding new information.

Famous Psychologists like Skinner and Erik Erikson proposed in their theories of human development that every child is capable of constructing his/her own knowledge to understand the world around them via the following methods (this is a non-inclusive list):

By immersing learners in complex, interactive experiences that are both rich and real by the teachers.

By exposing the learners to challenge stimulus so that it stimulate a student’s mind to the desired state of alertness.
By promoting intensive analysis to enable the student to gain insight about a problem, approaching it in different ways to perceive active processing of experience.

Based on the above theories the following teaching-learning model is proposed to explain the link between Cognitive structures and the usage of metaphorical thinking in teaching-learning Psychology.

Cognitive structures could be developed by practicing metaphorical thinking the following ways:

- Making connections with prior knowledge and experience as well as by connecting the experience to the learning situation,
- Looking for patterns and relationships among bits of information to integrate and make meaning,
- Formulating rules to process information quickly and automatically, and
- Abstracting generalizable principles to transfer learning from one situation to another.

Methodology

An experiment was carried out to evaluate the development of cognitive structure via metaphorical thinking in a teacher sample consisting of 25 males and 75 females teaching Psychology. A 45 item questionnaire assessing the implementation of four dimensions.
namely (1) making connections, (2) finding patterns, (3) identifying rules, and (4) abstracting principles was prepared relevant to content, activity and assessment.

A pilot study was conducted on a sample of 100 teachers. The reliability was calculated by using split half split method was found to be 0.756 and the validity of the questionnaire was calculated as the square of reliability equal to 0.585.

The responses from the teachers were collected and the scores are subjected to regression analysis using SPSS 20.0 version.

To show the relationship between metaphorical thinking
(made of four components) with content, activity and assessment

<table>
<thead>
<tr>
<th>S.No</th>
<th>Psychological variable</th>
<th>R_{1.23}</th>
<th>R_{2.13}</th>
<th>R_{3.12}</th>
<th>Level of significance</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>metaphorical thinking with content</td>
<td>0.464**</td>
<td>0.534**</td>
<td>0.397*</td>
<td>0.05</td>
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<td>2</td>
<td>metaphorical thinking with activity</td>
<td>0.412**</td>
<td>0.365*</td>
<td>0.496</td>
<td>0.05</td>
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<tr>
<td>3</td>
<td>metaphorical thinking with assessment</td>
<td>0.386*</td>
<td>0.497**</td>
<td>0.456**</td>
<td>0.05</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001, N.S = Not significant.

R_{1.23} = the relationship of metaphorical thinking with content, activity and assessment.

R_{2.13} = the relationship of metaphorical thinking with activity content and assessment.

R_{3.12} = the relationship of metaphorical thinking with assessment, content and activity.

The overall regression values suggest that if the information is delivered by the teacher by careful planning of the content, activity and assessment establishing the link between present to prior knowledge, finding patterns, identifying rules and abstracting principles.
would result in quick development of cognitive structures eventually resulting in enhanced information processing ability.

Discussion

Several researchers as early as 1975 suggested that metaphorical thinking helps to experience the difficult subject matter in a simple way. George Lakoff and Mark Johnson (1980) explained metaphorical thinking as central to the human thought process in communication. Aristotle considered metaphorical thinking a sign of genius nature of an individual believing that the individual who had the capacity to perceive resemblances between two separate areas of existence and link them together was a person of special gifts. Deacon (2000), in his market research, suggests that the participants who use metaphorical thinking were successful in market research. Christensen and Olson (2002) as well as Zaltman (2003) proceed in their consumer market research by asking the research participants to implement metaphorical thinking to relate their attitude with the product in use. The formulation of metaphorical concepts requires a creative, synthesizing approach.

References


Student Perception of Educational Experiences

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The college experience is under scrutiny (e.g., Zakaria 2015) and high profile organizations such as the American Association of Colleges and Universities are making efforts to clarify the value of college (e.g, Schneider 2015). Ultimately students will determine the value of college, and their ability to describe its impact will be critical to the evaluation of higher education. The current research explored student perceptions of college in terms of its contribution to generating meaning in one’s life as well as preparation for success at work. Also, students identified skills that have been enhanced during college. This work was an initial exploration of student thought regarding their education and how the benefits of college can be amplified.

This preliminary description was created using responses to a brief survey from 23 students (7 males; 16 females) enrolled in a behavioral statistics course at a small liberal arts university. Students rated their level of agreement to items on a 1 (strongly disagree) to 5 (strongly agree) scale. Items involved 4 college value items (e.g., I believe that my college experience helps me understand the world in a better way), 4 work preparation items (e.g., I feel I am adequately preparing myself for being successful in a meaningful job after college) and 3 utilizing education items (e.g., I feel confident talking about my education in terms of how it helps me be successful in work).

College Value Scores (CVS: $M = 17.70, SD = 1.96$, Cronbach’s $a = .77$), Work Preparation Scores (WPS: $M = 17.22, SD = 1.70$, Cronbach’s $a = .64$), and Utilizing Education Scores (UTS: $M = 13.22, SD = 1.51$, Cronbach’s $a = .71$) were created from students’ responses. There were significant correlations between CVS and WPS, $r = .65$, $p = .001$ and WPS and UES, $r = .64$, $p = .001$, but not CVS and UES, $r = .36$, $p = .10$. In terms of skills 18 students identified items which were placed into several general categories: cognitive items, social items; organizational items; personal qualities; and other items. The most frequent cognitive item was critical thinking and for social items the most frequent items involved managing social relations and communication abilities. Time management was the most common organizational item (less than 15% of the items produced were personal or other categories). Strikingly, only one student provided one skill that was specific to work success (i.e., an education major noted classroom management) even though the prompt for identifying skills came after the work related items of the survey.

It is clear that students in this sample find value in their college experience. They reported agreeing strongly with statements indicating college prepares them to better understand their world and to be better adults. In addition, students endorsed strongly statements
regarding the role of college in preparing them for success in work and career. As anticipated, these two measures were significantly correlated. Further, students also largely agreed with statements that they were gaining skills and information from college that they could use and discuss. Interestingly, this notion of learning information they could discuss was not significantly correlated with views on the value of college coming from enhancing meaning in one’s life.

While highly preliminary, these findings suggest that students perceive that college aids them in achieving multiple important goals. The structure of the current survey divided these perceptions into unique areas: that of one’s personal life and one’s career aspirations. While measuring these perceptions can be improved from this initial study, the current findings indicate that although these areas were strongly connected they do not appear to be the same thing, since there was not a significant correlation between utilizing what is being learned toward work and valuing what college is providing in terms of living a meaningful life.

Another important issue to recognize is that these findings are based on perceptions of students about their experiences and skills they are acquiring. When considering what skills were noted by students, most skills were general in nature (e.g., critical thinking) and the lack of career specific skills was glaring.

As instructors, these findings can guide consideration of what can be learned in our courses. Within this study, students already viewed their courses as valuable, but this likely can be enhanced. For example, students can be provided with information that labels the specific skills that they are gaining through their courses. Martini, Rail and Norton (2015) noted the value of faculty being explicit about the specific skills assignments require. To help students focus on how their course work benefits them it may be useful for assignments to identify the necessary skills required and to frame these skills in ways that can be communicated to employers (Miller & Carducci 2015).

As an example of this, Lawson, Jordon-Fleming and Bodle (2015) indicated that psychology courses aid specific components of critical thinking skills. They found that courses focusing on developing a thesis (e.g., capstones) helped students’ psychology specific critical thinking. Taking an additional step and providing students with vocabulary for these skills allows them to articulate their abilities to others. Assignments and evaluations (e.g., tests) could be constructed to evaluate student abilities (e.g., identify problems with particular research designs) but also to label their ability as a specific form of critical thinking. For example, as students learn about various research designs additional information can be provided about strategic analysis to identify strengths and weaknesses. Through repeated efforts, tests move from being a grade in a course to an opportunity to practice skills that students can articulate to others (e.g., potential employers) and use in a variety of settings.

In all, the goal is to help our students prepare for their lives once out of college. Appleby (2014) identified critical skills that when used well aid individuals in advancing in their careers in addition to skills that when not used well can result in job termination. Further Appleby addressed how informed advising can steer students to select courses that provide
them with opportunities to build skills that will be of service to them. Courses that demand these skills can also be explicit about those skills that are being honed. Students can then benefit from being able to tell others of their enhanced skills so that they can distinguish themselves as they begin lives beyond the college environment.

References


Puppy Power? Applying the Effect of Viewing Cute Images on Task Performance to the Classroom

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Presented at: Southeastern Psychological Association
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Viewing cute images may be pleasant, but what kind of effect do these images actually have on behavior? Sherman, Haidt, and Coan (2009) examined how perceiving cuteness can affect performance on tasks requiring carefulness and focused attention and that individuals who viewed baby animals out-performed individuals who viewed adult animals in a fine-motor dexterity task. Nittono, Fukushima, Yano, and Moriya (2012) demonstrated that viewing cute images increased performance on a both fine-motor dexterity task and a non-motor visual task. These studies suggest that individuals are more careful and focused after viewing cute images, but can this effect extend to a more complex, real-world task requiring focused attention, such as the classroom? More specifically, we examined performance on an Introduction to Psychology exam. Based on past research, we hypothesized that viewing cute images prior to taking a final course exam would result in higher exam scores, and we explored whether students would report more pleasant, relaxed exam experience.

Pilot Study
A pilot study of 32 royalty-free images was distributed online using Qualtrics survey software (2015). Volunteers ($N = 29$, 11 women, 3 men, 15 did not report; $M$ age = 19.43, $SD$ age = 1.34) were recruited from lower-level psychology courses and student organizations at a mid-sized, southeastern university. Consistent with the procedure of Nittono et al. (2014), color images of each animal were randomly presented one at a time; each image was rated on four items (i.e., cute, infantile, pleasant, exciting) on a 6-point scale (1 = not at all to 6 = very much). Seven images of puppies and kittens were selected for the baby animal condition and seven images of dogs and cats were selected for the adult animal condition to be used in the main study. The 14 images of baby and adult animals from the pilot study were selected for the main study so that the baby images were significantly higher than adult images in cuteness, $t (13) = 2.80$, $p = .02$, $d = 0.53$, and infantility, $t (13) = 5.78$, $p < .001$, $d = 1.58$, but were not different in pleasantness, $t (13) = 1.53$, $p = .15$, $d = 0.30$, or excitement, $t (13) = 1.93$, $p = .08$, $d = 0.38$ (see Table 1).

<table>
<thead>
<tr>
<th>Baby Animals</th>
<th>Adult Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cute</td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>5.32</td>
<td>0.77</td>
</tr>
<tr>
<td>Infantile</td>
<td></td>
</tr>
<tr>
<td>4.71</td>
<td>1.33</td>
</tr>
<tr>
<td>Pleasant</td>
<td></td>
</tr>
<tr>
<td>4.91</td>
<td>1.07</td>
</tr>
<tr>
<td>Exciting</td>
<td></td>
</tr>
<tr>
<td>4.22</td>
<td>1.38</td>
</tr>
</tbody>
</table>

Table 1. Means and standard deviations of scores on images selected during the pilot study.
Main Study

Participants included 61 volunteer students (42 women, 17 men; $M$ age = 19.66, $SD$ age = 2.93) from two Introduction to Psychology sections ($n = 37$, $n = 31$). Both sections were taught in the same semester by the same instructor on the same days of the week, one after the other for equal lengths of time; the same course materials were used. Participants were largely Caucasian (77.30%) students enrolled as freshmen (67.20%) at the university.

Before their final exam, participants completed a short survey in which they were randomly assigned to either view images of baby animals (4 puppies and 3 kittens) or adult animals (4 dogs and 3 cats). They rated how cuteness, pleasantness, infantility, and excitement of each image, and they indicated how prepared, calm, anxious, worried, focused, and distracted they felt ($1 =$ not at all to $6 =$ very much). The students then completed their final exam; the total number of multiple-choice questions answered correctly by each participant was recorded.

We conducted independent-samples $t$-tests to determine whether the condition of images affected exam performance or experience. While the baby images were rated as cuter and more infantile but no more pleasant or exciting than the adult images, viewing cute images did not result in higher exam scores or reports of a more pleasant exam experience (See Table 2).

Table 2. Effect of image type on image ratings and exam performance and experience.

<table>
<thead>
<tr>
<th>Exam Performance and Experience:</th>
<th>Baby Animals</th>
<th>Adult Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$t$</td>
<td>df</td>
</tr>
<tr>
<td>MC # Correct</td>
<td>-$0.842$</td>
<td>$57$</td>
</tr>
<tr>
<td>Worried</td>
<td>-$0.167$</td>
<td>$57$</td>
</tr>
<tr>
<td>Prepared</td>
<td>$1.47$</td>
<td>$57$</td>
</tr>
<tr>
<td>Calm</td>
<td>$0.115$</td>
<td>$57$</td>
</tr>
<tr>
<td>Anxious</td>
<td>-$0.289$</td>
<td>$57$</td>
</tr>
<tr>
<td>Focused</td>
<td>-$0.383$</td>
<td>$57$</td>
</tr>
<tr>
<td>Distracted</td>
<td>$0.450$</td>
<td>$57$</td>
</tr>
<tr>
<td></td>
<td>$t$</td>
<td>df</td>
</tr>
<tr>
<td>Cute</td>
<td>-$2.40$</td>
<td>$55$</td>
</tr>
<tr>
<td>Infantile</td>
<td>-$5.95$</td>
<td>$52$</td>
</tr>
<tr>
<td>Pleasant</td>
<td>-$1.92$</td>
<td>$56$</td>
</tr>
<tr>
<td>Exciting</td>
<td>-$1.68$</td>
<td>$56$</td>
</tr>
</tbody>
</table>

Discussion

Many students struggle with exams, and we hoped that viewing cute images prior to an exam might help students in their performance and improve their perceived exam experience. If viewing cute images benefits students, this could be a relatively quick, simple, and enjoyable addition to the start of an exam. Unfortunately, our results did not produce the desired effect. Like the prior research (Nittono et al., 2014), our baby images
were viewed as cuter and more infantile but no more pleasant or exciting than adult images. However, viewing baby images (vs. adult images) did not improve student performance of perceived exam experience. Although there was no significant effect of image type on exam scores or experience, the results from this study may direct future research on how the effect of viewing cute images can be applied to the classroom. This study focused on viewing images just before examination, but this research could be used in teaching to improve cognitive skills in learning to potentially improve exam scores. In other words, the effect of viewing cute images may be more beneficial to student performance if used when learning material rather than when trying to remember it.

References

Self-regulated learners actively navigate the challenges of post-secondary educational settings. They set goals, employ distributed practice and study, and monitor and regulate their learning. Further, students’ effective use of cognitive strategies is a cornerstone for successful self-regulated learning (SRL) (Dunlosky et al., 2013; Winne, 2011; Zimmerman, 2008). Unfortunately, although we recognize that SRL is critical for learning, we know less about the strategies students employ as they face academic challenges. Reports of students’ SRL through inventories (e.g., Motivated Strategies for Learning Questionnaire) serve as one source for understanding their strategy use. Such studies generally examine the relations among SRL constructs as well as relations between reported SRL and achievement (e.g., Anthony et al., 2013), or include students’ reports of SRL before and after coursework for use in the design of interventions and supports for academic success (e.g., Berger & Karabenick, 2011). Employing survey methodology, Kornell and Bjork (2007) and Hartwig and Dunlosky (2012) instead focused on students’ study habits, such as rereading and self-testing, and reported relative stability when comparing samples of students across time.

However, notwithstanding findings from these and a few additional studies, too little is known regarding college students’ use of study and learning strategies. A comparison of students’ and instructors’ perceptions of specific strategies through a scenario-based approach also concluded that both held misconceptions regarding empirically-supported strategies (Morehead et al., 2015). Therefore, it is critically important to understand students’ perceptions of SRL strategies as well as their interest in learning more about specific effective strategies.

Participants (N=228; 70.2% White; 57.9% male; mean GPA=3.21, SD=0.65) included undergraduate chemistry (n=97; 42.5%), information sciences and technology (n=110; 48.2%), and math (n=21; 9.2%) students. Participants first reported use and frequency of studying and learning goals. They then also rated frequency of use, perceived usefulness, and interest in learning more about specific strategies known to be effective through previous research and empirical support (e.g., Cleary, 2006; Karabenick & Knapp, 1991; Fiorella & Mayer, 2015). As illustrated in Table 1, strategies were represented by the following categories: selection strategies (n=6); organization strategies (n=4);
integration/elaboration strategies \((n=7)\); study or test strategies \((n=4)\); technology-based strategies \((n=4)\); information- and help-seeking strategies \((n=5)\); and regulation strategies \((n=3)\). Overall findings indicated students tended to study in sessions that lasted between 2 and 3 hours. Only 7 students reported studying daily; most students reported studying 2 days per week. Regarding learning goals, many students reported only setting semester learning goals rather than more proximal goals. As illustrated in Table 2, students reported interest in knowing more about effective strategies and, despite the finding that students recognized some strategies as useful, they did not report their use. Students also reported taking notes and rereading notes as primary strategies with high usefulness regardless of course. Despite empirical support, however, summarizing and generating examples were less frequently reported and students did not advocate drawing strategies. Data from this study provide unique insight and foundation for development of SRL interventions to target strategies students should use but are not, and can directly focus on strategies students value but may not effectively employ without support. In particular, the findings suggest the need to facilitate students’ sustained use of empirically-supported strategies across learning tasks, and likewise suggest the need to foster students’ use and monitoring of proximal and targeted learning goals. Such work will further our understanding of how and when to guide students’ effective use of specific strategies to support regulation.

References


Table 1
**List of Strategies by Strategy Category**

<table>
<thead>
<tr>
<th>Strategy Category</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highlight/underline text</td>
</tr>
<tr>
<td></td>
<td>Copy and paste from the text or instructor’s notes</td>
</tr>
<tr>
<td><strong>Selection Strategies</strong></td>
<td>Reread the text</td>
</tr>
<tr>
<td></td>
<td>Reread your notes</td>
</tr>
<tr>
<td></td>
<td>Rewrite your notes</td>
</tr>
<tr>
<td></td>
<td>Purchase notes</td>
</tr>
<tr>
<td></td>
<td>Create outlines</td>
</tr>
<tr>
<td><strong>Organization Strategies</strong></td>
<td>Summarize the text/instructor’s notes</td>
</tr>
<tr>
<td></td>
<td>Take notes</td>
</tr>
<tr>
<td></td>
<td>Create tables/figures</td>
</tr>
<tr>
<td></td>
<td>Create mnemonics</td>
</tr>
<tr>
<td></td>
<td>Paraphrase text or notes</td>
</tr>
<tr>
<td><strong>Integration/Elaboration Strategies</strong></td>
<td>Combine/integrate notes</td>
</tr>
<tr>
<td></td>
<td>Generate examples</td>
</tr>
<tr>
<td></td>
<td>Explain content to self</td>
</tr>
<tr>
<td></td>
<td>Explain content to others</td>
</tr>
<tr>
<td></td>
<td>Draw diagrams</td>
</tr>
<tr>
<td></td>
<td>Study with team/group</td>
</tr>
<tr>
<td></td>
<td>Test your own knowledge/create practice test problems</td>
</tr>
<tr>
<td><strong>Study or Test Strategies</strong></td>
<td>Complete practice problems</td>
</tr>
<tr>
<td></td>
<td>Work backwards through problems</td>
</tr>
<tr>
<td><strong>Technology-Based Strategies</strong></td>
<td>Record lectures</td>
</tr>
<tr>
<td></td>
<td>Check course management system</td>
</tr>
<tr>
<td></td>
<td>Check online discussion board</td>
</tr>
<tr>
<td></td>
<td>Check university email</td>
</tr>
<tr>
<td></td>
<td>Search for examples online</td>
</tr>
<tr>
<td><strong>Information- and Help-Seeking Strategies</strong></td>
<td>Search for help or information online</td>
</tr>
<tr>
<td></td>
<td>Seek help from the teacher</td>
</tr>
<tr>
<td></td>
<td>Seek help from peers</td>
</tr>
<tr>
<td></td>
<td>Seek help from TA/LA</td>
</tr>
<tr>
<td><strong>Regulation Strategies</strong></td>
<td>Monitor progress</td>
</tr>
<tr>
<td></td>
<td>Evaluate current level of knowledge</td>
</tr>
</tbody>
</table>
Table 2

*Ratings of Frequency of Use, Perceived Usefulness, and Interest in Learning More about Strategies*

<table>
<thead>
<tr>
<th>Ratings of Strategies</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min-Max</th>
<th>Scale Midpoint</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency of use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Selection</td>
<td>16.89</td>
<td>17.00</td>
<td>4.26</td>
<td>6.00-28.00</td>
<td>18.00</td>
<td>.69</td>
</tr>
<tr>
<td>Organization</td>
<td>13.23</td>
<td>13.00</td>
<td>3.09</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.61</td>
</tr>
<tr>
<td><strong>Integration/Elaboration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study/Test</td>
<td>12.13</td>
<td>12.00</td>
<td>3.03</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.59</td>
</tr>
<tr>
<td>Technology</td>
<td>11.57</td>
<td>12.00</td>
<td>2.64</td>
<td>4.00-19.00</td>
<td>12.00</td>
<td>.41</td>
</tr>
<tr>
<td>Info-/Help-Seeking</td>
<td>15.84</td>
<td>16.00</td>
<td>3.48</td>
<td>5.00-25.00</td>
<td>12.00</td>
<td>.69</td>
</tr>
<tr>
<td>Regulation</td>
<td>9.80</td>
<td>10.00</td>
<td>2.59</td>
<td>3.00-15.00</td>
<td>9.00</td>
<td>.77</td>
</tr>
<tr>
<td><strong>Perceived usefulness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection</td>
<td>19.08</td>
<td>19.00</td>
<td>4.25</td>
<td>7.00-30.00</td>
<td>18.00</td>
<td>.70</td>
</tr>
<tr>
<td>Organization</td>
<td>14.66</td>
<td>15.00</td>
<td>3.02</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.66</td>
</tr>
<tr>
<td><strong>Integration/Elaboration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study/Test</td>
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<td>3.17</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.63</td>
</tr>
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<td>4.00-20.00</td>
<td>12.00</td>
<td>.65</td>
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<tr>
<td>Info-/Help-Seeking</td>
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<td>20.00</td>
<td>3.55</td>
<td>9.00-25.00</td>
<td>12.00</td>
<td>.74</td>
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<tr>
<td>Regulation</td>
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<td>2.93</td>
<td>3.00-15.00</td>
<td>9.00</td>
<td>.85</td>
</tr>
<tr>
<td><strong>Interest in learning</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection</td>
<td>19.16</td>
<td>19.00</td>
<td>4.96</td>
<td>6.00-30.00</td>
<td>18.00</td>
<td>.82</td>
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<tr>
<td>Organization</td>
<td>14.51</td>
<td>15.00</td>
<td>3.36</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.80</td>
</tr>
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<td><strong>Integration/Elaboration</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study/Test</td>
<td>14.60</td>
<td>15.00</td>
<td>3.35</td>
<td>4.00-20.00</td>
<td>12.00</td>
<td>.79</td>
</tr>
<tr>
<td>Technology</td>
<td>12.68</td>
<td>13.00</td>
<td>3.34</td>
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<td>12.00</td>
<td>.72</td>
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<tr>
<td>Info-/Help-Seeking</td>
<td>18.02</td>
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<td>12.00</td>
<td>.86</td>
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<tr>
<td>Regulation</td>
<td>10.85</td>
<td>11.00</td>
<td>2.59</td>
<td>3.00-15.00</td>
<td>9.00</td>
<td>.85</td>
</tr>
</tbody>
</table>

Note. Min=Minimum; Max=Maximum; Scale Midpoint=Score obtained by selecting the midpoint of the scale (3) for all strategy items per strategy category.
In our undergraduate psychology program, we emphasize teaching students how to understand the research process including using SPSS to complete simple analyses. Based on graduate student presentations at regional and national conferences as well as anecdotal information from our students who have been admitted to graduate schools, we have assumed that these graduate programs use SPSS and expect incoming students be familiar with SPSS. The purpose of this study was to collect information from psychology graduate programs to determine whether or not graduate programs do want and expect their incoming students to have experience and be familiar with SPSS. One of the key factors for this study was based on a financial concern. The site license for SPSS is quite expensive, reaching into thousands of dollars each year. This investment is worthwhile if it helps to adequately prepare students for graduate school. However, if SPSS is not needed for preparation into graduate school, it may not be worth the expense. Therefore, we examined whether faculty from selected psychology graduate programs expect incoming students to have SPSS software experience and, if so, how much experience.

As part of our departmental senior assessments, students expressed interest in 70 graduate programs. We selected those programs for inclusion in our study. After identifying a contact person for each school, we sent an email inviting him or her to participate by completing a 13-item questionnaire developed in Qualtrics. We used Likert items to assess the level of expertise expected of incoming students. We asked the directors of psychology graduate programs if they used a PC or Mac format, the importance of students knowing how to use SPSS, if their program had thought about changing to a different software program due to cost, and how problematic it would be if students had little to no knowledge on how to use SPSS in statistical analyses. We find this study important because there is very little in the literature regarding SPSS use in graduate programs.

From the 70 program representatives contacted, 36% completed the online survey. Most of these respondents (92%) reported their graduate programs as using PC computing platforms with the remaining reporting Mac platforms. Because SPSS software is native to PCs, use of a particular software package may be dictated more by the computers used that the software itself.

Of 25 program representatives that responded, 23 indicated that they use SPSS. Of those 23, 14 indicated that in addition to SPSS, they also use other statistical software such as Excel (6) and r (5). Ten programs reported no other statistical packages were used and one program did not answer.
Having SPSS within a graduate program does not guarantee that students enter the program prepared to use the software. When asked how much skill they preferred their first year graduate students to have in SPSS, 9 of the respondents indicated that they prefer incoming graduate students have "a lot" to "as much skill using SPSS as possible". Eight programs preferred a moderate level of skill and 5 programs indicated "none" to "a little skill is preferred."

Of the 23 program representatives reporting SPSS as their statistical analysis software, 13 indicated that it would not be problematic if incoming students lacked SPSS experience and 6 responded that it would be "moderately problematic" and 3 programs indicated that it would be "very" to "extremely problematic".

When asked whether their graduate programs offered incoming students remedial SPSS training, 3 respondents reported no remedial training; 11 reported moderate remedial training; and 7 stated that remedial training was offered to students "often" or "most of the time". One possible reason that more remedial training is not provided is that graduate programs often have statistics classes that teach students how to use the required statistical software. Therefore, it is not viewed as remedial training.

We also asked if the school purchased the statistical software for their students. Out of 25 schools that responded, 18 indicated that they purchase software for their labs, one program provides a license for students' personal computers, 4 programs provide licenses to both department labs and individual students. Finally, 2 respondents indicated that their programs do not purchase software for their students.

In conclusion, there appears to be several factors associated with the use of SPSS in psychology graduate programs. First, nearly all of the responding programs reported that SPSS is the primary statistical software package used for analysis. Representatives from programs currently using SPSS may have responded at a significantly higher rate and therefore biased the sample. Second, nearly all programs use PC computers rather than Macs which may be the most influential factor in the choice of SPSS as their primary statistical analysis package. Third, and perhaps most important to our study, graduate programs do want students to have at least some experience with statistical software, especially SPSS. Due to the lack of remedial classes in many of the programs, incoming graduate students, without this experience may find themselves at a disadvantage.

As a result, our undergraduate program will continue to use SPSS in our research classes and labs. To examine further the relationship between SPSS and success in psychology graduate programs we will shift our emphasis from the programs to the students. By asking graduate students about their experience with SPSS as an undergraduate as well as the types of experience they had as undergraduates, we will be able to use this data to better prepare other students for psychology graduate programs.
Dual Credit of Incoming College Students: Implications for Psychology Programs

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Indiana University Southeast

Presented at: Midwestern Psychological Association, 2016
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The National Center for Education Statistics has documented the increasing rates of public high schools offering dual enrollment or dual credit courses to their students (Thomas, Marken, Grey & Lewis, 2013). Dual credit is the term given to courses in which high school students may earn both high school and college credits. Dual credit courses are taught by high school faculty or by adjunct college faculty or college faculty either at the high school, at the college or university, or sometimes through online courses or distance education. Dual credit is offered by both state and independent (private, regionally accredited) colleges and universities.

Borden, Taylor, Park & Seiler (2013) noted in their research published by the Higher learning Commission (HLC) that dual credit has several potential benefits. Specifically, a primary benefit noted is the shortening of time to degree completion. Borden, et al. note that spending less time in college would lower the cost of college and potentially increase access to higher education for students. The current study was conducted to ascertain on one campus the current state of dual credit enrollment of incoming students. This study provides a descriptive report of the amount of dual credit hours and the types of dual credit courses, first year students bring to a 4 year public university

Method

Transcripts from students attending a medium sized public university were analyzed. Transcripts of students taking classes at a university in the Midwest were examined. Transcripts representing students from Fall 2014 and Fall 2015 were analyzed. These transcripts represented 983 students who were enrolled in Fall 2014 and 878 students who were enrolled in Fall 2015. Whether students had dual credit or not was noted and the number of dual credit hours per students was noted. In addition, for students who had dual credit hours, the actual classes taken were tallied (see Table 1). Differences between dual credit students and students without dual credit were also analyzed (see Table 2).

Results

Number of Dual Credit hours First Year Undergraduates
In the Fall 2014, 34% of the 983 first year undergraduate students had earned some level of dual credit (n=337). The figure below depicts how many students earned varying quantities of dual credit. As can be seen by the figure below, the majority of dual credit
students earned 3-6 credit hours and approximately 50% of dual credit students earn 12 credits or less depicted by the red arrow. Mean number of credit hours = 15.99, SD = 11.63).

**Figure 1: Fall 2014 Amount of dual credit hours transferred in.**

![Figure 1](image1)

**Figure 2 Fall 2015 Amount of dual credit hours transferred in.**

![Figure 2](image2)

In the Fall 2015, 34% of the 878 first year undergraduate students had earned some level of dual credit (n=285). While the percentage of students taking dual credit did not change, the amount of dual credit this percentage of students is taking is now higher. This is reflected in the median migrating to the right (red arrow) as well as the mean increasing between Fall 2014 to Fall 2015. The majority of dual credit students earned 3-6 credit hours and while the percentage of students bringing in dual credit did not increase from Fall 2014 to Fall 2015, the amount of dual credit each individual dual credit students is bringing in is increasing. Mean number of credit hours in Fall 2015 was 17.35 with a standard deviation of 11.98. The vast majority of dual credit hours came from Ivy Tech 96%).

**Most common Dual Credit Classes transferred in by students.**
To determine the type of dual credit classes, the transcript of each student who had dual credit had to be accessed and then a list of their dual credit classes was made. Transcripts had to be examined one by one to see what classes were transferred in under dual credit.
Approximately 350 transcripts were examined and 337 were found to have dual credit. Using this information a tally was made for each course type, noting where the dual credit was earned. An examination of the websites of the most commonly used colleges listed were examined to classify the course transferred in.
Table 1 depicts the Top 25 of the most frequently taken dual credit classes by college in Fall 2014 and Fall 2015.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course</th>
<th>Fall 2014 Total</th>
<th>Fall 2015 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng Composition</td>
<td>W131</td>
<td>179</td>
<td>150</td>
</tr>
<tr>
<td>Math College Alg</td>
<td>M125</td>
<td>150</td>
<td>126</td>
</tr>
<tr>
<td>Math Trig</td>
<td>M126</td>
<td>132</td>
<td>107</td>
</tr>
<tr>
<td>Spanish</td>
<td>S100</td>
<td>99</td>
<td>81</td>
</tr>
<tr>
<td>Spanish</td>
<td>S150</td>
<td>90</td>
<td>71</td>
</tr>
<tr>
<td>History</td>
<td>H106</td>
<td>76</td>
<td>64</td>
</tr>
<tr>
<td>History</td>
<td>H105</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>Political Science</td>
<td>Y103</td>
<td>59</td>
<td>45</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>UN100</td>
<td>59</td>
<td>31</td>
</tr>
<tr>
<td>Communications</td>
<td>S121</td>
<td>53</td>
<td>54</td>
</tr>
<tr>
<td>Psychology</td>
<td>P101</td>
<td>51</td>
<td>45</td>
</tr>
<tr>
<td>Biology</td>
<td>L100</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>Intro to Biology</td>
<td>L101</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>English</td>
<td>UN100</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>Economics</td>
<td>E101</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td>Spanish</td>
<td>S200</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>Sociology</td>
<td>S203</td>
<td>28</td>
<td>12</td>
</tr>
<tr>
<td>Literature</td>
<td>L202</td>
<td>24</td>
<td>51</td>
</tr>
<tr>
<td>Calculus I</td>
<td>M215</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Concepts in Math</td>
<td>M118</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Spanish</td>
<td>S250</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Anatomy</td>
<td>A215</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>English Exposition</td>
<td>W132</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>French</td>
<td>F100</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>French</td>
<td>F200</td>
<td>13</td>
<td>18</td>
</tr>
</tbody>
</table>
Table 1 indicates the most popular dual credit classes taken by students. Table 1 is ordered such that the most popular classes are listed on the top, with less popular classes represented toward the bottom. Awareness of the popular classes may want to be considered as we design first year programming with various populations.

**Characteristics of students who come in with Dual Credits were analyzed for the Fall 2015 semester.**  
Table 2 compares the mean scores of students who have any dual credit work transferred compared to students who have no dual credit transferred in. As you can see from the Table 2, dual credit students perform better on all of the variables examined. Dual credit students have a higher GPAs, take slightly more credit hours, have higher SAT or ACT scores and performed better in High School than students who did not take any dual credit hour classes.
Table 2 Differences between Students with and without Dual Credit

<table>
<thead>
<tr>
<th>Fall 2015 Cohort</th>
<th>No Dual Credit</th>
<th>Dual Credit</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>287</td>
<td>265</td>
<td>p value</td>
</tr>
<tr>
<td>Fall 2015 GPA</td>
<td>2.194</td>
<td>2.831</td>
<td>0.000</td>
</tr>
<tr>
<td>Fall Credit hours</td>
<td>13.33</td>
<td>13.85</td>
<td>0.000</td>
</tr>
<tr>
<td>SAT Verbal</td>
<td>467</td>
<td>489</td>
<td>0.006</td>
</tr>
<tr>
<td>SAT Math</td>
<td>455</td>
<td>485</td>
<td>0.000</td>
</tr>
<tr>
<td>SAT Writing</td>
<td>453</td>
<td>475</td>
<td>0.004</td>
</tr>
<tr>
<td>SAT Composite</td>
<td>921</td>
<td>975</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT English</td>
<td>19.53</td>
<td>21.92</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT Math</td>
<td>19.02</td>
<td>21.36</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT Reading</td>
<td>20.63</td>
<td>23.22</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT Science</td>
<td>20.37</td>
<td>22.01</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT Writing</td>
<td>6.81</td>
<td>7.72</td>
<td>0.000</td>
</tr>
<tr>
<td>ACT Composite</td>
<td>19.99</td>
<td>22.22</td>
<td>0.000</td>
</tr>
<tr>
<td>HS Percentile</td>
<td>55</td>
<td>72</td>
<td>0.000</td>
</tr>
<tr>
<td>HS GPA</td>
<td>3.0522</td>
<td>3.49</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Do we retain Dual Credit Students at a higher rate?
Yes. Examining the Fall 2014 cohort to see who returned Fall 2015, we find that 69.7% of students who have dual credit return the following Fall semester whereas only 49.8% of students without dual credit return.
Cases of Individual Students who come in with higher amounts of dual credit (26 or more).
In Fall 2014, 18% of students had 26 or more hours of dual credit. In Fall 2015, 19% of students had 26 hours or more of dual credit. A small amount of students may have as many as 66 dual credit hours (see Student D). Listed next are a sampling of Fall 2015 IUS dual credit students to illustrate these points with individual student cases.

<table>
<thead>
<tr>
<th>Computer Science student with 26 dual credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>F200 Examining self as a teacher 3 B</td>
</tr>
<tr>
<td>L202 Literary Interpretation 3 A</td>
</tr>
<tr>
<td>W131 Reading Writing and Inquiry I 3 A</td>
</tr>
<tr>
<td>M118 Finite Mathematics 3 A</td>
</tr>
<tr>
<td>M125 Precalculus Mathematics 3 A</td>
</tr>
<tr>
<td>M126 Trigonometric Functions 3 A</td>
</tr>
<tr>
<td>S100 Spanish 1 4 B</td>
</tr>
<tr>
<td>S150 Spanish 2 4 B</td>
</tr>
</tbody>
</table>

Student A will need 2-3 more math classes and Spanish is not needed.

<table>
<thead>
<tr>
<th>Geoscience student with 35 dual credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A215 Anatomy 6 B</td>
</tr>
<tr>
<td>H105 American History I 3 C</td>
</tr>
<tr>
<td>H106 American History II 3 B</td>
</tr>
<tr>
<td>M118 Finite Mathematics 3 B</td>
</tr>
<tr>
<td>M125 Precalculus Mathematics 3 A</td>
</tr>
<tr>
<td>M126 Trigonometric Functions 3 B</td>
</tr>
<tr>
<td>S100 Spanish 1 4 B</td>
</tr>
<tr>
<td>S150 Spanish 2 4 B</td>
</tr>
<tr>
<td>S200 Spanish 3 3 B</td>
</tr>
<tr>
<td>S250 Spanish 4 3 B</td>
</tr>
</tbody>
</table>

For Student C, all the courses apply since there is room for electives and a foreign language is required.

<table>
<thead>
<tr>
<th>Pre-Elementary Ed. Student with 35 dual credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A100 The solar system 3 B</td>
</tr>
<tr>
<td>C104 Physical Sciences and Society 3 C</td>
</tr>
<tr>
<td>H105 American History I 3 B</td>
</tr>
<tr>
<td>H106 American History II 3 C</td>
</tr>
<tr>
<td>M118 Finite Mathematics 3 C</td>
</tr>
<tr>
<td>M125 Precalculus Mathematics 3 B</td>
</tr>
<tr>
<td>M126 Trigonometric Functions 3 B</td>
</tr>
<tr>
<td>S100 Spanish 1 4 B</td>
</tr>
<tr>
<td>S150 Spanish 2 4 B</td>
</tr>
<tr>
<td>S200 Spanish 3 3 B</td>
</tr>
<tr>
<td>S250 Spanish 4 3 B</td>
</tr>
</tbody>
</table>

Student B needs Chemistry with a lab, only one history course is required for her degree, and she will need 2-3 more math of a specific type and Spanish is not required.
Students A, B and D indicate that greater thought needs to be given to whether a dual credit hour class is a wise choice for a student. As students select their academic career path, certain courses are needed for some and not for others. As high school students take more and more credit hours prior to making that major selection decision—these students discover when they get to college that they have a large amount of dual credit hours that serve no purpose for their desired path. Instead they have essentially used up their electives or simply have taken classes that will not help them progress toward graduation. This means that when high school students are picking their dual credit classes, they should do so in a thoughtful manner—not simply take any and all dual credit offered at their school. There are times when it is appropriate to just take the course for High School Credit.
Discussion

As students take more dual credit, thoughtful consideration of which courses should be taken needs to occur. Some classes are not reducing time to degree, but rather are unnecessary for the path the student chooses. Universities need to consult with local high schools to educate parents, and students on this matter. Implications for program development need to be considered. As an increasing number of students come in with dual credit, a reduction in lower level courses may occur for programs. For example, Psychology at our university offers fewer sections due to so many students coming in with Dual Credit or AP classes. Faculty need to consider programs that can be put in place to help incoming students maximize the benefit of having taken dual credit courses—for some it is a true advantage. More research needs to clarify whether and how we can ensure dual credit is advantageous to students.

References


In recent years, there have been demands to increase retention and graduation rates in higher education. There are, of course, many ways to increase these rates, but one such way is to focus on course-level efforts. Among the strategies for doing so, learning analytics offers much promise. Briefly, learning analytics is “the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs” (Long & Siemens, 2011, p. 32).

In a recent Horizon Report (Johnson, Smith, Willis, Levine, & Haywood, 2011), it is suggested that the use of learning analytics in higher education is on the rise. But much of the recent work has focused on “big data”, which typically includes admissions or institutional data. Recent efforts, such as the Educational Advisory Board (https://www.eab.com/), focus on collecting and analyzing all of the possible existing data on students in a particular major, for example, and using it to make predictions about student success and retention. These large-scale efforts are necessary and commendable, but they do not necessarily speak to what individual faculty can do in their courses. In fact, faculty can make use of statistics available in their Learning Management System (LMS) to make predictions about student performance, as well to monitor student progress in their courses.

Data from students (N = 28) in two online, introductory psychology courses were mined from the course LMS. Specifically, behavioral (e.g., number of times accessed syllabus, number of forum posts read) and performance (e.g., number of emails sent by student, grades) data were analyzed. The results showed that performance early in the course and later in the course is strongest predictor of overall course performance. The best predictors of early performance are performance variables rather than behavioral ones. The best predictors of overall performance are performance variables and not behavioral ones.

These results are discussed in terms of the ease with which faculty can make use of learning-analytic data to help predict student performance. More importantly, data such as these can be used to alert students early in the course that they need to seek guidance on how to change behaviors that will lead to success in the course.
Learning Analytics: Predicting Student Performance
Beth Dietz
Department of Psychology
Miami University

Abstract

Learning analytics refers to the use of data to understand and optimize student learning. In addition to an overview of learning analytics, this presentation provides a report of how learning analytics was used to help predict student performance in an introductory psychology course.

Introduction

In recent years, there have been demands to increase retention and graduation rates in higher education. There are, of course, many ways to increase these rates, but one such way is to focus on course-level efforts. Among the strategies for doing so, learning analytics offers much promise (Dietz-Uhler & Hum, 2013). Briefly, learning analytics is “the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs” (Long & Siemens, 2011, p. 32).

In a recent Horizon Report (Johnson, Smith, Willis, Levine, & Haywood, 2011), it is suggested that the use of learning analytics in higher education is on the rise. But much of the recent work has focused on “big data”, which typically includes admissions or institutional data. Recent efforts, such as the Educational Advisory Board (https://www.eab.com/), focus on collecting and analyzing all of the possible existing data on students in a particular major, for example, and using it to make predictions about student success and retention. These large-scale efforts are necessary and commendable, but they do not necessarily speak to what individual faculty can do in their courses. In fact, faculty can make use of statistics available in their Learning Management System (LMS) to make predictions about student performance, as well as to monitor student progress in their courses.

Method

All students (N = 28) from two sections of Introduction to Psychology (online) agreed to allow their performance and behavioral data to be used.

In addition to a Getting Started Module, the course was composed of 10 modules. Each module included a critical thinking assignment, a mini project, and a quiz. There were three exams, as well as a final exam.

Two types of data:

Behavioral: Data generated from Course Management System (CMS) (e.g., number of times accessed syllabus, number of forum posts read)

Performance: Data generated by student (e.g., number of emails sent by student), and grades

Results

The results showed that performance early in the course and later in the course is the strongest predictor of overall course performance. The best predictors of early performance are performance variables rather than behavioral ones. The best predictors of overall performance are performance variables and not behavioral ones.

Overall Performance (Final Grade)

<table>
<thead>
<tr>
<th>Early Predictors (First Quarter Variables)</th>
<th>All Predictors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 2 Grade</td>
<td></td>
</tr>
<tr>
<td>Third Quarter Mini Project Grade</td>
<td></td>
</tr>
<tr>
<td>Exam 1 Grade</td>
<td></td>
</tr>
<tr>
<td>Fourth Quarter Number of Forum Posts Read</td>
<td></td>
</tr>
<tr>
<td>Third Quarter Quiz Grade</td>
<td></td>
</tr>
<tr>
<td>Fourth Quarter Critical Thinking Grade</td>
<td></td>
</tr>
<tr>
<td>Mini Project Average Grade</td>
<td></td>
</tr>
</tbody>
</table>

F(7,28) = 582.896, p < .001, R² = .995

F(1,24) = 99.38, p < .001, R² = .926

Exam Performance

Module 3 Mini Project Grade
Module 1 Critical Thinking Grade
Module 1 Mini Project Grade
Quiz 2

F(2,22) = 18.184, p < .001, R² = .760

Discussion

In terms of predicting overall course performance, performance early in the course and later in the course is strongest predictor.

The best predictors of early performance are performance variables rather than behavioral ones.

The best predictors of early and overall performance are performance variables and not behavioral ones.

Limitation: These data include students who generally succeeded (and remained) in the course.


Showing Up is a Quarter of the Battle: Class Attendance Predicts Exam Performance and Final Grades in Undergraduate Psychology Courses

Rebecca D. Foushee & Todd Hennessy
Lindenwood University

Presented at: Midwestern Psychological Association, 2016
For further information, contact: RFoushee@lindenwood.edu

Abstract

Previous research suggests that active student engagement in the educational process affects learning outcomes within university classroom contexts. We hypothesized that students with high rates of classroom attendance would demonstrate higher individual exam grade averages and final course grades than students with lower rates of attendance throughout each semester long course. For this study, we examined a comprehensive data set of attendance records from the 2005 – 2015 decade across different levels of psychology courses (i.e., general education and major courses) and categories of courses (i.e., both lower- and upper-division courses). We also explored the simple predictive validity of classroom attendance across this wide spectrum of classroom environments. Our analysis of archival attendance records and performance outcomes data from 601 students enrolled in 29 undergraduate psychology courses provides evidence that regular class attendance reliably and consistently predicts overall exam performance and final grade outcomes across a variety of contexts.
Showing Up is a Quarter of the Battle: Class Attendance Predicts Exam Performance and Final Grades in Undergraduate Psychology Courses

Rebecca D. Foushee & J. Todd Hennessy
Department of Behavioral Sciences, Fontbonne University, 6800 Wydown Blvd., St. Louis, MO U.S.A.

ABSTRACT

Previous research suggests that active student engagement in the educational process affects learning outcomes in university classroom courses. As a result, active attendance rates and performance outcomes data from 608 students enrolled in 20 undergraduate psychology courses during the 2005–2015 decade provide evidence that regular class attendance reliably and consistently predicts improved performance and final grade outcomes across a variety of contexts.

INTRODUCTION

Previous research investigating the role of regular attendance in university courses suggests that attending classes is a regular and positively impacts learning outcomes and is associated with higher levels of class performance (Buckholtz, D., & Collard, S. J., 1986; Caudill, R. S., & Kunkel, J. T., 2013; Snyder et al., 2014; Thakur, P., & Cook, J., 2017; Van Nek, J., 2002; Thakur, P., & Cook, J., 2015). It has been found that students who regularly attend a psychology course display improved performance throughout the semester (Golding, 2011). It is important to note that regular attendance in large psychology lecture courses is associated with improved performance, regardless of whether or not attendance policies are implemented or enforced. Students must attend class to perform well in psychology courses.

RESULTS

In this archival research project, we examined attendance and course performance data from a sample of N = 608 students enrolled in 20 different psychology courses taught at a small Midwestern liberal arts university during the decade spanning 2005–2015. We examined class attendance data for each course, including the number of classes attended, the number of classes missed, and the percentage of attendance. We also examined the relationship between class attendance and course performance, including the number of exams taken, the number of exams missed, and the final grade achieved.

DISCUSSION

Results from this past study are consistent with previous research that suggests regular class attendance is significantly positively associated with high levels of academic achievement. Importantly, the data reported here are consistent with the existing literature examining the effects of regular class attendance on course outcomes. Our data provide additional evidence that brings the classroom to the forefront during a semester or course, resulting in higher grades and greater performance. This suggests that regular class attendance is a critical factor in achieving success in psychology courses. In other words, simply showing up to class can be a key factor in improving your overall grade in psychology courses.
Big Five Personality Traits and Teaching Enjoyment Predict Teaching Performance

Meera Komarraju, Stephen J. Dollinger, and Vilosh Veeramani
Southern Illinois University Carbondale

Presented at: Midwestern Psychological Association, 2016
For further information, contact: meerak@siu.edu

Abstract

Teaching assistants (TAs) perform an important instructional role in college classrooms. Using the Big Five personality traits and social learning conceptual framework and a multimethod approach we investigated the power of the Big Five personality traits (self-reported and perceived by others) and teaching enjoyment in predicting TAs’ performance ratings by students. Data (for 66 TAs) were obtained from self-reports of teaching enjoyment (14-items) and Big Five traits (10-items, Gosling, Rentfrow, & Swann, 2003), peer ratings of TAs on the Big Five, and performance ratings from course evaluations. Hierarchical regression analyses revealed self-report traits (extraversion, neuroticism), peer ratings (neuroticism), and teaching enjoyment predicted incremental variance in performance ratings. TAs who are extraverted, truly enjoying the teaching experience and are also viewed as being calm and emotionally stable perform more effectively. TA training programs could consider ideas--such as self-relaxation before entering the classroom--that might help translate traits to teachable skills.
Abstract

Instructors have been using collaborative group activities in the classroom for years, and research shows that use of groups leads to higher quality of work, improved retention of material, and improved student relationships (Hsiung, 2012, Johnson & Johnson, 1989). One aspect of successful groups is trust; however, there is limited research that has assessed trust in student learning groups. The current study incorporated semester-long assessments of 327 students in multiple psychology courses that all used groups as a major learning component. Results showed that students who perceived themselves as similar to their group members had higher levels of trust in the group, and higher levels of trust positively correlated with satisfaction with the group experience and motivation to work in groups again in the future. Trust did not correlate with course performance, however. Instructors should work to build group members’ trust in each other to improve experiences with collaborative activities.
Building Successful Groups for Collaborative Learning Activities: The Importance of Trust

Emily Stark & Andrea Lassiter
Minnesota State University, Mankato

METHODS
Participants: 327 students enrolled in a psychology course that incorporated discussion or project groups
- 73% Female
- 55% White/Caucasian
- M Age = 21.8, SD = 1.7
- Data from 4 different courses were combined
- 138 Freshmen, 115 Sophomores, 109 Juniors, 14 Seniors

Materials and Procedure:
- Setting of Semester:
  - Discussions / Project groups: All groups were created by the instructor at the beginning of the semester through random assignment.
  - Perceived Similarity: Participants rated how similar they thought they were to their group members on 14 different traits, including values, goals, personality, work ethic, etc. (Clark, 2001, for full measure). All responses were averaged to form an overall perceived similarity measure.
- Throughout the Semester:
  - Group Projects: Groups engaged in weekly discussions and also completed papers or projects, depending on the specific course.

RESULTS
1. Perceived similarity positively correlated with trust of group members (r = .28, p < .01).
2. Trust of group members positively correlated with satisfaction with group experience (r = .35, p < .01) and motivation to work in groups again in the future (r = .40, p < .01).
3. Trust of group members did not correlate with course performance (r = .04, p > .05).

RESULTS
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3. Trust of group members did not correlate with course performance (r = .04, p > .05).

REFERENCES

CONTACT
For more information, contact Dr. Emily Stark at Emily.Stark@msu.edu or Dr. Andrea Lassiter at Andrea.Lassiter@msu.edu

BACKGROUND
Active learning strategies are used in classrooms as a way to involve students in the learning process and improve retention of the material being taught. Often, active learning strategies involve students working in peer groups both in and out of class. Students and instructors have varying perceptions of the usefulness of collaborative or group work in class.

Benefits of Collaborative Work
- Higher grades on exams (Bakken, 2011)
- Improved retention of material (Johnson & Johnson, 1999)
- Deeper understanding of course content (Gaskill et al., 2011)
- Improved academic performance (Gaskill et al., 2011)

Negative Perceptions of Collaborative Work
- Students worry about showing group members on exams (Pappas & Monk-Furner, 2008)
- Students may need collaborative classroom work (Pappas & Monk-Furner, 2008)
- Current study: Only 34% of participants reported enjoying group work, 46% had a positive experience with group work

How can instructors improve student experiences and performance in collaborative classroom groups?

- Establishing Group Trust
- High Levels of Trust

Goal: Extend research on the effects of trust on group satisfaction and performance to classroom groups.

We expect that groups with greater levels of perceived similarity to their group members at the beginning of the semester will show higher levels of trust, and that high levels of trust will result in improved course performance and increased satisfaction with the group project, as well as increased motivation to work in groups in the future.

RECOMMENDATIONS
Instructors should work to build trust among members of collaborative groups.

- How to build trust:
  - Time for introductions
  - Clear and well-defined instructions and grading information
  - Opportunities to discuss conflict, activity and collaboratively address concerns
  - Develop and enforce penalties for social isolation or individual failure to meet group expectations
  - Encourage groups to discuss potential roles and expectations for each group member

- If trust is based on perceived similarity, does this disadvantage non-traditional and minority students?
- More research is needed on developing trust in classroom groups.
The Psychology Capstone as an Interdisciplinary Course: A Case Study

Kristin M. Vespia
University of Wisconsin-Green Bay

Presented at: Midwestern Psychological Association, 2016
For further information, contact: vespiak@uwgb.edu

Abstract

Psychology capstone courses are designed to provide students with culminating, integrative experiences to their education. This poster describes an interdisciplinary capstone class in the major, including its development; departmental and institutional learning objectives; specific pedagogical and evaluation strategies; and student and instructor responses to the experience. The course, Explorations of Madness, examined mental illness from multiple perspectives. Students responded positively to the content, format, and pedagogy. Many comments also suggested a more complex and complete understanding of specific topics and/or of the field as a whole.
Assessment of Career Development Outcomes in a Core Psychology Class

Kristin M. Vespia, Haily Hummelmeier, and Mackenzie Wink
University of Wisconsin-Green Bay

Presented at: Midwestern Psychological Association, 2016
For further information, contact: vespiak@uwgb.edu

Abstract

One of APA’s (2013) learning outcomes for psychology majors is professional development, which includes career-related knowledge and behavior. We review an intervention that infused relevant career material and activities into a core psychology class, share assessment results from multiple semesters, and describe how assessment will inform future efforts. Preliminary analyses suggest students: a) see value in this approach, and b) report making progress on career-related goals they set during a semester.
How to Put on a Successful Conference Showcasing Student Research and Creativity

*Diane E. Wille and Todd M. Manson*
*Indiana University Southeast*

Presented at: Midwestern Psychological Association, 2016
For further information, contact: dwille@ius.edu

Abstract

As a next step to encouraging and supporting student research and creative work, IU Southeast holds a campus-wide conference each spring showcasing such work. The 2016 conference included over 200 presentations (verbal or poster), over 275 presenters, and 58 faculty research mentors. Mentors were surveyed and 93% agreed that the conference is a valuable contribution to the university and helps students understand their research and develop presentation skills. Student participants were also surveyed and over 80% agreed that they enjoyed participating in the conference and that the experience helped give them a better understanding of their research and helped them learn presentation skills. This poster provides suggestions for starting and holding a successful conference.
Abstract

How can educators improve student outcomes using testing effects without the high investment of time and labor associated with standard quizzing? Performance in six undergraduate courses was assessed following four quiz conditions. The four conditions represented types of quizzing that can be incorporated into teaching formats and included two conditions in which the students wrote the quiz questions. Students reported that quizzing increased attendance, decreased anxiety related to exams, and encouraged use of notes. In contrast, results showed student-generated quiz questions tended to be item specific and were associated with decreased exam performance compared to no quizzing. The decreased performance on exams following student written questions may be explained by retrieval induced forgetting of information related to item specific questions (Little et al., 2012). These findings suggest that recommendations for educators to utilize quizzing to improve student outcomes should be made with caution.
Classroom Behavior and Non-Cognitive Factors Related to Course Success for Potential Early Identification of Students Who Need Teacher Intervention

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University of Kentucky

Presented at: Midwestern Psychological Association, 2016
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Abstract

Examination of class behavior and non-cognitive measures in university students enrolled in an introductory psychology course revealed factors related to course success. Participants in this study (N = 103) were enrolled in a 4-credit course that included a lecture component and four affiliated laboratory sections (n = 23-28 each). Results indicated that Expected GPA scores and completion of an out-of-class assessment within the first two weeks of class significantly correlated with first test scores. ACT scores, Lab participation scores, and completion of out-of-class assessments early in the course significantly predicted final grades. Academic preparation and classroom behavior are two aspects of student performance to consider when designing an early intervention program. ACT Scores, congruent with High School GPAs, can identify a student who might be at risk for struggling. Participation and engagement in class activities will also indicate whether a student is on the path to success or not.
Classroom Behavior and Non-Cognitive Factors Related to Course Success for Potential Early Identification of Students Who Need Teacher Intervention

Project Description
Special sections of introductory psychology, with a large proportion of first-generation students, were offered in Fall 2015 at the University of Kentucky. These students tend to perform more poorly than other students in many classes during their first year, including introductory psychology (Mitchell, 1997; Riehl, 1994). Students enrolled in a common lecture, taught by the primary instructor twice weekly. In addition, each student enrolled in one of four laboratory sections (n < 30) taught by a graduate teaching assistant every other week. Our aim was to discover early indicators that predict performance in an introductory psychology course so that appropriate interventions could be employed in future courses.

Data Collection

- Academic Preparation
  - ACT Scores
  - High School GPA
- Motivation
  - Growth Mindset
  - Learned Optimism
  - Expected GPA
- Behavior
  - Assessment Scores
  - Lab Scores

Measures

- Growth Mindset: belief that talent can be developed (Dweck, 2003)
- Learned Optimism: cultivated belief that deficit is a temporary setback (Seligman, 2001)

Academic Preparation
- Expected GPA: GPA students self-reported they expected to achieve at the end of the Fall semester
- Assessment Scores: scores earned for completion of out-of-class assignments

Hypotheses
1. Prior teaching experience led us to hypothesize that completion of early assignments and greater participation in laboratory discussions early in the course would correlate with course performance.
2. We hypothesized that measures of motivation, especially Growth Mindset, would also correlate with early course performance (Dweck, 2010, 2012).
3. Literature reveals ambivalence of the evidence regarding the predictability of high school grades and standardized test scores as indicators of overall college performance (Hoffman, & Lowitzki, 2005; Komarraju, Ramsey, & Rinella, 2013; Sawyer, 2013). We expected these variables would correlate with course performance.

Correlations

<table>
<thead>
<tr>
<th>Academic Preparation</th>
<th>ACT Score</th>
<th>High School GPA</th>
<th>First Gen Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>.335**</td>
<td>.396**</td>
<td>-</td>
</tr>
<tr>
<td>Midterm Grade</td>
<td>.545**</td>
<td>.547**</td>
<td>-</td>
</tr>
<tr>
<td>Final Grade</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Motivation</td>
<td>Total Optimism</td>
<td>Self-Control</td>
<td>Growth Mindset</td>
</tr>
<tr>
<td>Test 1</td>
<td>-</td>
<td>-</td>
<td>.222*</td>
</tr>
<tr>
<td>Midterm Grade</td>
<td>-</td>
<td>-</td>
<td>.147*</td>
</tr>
<tr>
<td>Final Grade</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Classroom Behavior</td>
<td>Expected GPA</td>
<td>Assessment Score</td>
<td>Lab Score</td>
</tr>
<tr>
<td>Test 1</td>
<td>.328**</td>
<td>.366**</td>
<td>.233*</td>
</tr>
<tr>
<td>Midterm Grade</td>
<td>-</td>
<td>.487**</td>
<td>.598**</td>
</tr>
<tr>
<td>Final Grade</td>
<td>-</td>
<td>.708**</td>
<td>.736**</td>
</tr>
</tbody>
</table>

Test 1 Success Factors
- First Gen Status -
- Residency -
- First Assessment t(91) = -3.38
  \( p < .01 \)

Mediation Analysis

\[ \text{ACT Score} \rightarrow \text{Expected GPA} \rightarrow \text{Final Grade} \]

\[ \text{ACT Score} \rightarrow \text{High School GPA} \rightarrow \text{Final Grade} \]

Multiple Regression: Final Grades

<table>
<thead>
<tr>
<th>ACT Score</th>
<th>High School GPA</th>
<th>Growth Mindset</th>
<th>Expected GPA</th>
<th>Lab Score</th>
<th>Assessment Score</th>
<th>Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>.007*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.001*</td>
<td>.004*</td>
</tr>
</tbody>
</table>

F(6, 47) = 18.99
\( p < .01, R^2 = .71 \)

Conclusion

Academic preparation and classroom behavior are two aspects of student performance to consider when designing an early intervention program. ACT Scores, congruent with High School GPAs, can illuminate a student who might be at risk for struggling. Participation and engagement in class activities will also indicate whether a student is on the path to success or not.
A shared concern among many faculty and students is that performance on exams might not accurately reflect what students know (Vander Schee, 2013). If factors that are not relevant to the desired learning outcomes affect exam performance, the validity of exam scores would be compromised. A plausible factor that could affect performance is the ordering of items within exams. Exam question order has the advantage of being relatively simple to change. Thus, if there are potential benefits to ordering questions in particular ways, instructors could implement these changes with minimal effort. Balch (1989) found that placing questions in the same order that content was covered in class produced higher scores on multiple-choice exams. However, the results of other studies did not reveal significant effects of sequential question ordering (Perlini, Lind, & Zumbo, 1998; Tal, Akers, & Hodge, 2008). Perlini et al. (1998) also examined the effect of ordering questions in terms of difficulty: easy-to-difficult, difficult-to-easy, or randomly. Presumably, higher levels of anxiety could be countered by presenting less difficult items first, allowing students to relax and perform better on remaining items. Perlini et al. did not find any effect of the order of questions. Similarly, Weinstein and Roediger (2012) found that, although arranging exam items from easy-to-difficult (versus difficult-to-easy) led participants to be more optimistic about their performance, their actual performance did not differ as a function of the order of item difficulty. Likewise, Vander Schee (2013) found that ordering test items based on their difficulty level did not have an effect on student performance.

Hypothesis
Previous studies have examined effects of test question ordering in a variety of ways, but have not specifically examined the effect of ordering the items so that the first few questions are the most difficult or easy. We extend previous research by examining the effect of the first five exam questions being difficult or easy. We predicted that students completing an exam that begins with easier questions would obtain higher overall exam scores than those completing an exam that begins with difficult questions.

Method
We analyzed data from students enrolled in sections of two face-to-face psychology courses (General Psychology and Lifespan Development) taught by three different instructors at a midsized, midwestern U.S. university. The sample from General Psychology included 164 students across four sections, while 117 students in two sections of Lifespan Development participated.
Instructors administered the exams in class using their normal procedures. However, we only analyzed data from students who consented to the use of their exam scores for research purposes. Within each class, the instructor constructed two versions of the exam. Both versions contained the same questions, but in one version the first five questions were easy and in the other version the first five questions were difficult. The questions in the middle of the exams were the same for both exam formats. Easy and difficult questions were selected based on item difficulty analyses from previous exams in the same course using the same questions. The five questions that had the lowest percentage of correct responses in previous semesters were identified as difficult, whereas the five questions that had the highest percentage of correct responses were identified as easy.

**Results**

Within each course, we compared mean percentage correct on the easy-first (EF) and difficult-first (DF) versions of the exam. For the General Psychology classes, the Levene’s test indicated a violation of homogeneity of variance. An independent-samples $t$-test correcting for unequal variances indicated no significant difference in mean exam scores based on question order, $t(155.41) = 1.22, p = .22, d = .19$. For the Lifespan Development courses, the independent samples $t$-test indicated no significant difference in mean exam scores based on question order, $t(115) = 0.90, p = .37, d = .17$.

**Discussion**

Although mean exam scores were numerically lower when the first five questions were difficult, the difference between easy-first and difficult-first versions of the exams was not significant. As the sample sizes were reasonably large, it is unlikely that the lack of significant differences was due to low power. Nevertheless, the results should be interpreted with caution as our analyses were limited to data collected from students enrolled in courses at one university taught by three different instructors. It is possible that exam question order could affect performance in different types of classes, for different types of exams, and with different populations of students. However, our results are consistent with those of Perlini et al. (1998), who placed all items in order of difficulty, not just the first five items. It may be useful in future research to explore how individual differences relate to manipulations such as changing the sequence of exam items. In particular, students who are more anxiety-prone might be more likely to benefit, in terms of their exam performance, from such a manipulation. The present findings suggest that beginning an exam with easier questions does not have any influence on exam scores. These results might be reassuring to instructors who attempt to discourage student cheating by creating multiple versions of exams through randomizing the order of items (see Vander Schee, 2013), as they suggest that instructors need not be too concerned about the impact of the order of exam questions on student performance.

**References**


Skills in Scientific Methodology: Are Faculty and Student Perceptions Related?

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Presented at: American Psychological Association, 2016
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Amidst the growing discussions regarding the relevance of a college degree, there has been a move towards emphasizing the development of skills among psychology majors (Strohmetz et al., 2015). Investigating introductory psychology students’ expectations for level of skill development in the psychology program as a whole, Gaither and Butler (2005) found that students had relatively high expectations for the development of research-related skills within the psychology major. However, Martini, Judges, and Belicki (2015) suggested that students’ ability to define the components of skills such as communication was quite limited.

In The Undergraduate Psychology Curriculum: Call for a Core, Dunn et al. (2010) proposed scientific methods as a unifying foundation for psychology curricula. Based on examination of a diverse sample of curricula from 374 schools in 48 states, Stoloff et al. (2010) reported that virtually all schools required courses involving scientific methodology. The outcomes of methodology courses relate most directly to Goal 2, Scientific Inquiry and Critical Thinking, of the APA Guidelines 2.0 (APA, 2013) but also encompass several elements of Ethical and Social Responsibility (Goal 3), and Communication (Goal 4). Within the context of research methodology courses, there is a gap in the literature regarding the relative importance of specific skills and faculty and students’ perceptions of the extent to which students learn these skills.

Our study may serve as a first step toward filling this gap. We adapted multiple items from the Academic Skills Inventory-Revised (Perry, Faust, & Elicker, 2011) to create a survey that focused on specific topics in design and statistics. Students and faculty completed the same survey, rating each item on importance (IM), emphasis (EM), and learning (LE). The goal of our study was to assess the similarity in rating among the three scales for students and for faculty and to examine the relationship between student and faculty ratings on each of the scales.

Method
At Kennesaw State University, we teach a two-semester research sequence that combines research design and statistics. In Research Methods and Statistics, instructors emphasize non-experimental methodologies and descriptive statistics. In Experimental Design and Analysis, instructors focus on hypothesis testing, experimental methodologies, and inferential statistics.

We asked students \(N = 81\), 51 Research Methods and Statistics, 30 Experimental Design and Analysis) and faculty \(N = 11\), six Research Methods and Statistics, five Experimental Design and Analysis) from research sequence courses to complete the online survey, which included a list of nine methodology skills and 19 statistical skills adapted from Perry et al.’s
Participants rated each item on a scale ranging from 1 (not at all) to 10 (very) on each of three dimensions: importance, emphasis in current course, and how well the skill was learned.

**Results**
First, we examined whether both students’ and instructors’ ratings of IM, EM, and LE were related. As shown in Table 1, for both the Research Methods course and the Experimental Design course, students’ ratings among the three scales (IM, EM, and LE) were positively correlated (all ps < .01). Instructors’ ratings were also positively correlated between IM and EM and between EM and LE (both ps < .05), but there was no significant correlation between IM and LE in either course.

Second, we investigated overall mean differences between students’ and instructors’ ratings on IM, EM, and LE. As shown in Table 2, within both the Research Methods course and the Experimental Design course, students’ ratings on the three measures were significantly higher than instructors’ ratings on all scales (all ps < .05) except IM in the Research Methods course. In the Research Methods course, the largest discrepancies were observed in the statistics area. In the Experimental Design course, the largest discrepancies were observed in the design area.

Finally, we examined differences among the overall means within students and within faculty for IM, EM, and LE. In the Research Methods course, for design items, both students and faculty rated IM and EM higher than LE (all ps ≤ .05). For statistics items, students rated IM and EM higher than LE (all ps ≤ .05). In the Experimental Design course, for design items, both students and faculty rated IM higher than LE (both ps ≤ .05). For statistics items, students rated IM and EM higher than LE, and faculty rated IM higher than both EM and LE (all ps ≤ .05).

**Discussion**
Positive correlations among ratings on the three dimensions generally indicated a consistent correspondence. However, there was a nonsignificant relationship between IM and LE ratings for faculty. Clearly faculty do not believe students are learning the content that faculty think is important. This finding may encourage them to reconsider their approach to teaching some of the topics.

Examination of mean differences revealed discrepancies between students’ and instructors’ perceptions. For example, students’ ratings of learning were consistently higher than faculty ratings. Participants were surveyed at the end of the semester, so both students and faculty had multiple grades to consider when judging the level of learning. Weakness in a skill may hamper students’ accurate metacognitive assessment of related knowledge resulting in overestimation (Dunning, Johnson, Ehrlinger, & Kruger, 2003; Kruger & Dunning, 1999). Another possibility is that faculty had more stringent criteria for learning than did students, or perhaps students perceived a lower initial level of knowledge than faculty did, which led students to perceive a greater change from the starting point.

Beyond expanding students’ general content knowledge in individual courses, educators are placing greater emphasis on students’ skill development in their major. Research methods courses are part of nearly every psychology program (Stoloff et al., 2010) and inherently include a number of skills for students to acquire. This study is the first step in determining 1) how consistent faculty perceptions of importance, emphasis, and learning are for core skills within their own courses and 2) the relationship between faculty and their students’ perceptions for these skills. Findings should be interpreted cautiously.
considering small sample size and volunteer bias. Future research might examine other topics within research methods courses (e.g., communication) and explore possible differences in emphasis across course sections and the influence of such differences on learning.

References
Table 1

Correlations Among Ratings of Importance, Emphasis, and Learning

<table>
<thead>
<tr>
<th>Area</th>
<th>Research Methods</th>
<th></th>
<th>Experimental Design</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students</td>
<td>Instructors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance-Emphasis</td>
<td>.80***</td>
<td>.92***</td>
<td>.87***</td>
<td>.89*</td>
</tr>
<tr>
<td>Importance-Learning</td>
<td>.63***</td>
<td>.79</td>
<td>.85***</td>
<td>.82</td>
</tr>
<tr>
<td>Emphasis-Learning</td>
<td>.71***</td>
<td>.91*</td>
<td>.76**</td>
<td>.95*</td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance-Emphasis</td>
<td>.84***</td>
<td>.92***</td>
<td>.86**</td>
<td>.88*</td>
</tr>
<tr>
<td>Importance-Learning</td>
<td>.66**</td>
<td>.66</td>
<td>.89**</td>
<td>.83</td>
</tr>
<tr>
<td>Emphasis-Learning</td>
<td>.71**</td>
<td>.85*</td>
<td>.77**</td>
<td>.92*</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01

Table 2

Differences in Ratings of Importance, Emphasis, and Learning Between Students and Instructors

<table>
<thead>
<tr>
<th>Area</th>
<th>Research Methods</th>
<th></th>
<th>Experimental Design</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students</td>
<td>Instructors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance</td>
<td>8.66(1.32)</td>
<td>7.81(1.22)</td>
<td>1.49(0.65)</td>
<td>8.88(1.33)</td>
</tr>
<tr>
<td>Emphasis</td>
<td>8.57(1.21)</td>
<td>7.43(1.22)</td>
<td>2.18*</td>
<td>9.01(1.01)</td>
</tr>
<tr>
<td>Learning</td>
<td>7.95(1.56)</td>
<td>6.15(1.37)</td>
<td>2.71**</td>
<td>8.51(1.56)</td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance</td>
<td>8.21(1.42)</td>
<td>6.30(2.36)</td>
<td>1.94(1.24)</td>
<td>9.03(1.24)</td>
</tr>
<tr>
<td>Emphasis</td>
<td>7.94(1.57)</td>
<td>4.75(0.89)</td>
<td>4.86**</td>
<td>9.00(1.13)</td>
</tr>
<tr>
<td>Learning</td>
<td>7.22(1.84)</td>
<td>3.88(0.79)</td>
<td>4.36**</td>
<td>8.41(1.77)</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01
From Passive Learner to Active Participant: Examining the Effectiveness of Inter-Teaching

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Psychology’s Burning Questions

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*Middle Georgia State University*


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Russell Crowe is a Better Teacher than You: How Movies Outperform Lectures and Paper Assignments

Russell E. Phillips III
University of Pennsylvania at Greensburg

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Students of Positive Psychology: Are They Flourishing?

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Rollins College

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Improving Undergraduates' Understanding of the Skill-based Learning Fostered by Course-based Assignments

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BACKGROUND
- Scholarship of "teaching and learning [SOTL] research has recently focussed on the extent to which teaching and learning outcomes are an effect driven by government accountability initiatives.
- Many of the learning outcomes discussed in the literature and the IAR document to be transferable skills that empower students to graduate (e.g., critical thinking, teamwork, leadership, APA, 2014).
- However, there is some evidence that these skills are not being explicitly taught or discussed in university contexts (Mentri, Jajuga, & Halik, 2015).
- Moreover, students do not appear to "test" skill development by something that instructors are trying to promote with their assignments (Hoffman, Rall, & Norton, 2015).
- Why is it important for students to recognize the skill-based learning that takes place through assignments?
  - Students will be better able to connect course-based learning experiences to the skills described in job ads.
  - Students not engaged with course content will be better able to recognize long-term applicability of the assignment.

THE PRESENT STUDY
- The goal of the present study was to examine whether explicit presentation of skill-based learning associated with an assignment would have students perceive the assignment as being relevant to their future career goals.

METHOD
Participants
- First-year psychology majors (N = 137; 143 females, 44 males, 1 Transgender, 1 Unspecified).
- Age range: 17 to 47 years (M = 23.53, SD = 4.28).
- Completed the survey as a part of a course-related project.

Measures and Procedure
- Participants were randomly assigned to either a skills (n = 104) or no skills (n = 33) condition.
- Both conditions read two identical assignment descriptions/instruction in online survey tool (Qualtrics), which included:
  1. "Design an essay analyzing a major shift in psychology (theory, method, methodology).
  2. "Write an argument about a famous person in psychology.

Reasons for Reference Ratings
- Qualitative responses regarding the reasons for the relevance ratings for the essay and Wikipedia assignments were coded into one of three primary categories: [a] usefulness (M = 3.54, SD = 1.25; p < .001), [b] academic relevance (M = 2.84, p < .001), [c] overall relevance (M = 2.84, p < .001).
- Reasons that refer to the assignment’s content or format.
- Reasons that refer to abstractable skills.
- Students could report more than one reason; up to four reasons were coded.

For all students, two scores were calculated:
- Number of codable responses related to the assignment content or format.
- Number of codable responses related to transferable skills.

Two independent samples t-tests indicated:
- Participants in the skills condition (M = 1.83, median) were more likely to make reference to skills than participants in the no skills condition (M = 1.0, median) when explaining their relevance ratings (t[136] = 4.31; p < .001; 95% CI for difference between means = [1.36, .59]).
- Participants in the no skills condition (M = 1.43, median) were more likely to make reference to the assignment content or format than participants in the skills condition (M = 1.01, median) when explaining their relevance ratings (t[43] = 1.49; p = .99; 95% CI for difference between means = [.24, .73]).

RESULTS
Manipulation Check
- A significant one-way ANOVA confirmed that participants in the skills condition were more likely than those in the no skills condition to report that instructor goals included fostering transferable skills (F[1, 137] = 27.32, p < .001).

Reference Ratings
- A 2x2 mixed model analysis of variance (ANOVA) was conducted on assignment relevance ratings, where condition (skills vs. no skills) was between-subjects and assignment (essay vs. Wikipedia) was within-subjects.
- Results indicated a significant main effect of condition (F[1, 137] = 3.89, p = .05), and the interaction between condition and assignment (F[1, 137] = 5.99, p = .02), 
- Participants in the skills condition (M = 3.50) reported that they had a greater relevance than those in the no skills condition (M = 3.12).
- The main effect of assignment (F[1, 137] = 5.99, p = .02, η² < .05), and the interaction between condition and assignment (F[1, 137] = 1.90, p = .21), η² < .05, were not significant.

DISCUSSION
- Our data support that making transferable skills explicit in assignment instructions can be helpful in promoting students’ awareness of the transferable skills that can be fostered through completion and perceptions of its relevance.
- The effect size observed was small, suggesting that simply putting this information in writing may not be sufficient to truly improve students’ understanding of course-based skill development.
- A more optimal strategy may involve a written explanation of the skills developed with assignment instructions, coupled with active examination of class.

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Claire Hooper, Camille Phillips, Dr. Leslie Angel, Dr. Terry Pettijohn II, and Dr. Andrew Terranova
Carroll College, Coastal Carolina University

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Enriching Psychology Courses: Using Hands-On Real World Application to Promote Reflective Learners

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Christopher Newport University

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Gluttons for Punishment? The Impact of a Group Project, Cumulative Exams, Reading Quizzes, and iClickers in a Class of 400 Introductory Psychology Students

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Gluttons for Punishment? The Impact of a Group Project, Cumulative Exams, Reading Quizzes, and iClickers in a Class of 400 Introductory Psychology Students

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Northern Arizona University

Background and Purpose

Student success in introductory psychology has implications not only for future academic success, but also for the general welfare of the students. To address the pedagogy of teaching Psyc 101, the use of quizzes and cumulative examinations has been shown to significantly improve student learning and long-term retention of information (Agger et al., 2011; Coates et al., 2010). Grading methods used to reflect what instruction was intended to be learned and include frequent, graded assessments that measure a variety of skills.

The current study evaluated the impact of quizzes being used in introductory psychology courses with the goal of increasing student effectiveness in our large sections and promoting faculty collaborative effort.

Method

Participants:
A total of 400 students (107 females, 293 males) were enrolled in the 24 sections of Psyc 101 that were used for this study. All students were enrolled in the course during the fall semester of 2016.

Materials and Procedure

The materials consisted of the classroom lectures, assignments, and examinations that were used. Most of the course requirements were the same between sections, which were 1) academic integrity (20%), 2) attendance (20% based on attendance at least 71% of the total number of classes), 3) research component (50%), 4) four practical applications assignments (50%), 5) four exams (50% cumulative), and 6) a final exam (50% cumulative). All exams were administered online using multiple-choice questions (with questions using 5-6 questions per exam, and short answer questions, and 7) extra credit (up to 2%).

Two of the course requirements were experimentally manipulated between the two sections.

(a) Group Project (20%): Students worked individually or in small groups (2-5 students) to create a product related to a myth of psychology. Students that worked in groups also completed a group evaluation. In addition, students completed 4 short answer questions assessing the myth and their learning from the project. Both aspects of the project were graded using the same rubric.

(b) Cumulative Exams (50%): Final exam was administered in class, and students were required to have completed all previous exams before the final exam was administered. A final exam was administered in class, and students were required to have completed all previous exams before the final exam was administered.

Regression Analysis

The multiple linear regression models were statistically significant (p = 0.03), showing that the predictors significantly influenced the course mean grades (R² = 0.19, p = 0.03) (Figure 2). Although, overall, the achievement of quizzes was not significantly associated with the mean ratings for both sections, corresponding to an “average” response.

Conclusion

The preliminary findings of this study provide insights into the impact of various teaching practices on the performance of introductory psychology students with a group project and cumulative exams learning the greatest potential to improve student learning.
Mindset and Student Attitudes Toward Feedback

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The effect of publisher provided intermittent quizzing on student exam scores

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Introduction

While professors typically assign readings to enhance or clarify concepts outlined in classroom lecture, students often seem unconvinced that time spent reading the text will have any benefit to them. In fact, most students admit that they do not do assigned readings or delay them until just prior to test time (Johann & Kivelmark, 2006; Jahan & Lopate, 2013).

One way to encourage student textbook reading is to employ intermittent quizzing of material throughout the semester which forces them to keep pace. Research indicates that this type of intermittent testing can help students perform better on exams. However, designing, scoring, and recording multiple quizzes in a semester can be time consuming.

The advent of on-line textbooks has brought with it new e-textbooks for use with our students. One of the particularly potential uses is quizzing that students can engage in after reading assigned sections of a text. The quizzes are scored and unmasked automatically for viewing by the student and the professor.

The purpose of the current research is to add to the research base in order to help determine if intermittent quizzing provided by text publishers helps students’ performance on exams.

Methods

Thirty-one students in an Abnormal Psychology class purchased access to an e-text that included a short quiz after each module in each chapter. The quizzes were formatted such that students had three attempts to get their test score possible on each quiz. However, for the course, it was only required that students attempt each quiz. That is, if the first two quiz scores were not included in their grade, they just received a nominal amount of points for attempting them.

It was assumed that some students would simply complete the quizzes in a cursory fashion and others would take advantage of all three attempts and try to master the material. Our hypothesis was that those who mastered the quizzes and therefore, earned higher quiz scores would also score better on the course exams than those students who took the quizzes in a cursory fashion in order to earn their completion points but did not necessarily master the material at quiz time.

Results

Results suggest that early on in the semester, there was no significant relationship between chapter quiz scores and performance on the first exam. However, as the semester progressed, a significant positive correlation between quiz scores and performance on exams began to emerge.

One interesting trend can be seen in examining the descriptive statistics for the quizzes and chapter tests. Here, there was no variance to be first quiz, suggesting that students scored in a more linear fashion (perhaps reflecting a similar state of unpreparedness) and as the semester progressed, quiz scores improved more on average, while those unprepared scores were as the semester progressed. This may have contributed to the greater variance in scores across quizzes.

Discussion

Overall results indicate that, notwithstanding the first set of quizzes and first test, completing the on-line publisher provided quizzes did impact a student’s performance on the corresponding test in a positive and significant way. It is possible this is occurring because the quizzes require students to read and digest the test material.

This result is useful information for professors as they debate the use of quizzes in their courses. The fact that these quizzes are provided by and automatically graded by publishers promises a test that meets the test, effectively seamless and non-invasive. Moreover, they leave the professor free to engage in other aspects of course preparation and management. At the same time, students are grasping the material more completely.

One limitation of this research is also one of its strengths. That is, every student took the quizzes but were able to take them at a time, not a mastery and in the order they were able to take them and when they mastered them. This is a strength because it allowed comparisons between those who chose to work hard on them and those that did not.

However, another explanation could be that, perhaps the more conscientious students performed better on the quizzes and later better on the tests while they would have performed better on each method anyway due to their academic diligence. In future research, therefore, student level of conscientiousness could be measured to see if it better predicts test and quiz scores.

References


Acknowledgment

This study was made possible by Ontario’s MindTap which came bundled with Caudle and Barkis’ Abnormal Psychology (2nd Ed).

For more information

Contact Kim Metz at kmetz@walsh.edu
Are Open Educational Resources Effective in Teaching Introduction to Psychology?

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Presented at: Southeastern Psychological Association, 2016
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Abstract

Rising textbook costs are creating additional debt for college students and in some cases, are causing students to forgo purchasing a textbook (Mitchell, 2014). Open educational resources (OER), which are typically free or low-cost, have become an increasingly popular alternative to traditional paper textbooks. In this study, we examined perceptions and effectiveness of an OER in an introductory psychology course at a small, public university in Georgia. We compared 1) perceptions of the type of textbook students were using (perceptions of OERs among students using an OER and traditional paper texts among students using traditional paper texts) and 2) course performance (i.e., exam grades). First, we found that students preferred the textbook format they were given: Students who used the OER preferred using the OER to a traditional paper text, and students using a traditional paper text preferred using a paper text. Second, we compared exam grades across the two courses. Although initial differences were found, these differences were not statistically significant, t(64) = -1.329, p = .188. Implications for using OER in all disciplines are discussed.
Are Open Educational Resources Effective in Teaching Introductory Psychology?

Charles M. Huffman & Judy Orton Grisett
Georgia Southwestern State University

**Introduction**

A serious issue facing many contemporary college students is debt. The average student's amount of college debt after graduation is $33,000 (Debt.org, 2015), a significant financial burden students carry. In fact, for the first time, college graduates' student debt has exceeded credit card debt in the United States (Izzo, 2015). A part of student loans go to pay for textbooks. In 2014, college students spent an average of $1,250 per year on textbooks and supplies (College Board, 2015). Given the high textbook costs, and the fact that students are typically assigned to purchase several books each semester, this figure is not surprising.

As a result of increasing textbook costs, students have developed creative ways to avoid paying for a textbook, including sharing with a classmate, purchasing older editions, or not purchasing a textbook at all. These limitations can negatively impact students’ grades because they do not have access to course materials. In light of these negative implications of growing textbook cost, open educational resources (OER) have become increasingly popular in recent years. OER are learning materials that are available to students to use for free or at a very low-cost. They are often available under a creative commons license, which allows instructors to modify or remix the materials for their own use, thereby providing flexibility to the instructors using these materials. Large repositories, such as the Open Textbook Network (open textbook network.org), Merlot II (merlot.org, 2015), and OER publishing platforms, such as Oeropenstaxcollege.org provide a wide array of OER to educators and their students.

In the present study, we further investigate the use of OER in a college course by examining students’ academic performance, perceptions, and use of an OER textbook compared to a traditional publisher’s textbook. The study was carried in two introductory psychology courses taught by the same instructor at a regional, four-year university in the southeastern United States (student population of approximately 2700 students). The institution serves a number of low-income students (approximately 50% of students receive the Pell grant), a demographic typically disproportionately impacted by high textbook costs.

**Method**

**Participants**
Sixty students from two introductory psychology courses participated in this study (M (OER users) = 31; M(traditional textbook users) = 29). This included 23 males and 37 females, with an average age of 19.34 years (SD = 1.84 years). All students provided informed consent for their completion of the perceptions survey, and IRB approval was acquired.

**Materials**
Students in the OER course used Stangor’s Introduction to Psychology (2016) textbook. The text was available for students to download for free in an e-book format from the Staylor Foundation website (http://staylor.org). A link to the textbook was also provided in the course management platform Desire2Learn. The instructor did not make any modifications to the text. Students in the traditional publisher’s textbook course used Myers’s and DeWall’s textbook Psychology in Everyday Life, 3rd edition (2014). This textbook included approximately $100 at the school bookstore. Students in both courses were required to have their respective textbook.

**Survey**
We administered a 22-item survey to measure students’ perceptions and use of the OER and traditional publisher’s textbook. The survey was modified for each course, so that students answered questions regarding the material they used. In order to emphasize the no-cost feature of the OER, the OER survey used the phrase “free,” online textbook, whereas the phrase “traditional paper textbook” was used in the traditional publisher’s textbook survey.

**Procedure**
Textbook implementation. Textbook implementation and data collection were carried out in Spring 2015. Students using the OER could access the textbook from a hyperlinked link in the course syllabus and through the course management system.

**Results**

**Student Performance**
First, we compared the performance of students using an OER versus a traditional textbook by comparing total number of exam points across the two groups. Out of 400 total possible exam points, OER users earned an average of 273.26 total exam points (SD = 79.37) compared to 295.91 total exam points (SD = 67.68) among traditional textbook users. An independent group t-test revealed that this difference was not statistically significant, t(64) = 1.329, p = .186.

**Advantages of Traditional Text**

![Figure 1. Traditional and OER textbook users' perceived advantages of traditional textbook. Traditional textbook users: OER = OER textbook users.](image)

**Advantages of OER Text**

![Figure 2. Traditional and OER textbook users' perceived advantages of OER textbook. Traditional = traditional textbook users; OER = OER textbook users.](image)

**Discussion**

The purpose of this study was to examine students’ performance, perceptions, and use of an open educational resource (OER) textbook compared to a traditional paper textbook. Our results revealed that there were no differences in performance and use between students who used a traditional paper textbook and an OER.

In terms of student perceptions, however, our data were somewhat conflicting. Students who used an OER stated that they liked the material they were using compared to students using a traditional paper textbook; however, when asked to make a choice about their preference between an OER and a traditional paper textbook, students selected the test they were using. In addition, students who used an OER were more likely to want a traditional paper textbook in addition to the OER; and they rated the visual appeal of the textbook (e.g., layout, colors, cover) lower than students who were using the traditional paper textbook rated the paper textbook.

There were several limitations in the current study. First, the study was quasi-experimental, so it is not possible to draw causal conclusions; however, both courses were taught by a single instructor, at the same time, on alternating days of the week, which eliminated many factors as possible confounding variables. Second, our sample size was limited (N = 68), which affected the power of the statistical analysis. Third, these results only included one semester, which limits the scope of the findings.

The most perplexing finding was that students preferred whichever test they were assigned. That is logical for the students who used the free, OER test; however, why would students who paid $100 for a textbook, when offered the possibility of a free textbook, maintain a preference for the former? A likely explanation is based in behavioral economics, or the IKEA Effect, in which consumers place a higher value on something they partially created, or purchased. Thus, the perception of a student who purchases a textbook is that it must have more value than something that is free, because they purchased it.

The findings of this research have implications for several key stakeholders, including students, educators, and administrators. There was no difference in final grades between students who used an OER textbook versus those who used a traditional publisher’s textbook. Students can save on textbook costs, educators can use the materials in ways that best benefit their own course needs and teaching practices, and administrators in higher education may find OER appealing because of the possible increase in retention, progression, and graduation rates due to the lesser financial burden OER provide. In conclusion, OER can offer an efficacious, cost-effective set of tools for students in introductory Psychology.
In both the personal evaluation of their current professors and the selection of professors for potential classes to be taken in the future, college students use a variety of tools, including websites such as Rate My Professors.com (RMP). Using these tools, students rate their professors on qualities such as helpfulness, clarity, easiness, and attractiveness. Such ratings are indicative of whether or not students are satisfied with the education given by their professors. In addition, RMP allows users to assign a chili pepper to denote “hot” professors. Previous research has shown a positive correlation between attractiveness and perceived overall quality of instruction (Felton, Koper, Mitchell, & Stinson, 2008; Freng & Webber, 2009; Liu, Hu, & Furutan, 2013; Riniolo, Johnson, Sherman, & Misso, 2006). Plus, prior research has indicated that college students tend to rate male professors more favorably than female professors (Abel & Meltzer, 2007). Based on such findings, it was hypothesized that students would expect a higher quality classroom experience from professors indicated to be “hot” and male.

Participants in the current study included 223 undergraduate psychology students (80.40% female; mean age = 19.54 years) who completed a survey on demographic information and their ratings of expectations of a hypothetical professor based on online professor ratings (formatted to match RMP summary statistics) and three sample comments from supposed former students. Participants were randomly assigned to read
different versions of the RMP-type entry: male with a chili pepper, male without a chili pepper, female with a chili pepper, and female without a chili pepper.

Results of a multivariate analysis of covariance (MANCOVA) controlling for participant age and sex and including the dependent variables of expected enjoyment of teaching, physical attractiveness, enhancement of classroom activities, fairness, and clarity indicated a non-significant effect for sex but a statistically significant ($p < .01$) effect for having a chili pepper. Post-hoc tests using simple analysis of variance (ANOVA) suggest that participants expected “hot” professors to be more physically attractive, not surprisingly. Unexpectedly, professors with a chili pepper were expected to be lower in clarity ($p < .01$). There was no significant interaction effect for sex and “hotness.”

Results from the current study yielded results not entirely consistent with past studies. Gender bias was not supported, and evidence for a “hotness” bias actually suggested a bias against more attractive professors, at least in terms of expectations of clarity in teaching based on ratings provided by other students. Further research on these topics may allow for greater understanding of how students use sites like RMP, and how postings on such sites may bias students for or against certain professors with implications for enrollment and baseline attitudes of newly enrolled students.
The Effect of Professor “Hotness” and Gender on Student Ratings of Instruction
Kayla McCaleb, Sara Sohr-Preston, and Karen Phung
Department of Psychology, Southeastern Louisiana University, Hammond, LA

INTRODUCTION
In both the personal evaluation of their current professors and the selection of professors for potential classes to be taken in the future, college students use a variety of tools, including websites such as Rate My Professors.com (RMP).
RMP allows users to assign a chili pepper to denote “hot” professors.
Previous research has shown a positive correlation between attractiveness and perceived overall quality of instruction (Felton, Koper, Mitchell, & Stinson, 2008; Freng & Webber, 2009; Liu, Hu, & Furutan, 2013; Rinaldo, Johnson, Sherman, & Misso, 2006).
Plus, prior research has indicated that college students tend to rate male professors more favorably than female professors (Abel & Meltzer, 2007).
Based on such findings, it was hypothesized that students would expect a higher quality classroom experience from professors indicated to be “hot” and male.

METHODS
Participants (N = 223) were undergraduate Psychology students (80.43% female; 70.00% White; mean age = 19.54) who completed a survey on demographic information and their ratings of expectations of a hypothetical professor based on online professor ratings (formatted to match RMP summary statistics) and three sample comments from supposed former students.
Participants were randomly assigned to read different versions of the RMP-type entry: male with a chili pepper, male without a chili pepper, female with a chili pepper, and female without a chili pepper.

MANCOVA Main Effects Results
(Effects of sex/hotness on DVs as a group)

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Follow-Up Testing for Professor Hotness using ANCOVA

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RESULTS
Results of a multivariate analysis of covariance (MANCOVA) controlling for participants age and sex and including the dependent variables of expected enjoyment of teaching, physical attractiveness, enhancement of classroom activities, fairness, and clarity indicated a non-significant effect for sex but a statistically significant effect (p < .01) effect for having a chili pepper.
Post-hoc tests suggest that participants expected “hot” professors to be more physically attractive, but lower in clarity.
There was no significant interaction effect for sex and “hotness.”

CONCLUSIONS
Results from the present study were not entirely consistent with previous research exploring professor ratings.
Gender bias in interpreting RMP-type entries was not supported by the results of this study. Bias may be more evident in how students evaluate actual current professors.
As far as attractiveness is concerned, at least in one domain (clarity), results suggested that being viewed as a more attractive professor could actually be detrimental to student expectations and evaluations of teaching.
More research is warranted to allow for greater understanding of the uses and usefulness of student ratings of their professors and the implications of these (potentially) biased evaluations.
Stress and Turnover Intention in College Students: The Mediating Role of Burnout

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Presented at: Southeastern Psychological Association, 2016
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It is not surprising that both stress and burnout have received increasing attention in the area of occupational health psychology, given the impact they both have on individuals’ overall well-being. While the bulk of research on burnout has been conducted in the workplace, student burnout is a steadily increasing phenomenon (Campbell et al., 2013). It is estimated that college dropouts cost the country over $200 billion in lost lifetime earnings (Galbraith et al., 2012). Given the relevance of burnout in society, it is imperative to further explore the antecedents that lead to experiencing this phenomenon. Research findings suggest that the principal force prompting student burnout is stress, specifically, academic and general life stress (McGowan et al., 2006). Where academic stress refers to a strain that manifests as a result of the pressure students feel from school-related obligations, general life stress refers to all other pressures experienced daily (Price, 2007). In the academic setting, burnout is defined as a tri-factorial syndrome characterized by emotional exhaustion, a cynical attitude towards school, and a feeling of low efficacy (Schaufeli et al., 2002). While turnover intentions serve as a proxy for student withdrawal, turnover is the actual process through which individuals leave an institution or organization as a result of being dissatisfied with the environment, staff, or their own performance (McGowan et al., 2006).

Drawing from the conservation of resources (COR) theory, the purpose of the present study was to provide insight into how academic and general life stress impact emotional exhaustion and subsequent turnover intention in college students. According to the COR theory, if individuals experience a deficit of resources, they undergo stress (Hobfoll, 1989). Resources are those personal characteristics that safeguard well-being and are key to understanding the development of burnout as they offer insight on how to minimize its effects. Therefore, individuals who are more vulnerable to experiencing emotional exhaustion will be more likely to withdrawal from school.

The purpose of the present study was to provide insight into how academic and general life stress impact emotional exhaustion and subsequent turnover intention in college students. The sample consisted of 80 students drawn from a university in the Southeastern region of the country. Participants were 84% female, ranged in age from 18 to 46 ($M = 20.69$, $SD = 3.95$), and varied in ethnicity: African American (30%), Hispanic (27%), White, Non-Hispanic (22%), Afro-Caribbean (12%) and Other (9%). The majority of participants were sophomores in college (45%) and identified as full-time, traditional students (97%). Participants completed the Holmes and Rahe Stress Scale (Holmes & Rahe, 1967) used to measure general life stress and the Traditional College Student Stress Scale (Renner & Mackin, 1998) that assessed academic stress. In addition, the Maslach Burnout Inventory-Student Survey (Schaufeli et
al., 2002) was used to measure burnout using three sub-scales: emotional exhaustion (α = .91), cynicism (α = .85) and professional efficacy (α = .85). Lastly, turnover intention was also evaluated using three items (α = .83).

While general life stress was not related to exhaustion or turnover intention, academic stress had a significant impact on both overall emotional exhaustion and intentions to quit school. A test for mediation was conducted according to Baron and Kenny’s (1986) recommended procedures. In particular, emotional exhaustion mediated the relationship between perceived academic stress and turnover intentions. For this reason, it seems that emotional exhaustion accounted for the influence of academic stress on students’ withdraw from school. In addition, post hoc analyses were conducted to test for the mediating role of cynicism between academic stress and turnover intention. It was found that cynicism also mediated the relationship between academic stress and intention to quit school.

The results provide further support to the conservation of resources theory. Specifically, as the presence of chronic academic stressors drained resources, participants experienced a sense of dissatisfaction, physical symptoms of stress, and overall life distress. Consistent with the COR model, experiencing these negative states increased students’ desire to minimize this loss of resources, in this case, by intending to quit school. Further, these findings have important implications regarding the substantial impact of not only academic stress but cynical attitudes on turnover in college students. The identification of proper management and coping mechanisms for both stress and cynicism in students may prove to be beneficial in preventing burnout and may provide better insight to students and academic administrators for initiating efforts to reduce the intensity of stress. Involvement in extracurricular activities may also serve as a solution to effectively deal with this kind of stress. According to West et al. (2009), involvement in sports, clubs, and volunteer work may provide students with an effective coping mechanism and outlet for stress. Additionally, future research that examines academic stress and cynicism in the nontraditional student population (i.e. married, financially independent, employed full-time) may expand the variable nature of this body of research.

References


Stress and Turnover Intention in College Students: The Mediating Role of Burnout
Bliss Quintana, B. A. & Guillermo Wated, Ph.D.

Abstract
The purpose of the present study was to provide insight into how academic and general life stress impact emotional exhaustion and subsequent turnover intention in college students. The sample consisted of 80 students from a university in the southeastern region of the country. Participants were 64% female, ranged in age from 18 to 46 (M = 20.49, SD = 3.95) and varied in ethnicity. The majority of participants were sophomores in college (45%) and identified as full-time students (97%). Participants completed the Holmes and Rahe Stress Scale used to measure general life stress and the Traditional College Student Stress Scale that assessed academic stress. In addition, the Maslach Burnout Inventory-Student Survey was used to measure burnout using three subscales: emotional exhaustion (α = .91), cynicism (α = .85) and professional efficacy (α = .85). Finally, turnover intention was also assessed using three items (α = .83). While general life stress was not related to exhaustion or turnover intention, academic stress had a significant impact on both overall emotional exhaustion and intentions to quit school. A test for mediation was conducted according to Baron and Kenny’s (1986) recommended procedures. Emotional exhaustion mediated the relationship between perceived academic stress and turnover intentions. Post hoc analyses were also conducted in order to test for the mediating role of cynicism between academic stress and turnover intention. The identification of proper management and coping mechanisms for stress in students may prove to be beneficial preventing burnout and therefore, help reduce student attrition rates.

Hypotheses
Hypothesis 1: Emotional exhaustion will mediate the relationship between general life stress, and turnover intentions in college students. It is expected that both general life stress and emotional exhaustion will be positively related to turnover intentions.

Hypothesis 2: Emotional exhaustion will mediate the relationship between academic stress and turnover intentions in college students. It is expected that both academic stress and emotional exhaustion will be positively related to turnover intentions.

Method
PARTICIPANTS
The sample was voluntarily drawn from students at a private university located in the southeastern region of the United States. Participants (N = 80) were 64% women, ranged in age from 18 to 46 (M = 20.49, SD = 3.95) and varied in ethnicity. The majority of participants were sophomores in college (45%) and almost all identified as full-time students (97%). In regards to employment status, 8% of the students reported to be working full-time, 49% part-time and 43% were unemployed. In regards to living situation, 37% of participants do not live with their parents but do not pay for housing, 36% live with their parents and the remaining 27% pay for their own housing.

PROCEDURE
Participants completed two separate questionnaires used to assess present general life stress and experienced academic stress. They were asked to complete a first survey that was used to gauge overall burnout and turnover intentions. All participants were properly versed on the nature of the research and its implications. In addition, they were reminded that their participation would remain anonymous and could cease involvement at any point in the study. The survey was made available to participants via online survey software called SurveyMonkey.

MEASURES
General life stress was measured using the Holmes and Rahe Stress Scale (1967), which comprised of 43 items that depict daily stressors outside the academic setting. Participants marked “yes” or “no” for stressful life events that they had either experienced or not experienced within the past year.

Academic stress was measured using the Traditional College Student Stress Scale (Renner & Macklin, 1998), which comprised of 51 items that depict stress-inducing events that are school-related. Participants marked “yes” or “no” for stressful life events that they had either experienced or not experienced within the past year.

Burnout was measured using the Maslach Burnout Inventory-Student Survey (Maslach et al., 1996) which consists of 15 items that are divided into three subscales: Exhaustion (E), Cynicism (C), and Efficiency (E). All items were scored on a 5-point frequency rating scale (1 = never to 5 = always). High scores on E and C and low scores on E are indicative for burnout.

Turnover intention was measured using three items (α = .83) and rated on a 7-point scale (1 = very unlikely to 7 = certain or almost certain).

Analysis
The first hypothesis was supported, as general life stress was not statistically significant in relation to either turnover intention or emotional exhaustion. To test the second hypothesis, a test for mediation was conducted using the Baron and Kenny’s (1986) recommended procedures. Emotional exhaustion mediated the relationship between perceived academic stress and turnover intentions. First, cynicism was regressed on academic stress. The effect of academic stress was statistically significant as required by Baron and Kenny’s (1986) standards (Table 2). First, emotional exhaustion was regressed on academic stress (i.e., the mediator). The effect of academic stress was statistically significant as required by Baron and Kenny’s (1986) standards (Table 3). Finally, turnover intention was regressed on emotional exhaustion and academic stress. When controlling for emotional exhaustion (i.e., the mediator), the effect of academic stress disappeared as predicted.

Discussion
The present study examined the impact of both general life and academic stress on burnout. In particular, emotional exhaustion, and subsequent turnover intentions in college students. While general life stress was not found to be related to either exhaustion or turnover intention, academic stress had a significant impact on both overall emotional exhaustion and intentions to quit school. In particular, emotional exhaustion mediated the relationship between perceived academic stress and turnover intentions. That is, emotional exhaustion seems to account for the influence of academic stress on student’s willingness to leave school. Surprisingly, cynicism also mediated the relationship between academic stress and intentions to quit school.

The results provide further support to the conservation of resources theory (Hobfoll, 1989). At the presence of chronic academic stressors, drained resources, participants experienced a sense of dissatisfaction, physical symptoms of stress, and overall life dissatisfaction. Consistent with the COR model, experiencing these negative states increases students’ desire to minimize this loss of resources, in this case, by intending to quit school.

There are several practical implications that can be derived from the findings of this study. First and foremost, these findings encourage campus administration to become more aware of the risky factors and taking effective actions of academic stress. School administration should work to actively promote mental health services for students that can help to buffer or mitigate the effects of academic stress. At the same time, involvement in extracurricular activities may also serve as a solution to effectively decrease stress and the lack of academic stress. According to Wet al. (2009), involvement in sports, clubs, and volunteer work may provide students with an effective coping mechanism and outlet for stress.

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Southeastern Psychological Association (SEPA)
New Orleans, Louisiana
March 28th, 2018
1. What, another stats course? Students' statistics efficacy in basic and advanced statistics classes.

2. Does an effective team place you above the mean? The role of group cohesion in a Psychological Statistics course that emphasizes collaborative learning.

3. Effects of Targeted Troubleshooting Activities on Students Confidence In a Statistics Computer Lab

4. Improving Statistics Learning for Psychology Majors

5. Examination Preparation of the Best and Poorest Students in Statistics

6. Enhancing Understanding of Statistics and Research Methods Through Online Workshops

7. Sharpening Quantitative Reasoning Skills in a Summer Psychology Course for High School Students

8. Apps to untangle undergraduate statistics: In-class polling and video lectures

9. Testing Statistics Knowledge without Calculations
What, another stats course? Students' statistics efficacy in basic and advanced statistics classes.

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Introduction

Statistics courses often provoke anxiety among psychology students (Bond, Perkins, & Ramirez, 2012). Nonetheless, statistical reasoning is a core competency of our discipline and it is critical that our students learn to conduct and interpret statistical tests (APA, 2013). Fostering student self-efficacy with statistics is therefore an important yet challenging goal of many psychology departments.

Students may enter statistics courses with preconceived attitudes about the value and difficulty of learning statistics. Although attitudes towards statistics tend not to change over the course of a semester (Evans, 2007; Schau & Emmioglu, 2012), the valence of these attitudes may be significantly associated with self-efficacy to learn statistics and course achievement (Finney & Schraw, 2003; Perepiczka, Chandler & Becerra, 2011).

With the hypothesis that additional practice with statistical reasoning beyond the typical one-semester course would increase self-efficacy and positive attitudes toward the subject matter, we investigated the potential advantages of enrolling students in a second, multivariate statistics course after they have complete a standard introductory statistics course. We report data on statistical confidence and attitudes collected from students at the beginning and end of each of these courses. Specifically, we examined current statistics self-efficacy, self-efficacy for learning statistical concepts, and attitudes toward the value and difficulty of achieving statistical competency. We longitudinally assessed changes in self-efficacy and attitudes during the semester and cross-sectionally examined these changes between students in each of the two courses.

Methods

Our sample included students enrolled in Statistics in Psychology I and Statistics in Psychology II at Spelman College during the two semesters of an academic year. Both courses had different instructors each semester; data were collapsed across instructors. The data represent the responses of 38 students in the introductory statistics course and 42 students in the advanced course. Although we did not collect demographic or
disciplinary data, virtually all participants were women of African descent and psychology majors. The introductory class included primarily sophomores and juniors and the advanced class enrolled juniors and seniors.

During the first and last weeks of the semester, a member of the research team (one of the co-authors or a student research assistant) visited each class section of the introductory and advanced courses to recruit participants and distribute surveys. During the first visit of the semester, the recruitment procedure included informed consent, as well as recording of participants’ confidential aliases to be used for linking pre- and post-semester responses. The aliases were kept separate from the completed questionnaires and only retrieved as needed during the post-semester survey administration session. The surveys included three main scales: the current statistics self-efficacy scale, the self-efficacy to learn statistics scale (Finney & Schraw, 2003), and the survey of attitudes toward statistics (Schau, Stevens, Dauphinee, & Veccio, 1995). The questionnaires were identical within semesters and between courses except for minor changes in the personal information section. The questionnaires required 10-15 minutes to complete. Students either completed the surveys in the classroom or took them home and returned them in the following class session.

Paired t-tests were run to determine mean within-person changes in self-efficacy and attitudes from the beginning to the end of the semester. Independent t-tests were used to compare mean self-efficacy and attitudes between the introductory and advanced classes at the beginning and end of the semester. We ran Pearson correlations to assess the bivariate associations between the scales at each timepoint.

**Results**

Preliminary analysis of our data indicates that students’ confidence in doing statistics increases over the course of a semester. As expected, introductory students reported the lowest levels of confidence in their current ability to use statistical concepts, as well as in their ability to learn these concepts. These students’ end-of-semester confidence levels were high, however, and were not significantly different from those of students at the end of the advanced course. Students at the beginning of the advanced course reported current confidence levels that were significantly higher than those of the initial introductory students, but significantly lower than either post-semester current confidence levels.

We saw no significant change in attitudes towards statistics either within or between the two courses; however, overall attitudes were somewhat positive across all dimensions of affect, value, and difficulty. Attitudes were significantly correlated with the self-efficacy measures for advanced statistics students but not for students in the introductory statistics course.

**Discussion**

We were interested in determining whether enrollment in a second, multivariate statistics course would increase students’ self-efficacy for conducting statistical tests and attitudes toward statistics. Overall, the preliminary findings show that students in both introductory
and advanced statistics courses are fairly confident in their ability to learn and do statistics and report somewhat favorable attitudes about statistics. There was an increase in self-efficacy for doing statistics from the beginning to the end of the semester, but no change in attitudes towards statistics for either the introductory or advanced statistics students.

Advanced students were more confident at start of the semester than introductory students. All students’ confidence increased over the semester, but the mean self-efficacy scores were not significantly different by class at the end of the semester. The concepts assessed in the self-efficacy scales were all covered in the introductory statistics class, so there may have ceiling effect at end of semester. Next steps could include analyses using multivariate general linear models, which may be able to tease out these effects.

Data also yield a pattern of results that suggests that advanced students are better able to assess their own relative competency with statistical concepts. Self-efficacy scores were significantly correlated with attitudes for advanced students, but not for introductory students. As students progress through the statistics courses, it is expected that they gain both a deeper understanding of statistical concepts through ongoing practice as well as awareness of what they know.

We are continuing to collect data for this study with the goal of increasing the sample size to enable further in-depth analyses. In addition to building on these preliminary results, we plan on evaluating the association between students’ self-efficacy, attitudes, and achievement in these statistics courses.

Funding

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References


Does an effective team place you above the mean? The role of group cohesion in a Psychological Statistics course that emphasizes collaborative learning.

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Effects of Targeted Troubleshooting Activities on Student Confidence In a Statistics Computer Lab

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Improving Statistics Learning for Psychology Majors

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Most undergraduate students in my required introductory statistics course are apprehensive about taking examinations. They expect to have to memorize a lot of formulas. Memorizing formulas is not what I want students to focus on. They should focus on the “what, when, and how” of statistics. What statistics are available, when the statistics should be used, and how the statistics should be computed and interpreted. To shift students’ focus away from rote memorization, years ago I began providing with each exam a sheet that contains all of the formulas that students might need. The sheet was a copy of the inside of the front and back covers of my textbook, Statistics: An Introduction, 5th ed.

Providing students with a copy of important formulas seemed to reduce test anxiety, so I decided to go a step further to reduce anxiety. A week before each exam, I give the students an 8 1/2 by 11 sheet of colored paper on which they can write anything that they think might be helpful in taking the exam. Students bring the sheet, that I call a “memory jogger,” to the exam. Allowing students to use a memory jogger along with a sheet of important formulas while taking examinations accomplishes several objectives:

1. It helps to relieve test anxiety
2. It encourages students to organize the material and identify the most important concepts
3. It discourages rote memorization, and
4. It enables me to ask more probing questions.

According to students, preparing the memory jogger is an excellent way to study for the examinations.

Students’ memory joggers provide clues about how they prepare for examinations. Over the years, I have noticed differences between the memory joggers of the best students—those who received an A or B+ in the course—and the poorest students—those who received a D or F. The purpose of this research was to perform a content and style analysis of the memory joggers of the two groups to determine how they differed in their examination preparation.

After examining a sample of the best and poorest students’ memory joggers, six variables were selected for analysis. The variables were the proportion of the best and poorest students who (1) completely filled one side of their memory jogger for each examination and both sides for the final examination; (2) organized one or more of their memory joggers by chapter or used some other organizational strategy; (3) used procedures such as underlining and highlighting on one or more memory joggers to make material stand out; (4) devoted 40% or more of each memory jogger to definitions of terms, derivations, or lists; (5) included material on one or more memory joggers from all of the chapters rather than only from the most recently covered chapters; and (6) used the same style or type of content for all of the memory joggers.
The memory joggers of 289 students were analyzed. Of those, 227 students earned an A or B+; 62 students earned a D or F. The students were enrolled in eight introductory statistics courses taught by the author between fall 2011 and spring 2015. A total of 1,156 memory joggers, four for each student, were analyzed. Students’ names on the memory joggers were replaced with random numbers.

The results of the study are summarized in Table 1. Five of the six variables were statistically significant. The largest effect size was on variable 5. Eighty-eight percent of the best students included material on their memory joggers from all of the chapters covered versus 55% for the poorest students. Cohen’s $h$ was .76—a medium size effect. The second largest effect size was on item 2. Forty-five percent of the best students used some organizing strategy in preparing their memory joggers versus only 13% for the poorest students. Cohen’s $h$ was .73. Seventy-seven percent of the best students devoted 40% or more of each memory jogger to definitions of terms, derivations, or lists versus 60% for the poorest students. Surprisingly, not all of the best and poorest students completely filled the space on their memory joggers. However, the best students were more likely to do so than the poorest students: 79% versus 56%. Cohen’s effect size was $h = .50$.

To summarize, the best and poorest students differed in their preparation for the examinations. The best students were more likely to include material on their memory joggers from all of the material covered rather than focusing on the most recently covered material. The best students also were (1) more likely to organize their memory jogger in some logical manner; (2) use underlining or some other device to make material stand out; (3) devote 40% or more of each memory jogger to definitions of terms, derivations, or lists; and (4) utilize all of the space on their memory jogger.

At the end of each semester, I solicit anonymous feedback about the features of the course that students find most helpful and least helpful. Memory joggers are the most frequently mentioned helpful feature.

References

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1 Data for fall 2012 and spring 2013 are not included because the author did not teach the course that academic year.
### Table 1

Data for the Best and Poorest Students in Introductory Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Best Students Prop.</th>
<th>Poorest Students Prop.</th>
<th>z Statistic</th>
<th>p</th>
<th>Cohen’s h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Completely filled one side of their memory jogger for each examination and both sides for the final examination</td>
<td>.79</td>
<td>.56</td>
<td>3.66</td>
<td>&lt; .001</td>
<td>0.50</td>
</tr>
<tr>
<td>2. Organized one or more of their memory joggers by chapter or used some other organizational strategy</td>
<td>.45</td>
<td>.13</td>
<td>4.60</td>
<td>&lt; .001</td>
<td>0.73</td>
</tr>
<tr>
<td>3. Used underlining and highlighting on one or more memory joggers to make material stand out</td>
<td>.47</td>
<td>.32</td>
<td>2.14</td>
<td>.032</td>
<td>0.31</td>
</tr>
<tr>
<td>4. Devoted 40% or more of each memory jogger to definitions of terms or derivations</td>
<td>.77</td>
<td>.60</td>
<td>2.68</td>
<td>.007</td>
<td>0.37</td>
</tr>
<tr>
<td>5. Included material from all of the chapters covered rather than focusing on the most recently covered chapters</td>
<td>.88</td>
<td>.55</td>
<td>5.86</td>
<td>&lt; .001</td>
<td>0.76</td>
</tr>
<tr>
<td>6. Used the same style or type of content for all of the memory joggers</td>
<td>.85</td>
<td>.74</td>
<td>1.81</td>
<td>.070</td>
<td>0.27</td>
</tr>
</tbody>
</table>
Enhancing Understanding of Statistics and Research Methods Through Online Workshops.

Linda Rueckert, Chris Merchant, and Maureen Erber
Northeastern Illinois University

Presented at: Association for Psychological Science
For further information, contact: l-rueckert@neiu.edu

Three years ago the Psychology Department at Northeastern Illinois University developed peer-led workshops (Gafney & Varma-Nelson, 2008) to enhance learning in our required Statistics and Research Methods courses. Workshops were conducted outside of class by student Peer Leaders. However, NEIU is a commuter school and some students found it difficult to come to campus outside of regular class time. In an attempt to make the workshops more accessible, we developed online workshops. Before the first exam workshops were conducted in class for all students. Before the second exam students could choose to attend workshops either on campus or online. Exam scores improved significantly for students who completed the online workshops $t(39) = 1.92, p = .06$. Their improvement from exam 1 to exam 2 was slightly greater than for those who attended the second workshop on campus ($p = .09$), and significantly greater than a control group who did not attend any workshop ($p = .005$).

References
Enhancing Understanding of Statistics and Research Methods Through Online Workshops

Linda Rueckert, Christopher R. Merchant, Maureen W. Ember

Abstract

Students who received 30-minute workshops on computer simulations were significantly more likely to choose computer programs in future courses. However, students who attended workshops on computer simulations were less likely to choose computer programs in future courses. This suggests that computer simulations may not be the best method for enhancing understanding of statistics and research methods.

Method: Workshop Development

- In Fall 2014, workshops were developed for each workshop software (RStudio, Python, and R.
- The software was divided into two groups.
- Group 1: Students who were taught using the R software.
- Group 2: Students who were taught using the Python software.

Results: Student Survey

- Students who attended workshops on computer simulations reported significantly higher understanding of computer simulations than students who did not attend workshops.
- Students who attended workshops on computer simulations reported significantly less anxiety about computer simulations than students who did not attend workshops.

Conclusions

- Online workshops can significantly enhance understanding of statistics and research methods.
- Online workshops can significantly reduce anxiety about computer simulations.
Sharpening Quantitative Reasoning Skills in a Summer Psychology Course for High School Students

Kenneth Abrams, Ph.D.
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Summary

Understanding how to use quantitative data to support one's arguments and evaluate claims of others is strong, the essential skills students need to enter college. Carleton College offers each July a residential, four-week program titled Summer Quantitative Reasoning Institute (SQRI) in which talented high school students are introduced to the academic study of social sciences and receive college-level credit for successful completion. This initiative is such a course that integrates the study of science and social science in psychology, research methods, and statistics. For this final project, students in teams of four develop a research question on a paranormal phenomenon and a methodology that would empirically test the question. The students then collect data, analyze the results using SPSS, and interpret and present a paper at a symposium.

Participants

37 high school students

Method

Participants

37 high school students

Procedure

Three months of data collection were employed pre- and post-course. Sample items are provided below:

1. Belief in Paranormal Events Survey

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

2. Familiarity with Descriptive and Inferential Statistic Survey

<table>
<thead>
<tr>
<th>unfamiliar</th>
<th>very familiar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

3. Test of Critical Thinking in Psychology

- Some people claim that astrology, tarot card readings, palm reading, etc are "all in good fun," and do not necessarily harm anyone. What are some counter arguments to this statement?
- What are some reasons a person might experience an improvement in symptoms following faith healing?
- Describe two studies that should be used to evaluate claims of paranormal phenomena (such as telepathy, psychokinesis, or the Bermuda Triangle). Be sure to note times.
- What criteria should one consider when evaluating claims of paranormal phenomena?

Results

Conclusions

After participating in the SQRI program, students experienced marked gains in quantitative reasoning and critical thinking when faced with research data. Each student experienced significant gains in quantitative reasoning and critical thinking when faced with research data.
Apps to untangle undergraduate statistics: In-class polling and video lectures

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Presented at: Southeastern Psychological Association
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Teaching statistics courses tailored to Psychology students is fraught with challenges. In addition to dealing with high levels of math anxiety, many students need extra support in the mechanics of computation and in using software applications. Evolving technologies allow instructors many tools to scaffold student learning, but keeping up with the available options can be overwhelming. The purpose of the current paper is to share an example of two tools that I have found particularly effective.

In the paper, the first tool introduced was an application that allows real-time audience responses to be submitted through a basic cell phone text or email message (Poll Everywhere, 2016). This software application allowed audience responses to polling questions to be displayed immediately during class. The application offered several unique advantages in both my statistics classes as well as other courses. It gave students the opportunity to use their cell phones in a constructive way, see their responses instantly, and provided a way to demonstrate visual presentation of data. In the paper, I presented the steps of downloading the application (Poll Everywhere) along with demonstrating how to build, edit, and insert polls into slideshows. Across several courses, responses to live polling were positive and student engagement increased.

The second tool presented in the present paper was an application used to add video lectures to slideshow presentations (OfficeMix, 2016). The application can be added to both PowerPoint and Google slideshow creators and provides user-friendly means of recording and integrating video into lectures. In the present paper, I included a demonstration of the mechanics for creating screen recordings and videos. I also showed a short clip demonstrating a method of using story-telling to conceptually frame a statistical analysis – specifically the z-score was demonstrated. The video technique was used during a recent semester to build a full library of lectures including every type of calculation addressed in the course. The set included a step-by-step demonstration of the computations. Students were tasked with watching the videos before class. Time spent in-class was focused on working problems and using statistical software to complete workshop assignments.

Support for this method of using videos to support classroom lecture has been discussed in the literature. For example, Dunn, McDonald, & Loch (2015) found that the technique of using short video lectures was an effective supplement in large section introductory statistics classes in an Australian university setting. In preparing for the present paper, I was able to compare exam scores to gauge the effectiveness the video technique used in a smaller class setting with 25 to 30 students per class. Scores from the first exam were compared to those from two previous terms. After implementing the video lecture method, test scores were significantly higher compared to previous years ($t(73) = 1.98, p = .03, 1$-tailed, $r^2 = .051$). Perhaps, more importantly, the number of students scoring below 50 on the first exam represented only 10.71%
of the most recent class compared to the 30.43% and 20.83% noted in previous years without the video support. This finding noted early in the semester suggested that the video method may be most effective for helping those students that were having the greatest difficulty with material. Perhaps, the videos helped to buffer the lowest scores by helping students achieve at least partial mastery of learning objectives. In order to directly compare students’ overall mastery of course material, the same final exam was used that had been administered to the class before the videos were made available. Scores on the final exams were $M = 55.46$ ($SD = 19.76$) when videos were provided compared to $M = 50.68$ ($SD = 26.50$) before the videos were available. Although the scores were almost five points on average higher, the large variability in scores rendered this difference not statistically significant ($t(44) = .49, p > .05$). A more detailed analysis revealed that, when videos were used, 42.67% students had final exam scores below 50 with 20.83% of those scoring below 40. Before the videos were used, 63.64% students scored below 50 with 45.45% scoring below 40. This finding is in line with the pattern observed on the first exam where access to videos appeared to buffer the lowest exam scores. Chi-square tests indicated that the improvement across semesters did reach statistical significance. Expected frequency ($f_e$) of students scoring below 50 was calculated based on the percentages from the previous term, the observed frequency ($f_o$) was 10 students. Therefore, the number of students scoring lower than 50 on the exam was statistically significant ($\chi^2 (1, n = 24) = 5.31, p < .05$) and for the 5 students scoring below 40 ($\chi^2 (1, n = 24) = 5.87, p < .05$). Taken together, findings from statistics class exams suggested that access to the videos along with the concurrent changes in pedagogy was related to increased levels of mastery of course objectives. Future work is planned to examine these effects in greater detail.

References
I have been teaching introductory statistics to undergraduates for many years. In my experience, having them do calculations during tests means they spend all their time with their calculators rather than demonstrating their knowledge of the more important conceptual information like what it all means. I demonstrated how I nevertheless test their computational abilities without actual calculations using something I call “set-up problems”. Because of this, my tests more thoroughly assess their understanding of concepts and connections between concepts rather than their ability to use a calculator.
Section XXIV
Student Engagement/Motivation

1. Reducing Student Incivility in Large Classrooms: Using Student Generated Learning Contracts to Create a Positive Learning Environment
2. Encouraging Educational Psychology Students’ Motivation: Best Practices in Case Study Instruction
3. Use of Classroom Salon to Increase Student Engagement
4. Motivating Students through Choice
5. Prioritize and Plan: Keys to Student Success at RMPA
6. Pluralistic Ignorance and the Motive Behind Student Requests for Trigger Warnings
7. Success at the Crossroads of Affordability and Engagement
8. The Student Motivation Tree: A useful Heuristic for Psychology Instructors
Reducing Student Incivility in Large Classrooms: Using Student Generated Learning Contracts to Create a Positive Learning Environment

Louise Chim, Martin Smith, Emanuela Yeung, and Marilyn Thorpe
University of Victoria

Presented at: Psychology ONE Conference
For further information, contact: chim@uvic.ca

Creating an environment conducive to student learning can be challenging in large classrooms as students feel more anonymous and engage in more disruptive behaviors compared to smaller classes (Alberts, Hazen, & Theobald, 2010; Elder, Seaton, & Swinney, 2010). Can we reduce disruptive behaviors by communicating the desirable classroom behaviors through learning contracts? In our study we had three conditions in three sections of an introductory psychology course: (1) a student generated learning contract where the class collectively created a contract, (2) an instructor generated contract, and (3) a no contract control group. At the beginning and end of the semester, students rated how frequently they observed other students engaging in various positive and negative classroom behaviors (Incivility Scale, Indiana 2000). We found that the student generated condition was most effective as they reported observing negative classroom behaviors less frequently compared to the other conditions at the end of the semester.

References


Reducing Student Incivility in Large Classrooms: Using Student Generated Learning Contracts to Create a Positive Learning Environment

Louise Chim, Martin Smith, Emanuela Yeung, & Marilyn Thorpe
University of Victoria

Introduction
- Creating an environment conducive to student learning can be a challenge in large classes, as inappropriate classroom behaviors (e.g., device use for non-class activities, chatting) can impede learning (e.g., Gingerich & Linneweber, 2014).
- Recommendations include communicating expectations regarding student behavior, early, often, and with clear explanations of why inappropriate classroom behavior is non-adaptive and undesirable (Prey, 2009).
- Can explicitly communicate to students desirable classroom behaviors through learning contracts (Nilsen & Jackson, 2004).

Present Research
- How effective are student contracts in reducing disruptive classroom behaviors?
- Are student contracts more effective when students play a role in generating the contract compared to when the instructor creates it?

Method
Participants
- 888 introductory psychology students (68.6% female) across 2 classes

Measure
- Incivility scale (Prey, 2004)

The instructors presented one of three conditions:
1. Student generated contract (N = 167)
   - Instructor provided a blank contract
   - Students discussed what should go in the contract and what group agreed on the content and filled out the contract together.
2. Instructor generated contract (N = 150)
   - Instructor presented a contract to students.
3. Control condition (no contract) (N = 204)
   - Instructor rated classroom expectations in the course outline.

Hypotheses

Hypothesis 1: Students in both of the learning contract conditions will report disruptive behaviors less frequently in the classroom, relative to the control group.

Hypothesis 2: Students in the student generated learning contract condition will report disruptive behaviors less frequently than those in the control condition.

Results
Using repeated measures ANOVAs we examined the effect of condition (student contract, instructor contract, control) and time (before intervention, end of semester) on how frequently students observed others engaging in different behaviors.

Observation of Incivility Behaviors (e.g., loud talking), time x condition interaction (F(2, 356) = 10.02, p < .01), partial ω² = .03.

Time 1 (Before Intervention): No significant differences between groups.

Time 2 (End of Semester): Participants in the student generated contract condition observed less disruptive behaviors than participants in the other two conditions (F(2, 356) = 4.62, p = .01).

Results and Discussion
Observation of Easepresence/Uninvolved Behaviors (e.g., looking away, getting up during class)
Significant time 1 condition interaction (F(2, 356) = 4.62, p = .01, partial ω² = .03).

Instructor Generated Excerpt
In order to enhance the classroom learning environment for me and my colleagues in the PDC 100 community, I promise to:
- Not engage in the following distracting behaviors:
  - talking loudly, unrelated technology use
  - engaging in class, loud, distracting conversation
  - Not to engage in the following behaviors that will help me succeed:
  - engage in class discussion
  - be punctual and get to class on time
  - Be engaged during lectures.

Student Generated Excerpt
Create a classroom learning environment for me and my colleagues in the PDC 100 community, I promise to:
- Not to engage in the following distracting behaviors:
  - talking loudly, unrelated technology use
  - engaging in class, loud, distracting conversation
  - Not to engage in the following behaviors that will help me succeed:
  - engage in class discussion
  - be punctual and get to class on time
  - Be engaged during lectures.

The above are excerpts from the learning contracts. The student generated contract was initially blank and then as a group the class filled out the contract expectations together. In both contract conditions, students agreed and turned in the contract back to the instructor.

Method
Participants
- 888 introductory psychology students (68.6% female) across 2 classes

Measure
- Incivility scale (Prey, 2004)

The instructors presented one of three conditions:
1. Student generated contract (N = 167)
   - Instructor provided a blank contract
   - Students discussed what should go in the contract and what group agreed on the content and filled out the contract together.
2. Instructor generated contract (N = 150)
   - Instructor presented a contract to students.
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Time 1 (Before Intervention): No significant differences between groups.

Time 2 (End of Semester): Participants in the student generated contract condition observed fewer disruptive behaviors than their peers in the other two conditions (F(2, 356) = 4.62, p = .01).
Because courses in educational psychology include abstract psychological concepts, some prospective teachers may risk seeing content as dispensable until their utility is made apparent by grounding theories in concrete teaching experiences. The purpose of this symposium was to discuss how case study instruction can cultivate authentic learning experiences that highlight connections between curriculum content and teachers’ professional decision-making. In addition, we crafted our symposium discussion to help those participants in other psychological disciplines reflect on ways to translate instructional strategies into their own classrooms.

Case Instruction

Case study instruction uses descriptive stories that narrate classroom dilemmas and asks students to apply course material as they engage in hypothetical classroom teacher decision-making. Interest in case instruction developed over the last two decades and has become an important base from which to ground teacher education. Its use in educational psychology has increased in popularity, and it’s identified as a promising approach to helping pre-service teachers bridge theory and practice (Engle & Faux, 2006). Most pre-service teachers don’t possess extensive classroom experience; working with cases allows them to test theoretical concepts and engage in hypothetical classroom decision-making.

Case Instruction and Online Learning

According to the National Center for Education Statistics (NCES), from 2000-08, the percentage of undergraduates enrolled in at least one online course increased 12% (from 8% to 20%), a curve in enrollment projected to continue (Allen & Seaman, 2006; Radford, 2011). Due to this growing trend, it’s crucial for courses to be offered in a hybrid (blended class of face-to-face and online instruction) or fully online format to meet students’ needs. Research indicates case studies can have positive results for educational psychology.
students’ involvement in postings, peer support, and reciprocated interaction among stakeholders like students, instructors, and cooperating teachers (Bonk et al., 1998).

**Benefits for Students Learning in Educational Psychology**

Publications in case-study research suggest that using cases in pre-service instruction may promote student learning, lead to a better understanding of the connection between theory and practice, and increase problem-solving, decision-making, and critical thinking for educational situations (Bruning et al., 2008; PytlikZillig et al., 2008). In addition, case study instruction may help students to gain an appreciation for the realities of classroom teaching, engage in active learning, and cultivate intrinsic motivation and self-regulated learning skills (Bruning et al., 2008; Ching, 2011; DeMarco et al., 2002; Mayo, 2002; PytlikZillig et al., 2011; Sudzina, 1997).

**Qualities of Effective Case Instruction**

Existing research suggests that the most effective case study activity will establish a collaborative community of learners, encourage perspective-taking of various stakeholders, revisit cases periodically, use complex cases that mirror classroom realities, scaffold students’ critical thinking and reflection skills, and incorporate what is known about effective authentic assessment when culminating in projects or written assignments (Gonzalez-DeHass & Willems, 2015). Several of these features of case instruction are described below.

**Establishing a Collaborative Community of Learners**

Case study instruction can cultivate a collaborative learning environment where students are encouraged to talk about classroom teaching practices and to engage in decision-making under the guidance of their course instructor. Collaboration within a community of learners is an opportunity to share one’s perspective with others, negotiate meaning, and develop solutions through shared inquiry (Alesandrini & Larson, 2002). Cases also demonstrate the collaborative nature of teaching by illustrating how a teacher works jointly with other stakeholders such as a principal and parents to help students learn (Ching, 2011; Merseth, 2008).

**Mirroring Classroom Realities: Case Complexity**

Complexity refers to a case’s intricacy and allowing pre-professional teachers to engage in problem-solving for real-life situations. Challenges presented should reflect those that teachers face in the classroom today so that students see the utility in what they are learning, and are therefore more willing to apply themselves and take an active interest in their learning. The cases need to be devised around complex, authentic, and problematic cases that mirror the multifaceted nature of teaching. Effective cases require pre-service teachers to utilize the professional knowledge that expert teachers simultaneously draw on in classroom decision-making and incorporate knowledge from different subject domains.

**Case Discussion for Complex Decision-Making**

Case study instruction encourages perspective-taking by having students consider divergent theoretical applications and solutions from alternative perspectives and from the viewpoint of the multiple stakeholders affected in the case. Case study instruction also
assists students with cognitive flexibility by helping them develop more adaptive responses to the changing situational demands teachers face. Finally, case study instruction promotes critical thinking by guiding students in defining the problem, applying relevant theoretical knowledge to understand the problem, and supporting their arguments.

**Linking to Authentic Assessment**

Instructors in educational psychology can also use case-based instruction as a way to authentically assess students’ mastery of important academic content. Thereby, the authentic activity evolves into opportunities to apply their learning of real-world classroom challenges and contexts. It engages the pre-service teachers in teacher decision-making experiences while having them balance various viewpoints (students, parents, administrators) to make decisions just as practicing teachers do. In addition, instructors can incorporate knowledge from diverse subjects (development, learning, motivation, classroom management, etc.) and evaluate students using rubrics that establish clear expectations and allow for feedback, practice, and revision.

**Skill-Building across Psychological Disciplines**

Finally, symposium attendees were given the task to offer suggestions to any of the four questions that were located on large post-it pads placed on the walls of the room.

- How can you establish a collaborative community of learners in your classroom?
- What are the current challenges graduates might face within your field’s profession?
- How can we introduce students to complex decision-making and encourage cognitive flexibility, perspective-taking, and critical thinking?
- What might authentic assessment activities look like in your own disciplines and what are necessary characteristics of quality assessment?

To get attendees started we posted two examples under each question and discussed why those examples were best practices in the field of educational psychology for those questions. These skill-building groups allowed us to close with some concrete implementation strategies for best practices in case study instruction across psychological disciplines.

**References**


Use of Classroom Salon to Increase Student Engagement

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Presented at: Association for Psychological Science  
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Classroom Salon (a product of Carnegie Mellon University, hereafter referred to as Salon) is an open source platform designed to promote academic social interaction in and out of the classroom by means of digital annotation of course materials. My purpose was to improve engagement and participation in my senior capstone psychology seminar. This report includes information on the program (implementation, uniqueness, instructor benefits), and results of student evaluation which indicated improvement in student outcomes and engagement.

Introduction

Salon permits instructors to load documents and videos to a course site. Students can use predetermined tags and add their own comments to the documents, such that the comments appear (and are linked) next to the particular portion of the text or video. PDF and Word documents can be used.

While these functions are similar to a Google doc in terms of shared views and editing access by all users, the distinguishing advantage is for instructors who can quantify things like participation with easy-to-use analytics that come with the software.

Our department capstone course is a senior seminar organized around a topic of the instructor’s choice, using original journal articles as the primary source of reading materials. Discussion can falter when students don't feel confident in their understanding, or when they neglect to do the readings in a timely fashion.

I wanted to encourage more frequent participation from students, as well as greater likelihood of reading each week’s assignments prior to classtime, through use of Salon, and I also wanted to measure student impressions of Salon, to know what they thought of it.

Participants
Participants were 30 students in two sections of senior seminar; 7 males and 23 females. All but three were graduating senior psychology majors.

Procedure and materials
A 27 item rating scale was administered following the last class. The items were organized around overall, social, participation, mechanical, learning aspects, with more items for some aspects than others. Sample scale items
Overall: “Overall I enjoyed the use of Salon for this class”
Social: “I liked seeing what other students posted to Salon”
Participation: “Because of Salon, I think I was more active in class than I would have been otherwise”
Learning: “The use of Salon increased my critical thinking about the articles”
Mechanical: “Salon is difficult to figure out how to use”

Results
Scales were reverse scored as needed, summed and averages calculated for the five aspects listed above. A score of 1 indicated high agreement with a positive statement, 5 indicated low agreement with a positive statement. All means were between 1 and 2.4, indicating generally high levels of positive attitudes towards use of Salon. Some sample student comments on end of year evaluations follow:

“Salon works in prep for upcoming classes. I liked when I was able to see that I wasn’t alone on some thought.”
“I enjoyed the use of Salon because it forced me to read the articles and if I didn’t understand something, there was usually someone else who had commented on it and clarified”
“Overall, Salon really improved our discussions in class!”
“Such a great program, more senior seminars and first year seminars should look into this program”

Students appeared to enjoy the use of Salon and thought it helped them contribute more to the discussion. Their ratings indicate that they thought it was worth the additional technology effort. My general impression was that students read in advance of each class more often than in years prior without use of Salon. Digital student comments provided easy initiation of in class discussions. Grading participation using Salon analytics was certainly easier than in prior years.

Next steps include using Salon again, with greater comment structure in the form of prefabricated tags, and extending course materials to include videos of laboratory procedures. I will also be introducing Salon to my colleagues to show how it can be used for any course that is based on readings and discussion, even first year seminars.

References
• Web site for Salon: http://www.classroomsalon.com/
Motivating Students through Choice

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Presented at: Midwestern Psychological Association
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Abstract

Research (Koch, 2004; Weimer, 2002) has suggested that if students are actively involved in choosing tasks in the classroom then they may be more motivated. Thirteen students in a required, upper level psychology course were allowed to select which assignments they would complete for evaluation. Impact on motivation was mixed—six students reported increased motivation, four reported no impact on motivation, two students said it was sometimes more motivating, and one student reported decreased motivation. Reasons for selecting assignments varied; however, common themes included wanting to challenge oneself and using past experiences to determine the likelihood of success. In the final interview of the semester students were able to recognize and take responsibility for mistakes that they made in selecting assignments and completing them. This suggests that even if this type of pedagogical technique does not always enhance motivation, it does seem to enhance ownership of learning.
Motivating Students through Choice
Dr. Shannon De Clute
Morningside College

Introduction
- Research (Koch, 2004; Weimer, 2002) has suggested that students may be more motivated in class if they are actively involved in choosing the tasks.
- Enhancing student motivation is a particularly important factor for courses that are mandatory and have a negative perception within a department.
- The current study is a qualitative examination of how student choice in assignment selection impacts overall motivation within the course.
- A secondary research question asks what factors students use to determine what types of assignments they select.

Methods
- Students were enrolled in the course 401: History and Systems in Psychology, which is a requirement of all psychology majors.
- At the beginning of the semester students were instructed that they would be allowed to select the assignments they would complete for the course.
- The following guidelines were given:
  - Every student would complete a large paper and presentation assignment over a topic of their choice, worth 100 points.
  - Daily quizzes worth 5 points each were given, the 10 highest quizzes were retained for the final grade (50 points total).
  - The students were allowed to select an additional 350-375 points from the list in Table 1 (the course was worth 500 points total, therefore students were allowed to select 25 points of extra credit).
  - For each assignment a description, rubric, and due date was given.
  - The students completed a worksheet in which they selected their assignments and answered the question "Why I selected what I selected."
  - Each student had a 10-minute conference with the instructor during the 2nd week of school to discuss the student’s selections and sign an agreement, indicating approval of their choices.
  - At the end of the semester, students had a follow-up 10-minute meeting with the instructor to discuss 1) whether the student’s purposes were achieved 2) whether this teaching technique was motivating, and 3) any other findings.
- Students were given the option of participating in this study. Those who participated also completed the motivational subscales of the Motivated Strategies for Learning Questionnaire (MSLQ, Duncan & Maddux, 2005).

Table 1: Possible Assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>Assignment</th>
<th>Due Date</th>
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</thead>
<tbody>
<tr>
<td>Unit 1 Test</td>
<td>Oct 12</td>
<td>Investigative Report Group Project</td>
<td>Oct 27</td>
</tr>
<tr>
<td>Unit 2 Test</td>
<td>Nov 9</td>
<td>Unit 1 Concept Map</td>
<td>Dec 2</td>
</tr>
<tr>
<td>Unit 1 Take-home Exam</td>
<td>Oct 12</td>
<td>Unit 1 Concept Map</td>
<td>Dec 2</td>
</tr>
<tr>
<td>Unit 2 Take-home Exam</td>
<td>Nov 9</td>
<td>Unit 2 Concept Map</td>
<td>Dec 1</td>
</tr>
<tr>
<td>Unit 3 Take-home Exam</td>
<td>Dec 9</td>
<td>Unit 3 Concept Map</td>
<td>Dec 1</td>
</tr>
<tr>
<td>Historical Anthropology</td>
<td>Dec 9</td>
<td>Choose Your First Adventure</td>
<td>Oct 12</td>
</tr>
<tr>
<td>Psychology Book Club</td>
<td>Oct 12</td>
<td>Weekly Reflections</td>
<td>Nov 30</td>
</tr>
</tbody>
</table>

The most popular assignments were weekly reflections, concept maps, and take home exams.
- Students reported choosing weekly reflections as a way to motivate them to stay up with the reading and pay attention in class, challenge themselves to reflect deeper on the material, and help them with understanding and memory.
- Students selected concept maps because it was an opportunity for creativity, they had previous positive experiences with this technique, and to improve understanding.
- Students selected take-home exams primarily because they reported experiencing anxiety related to timed in-class exams and believed a take-home exam would be better. Some students had positive previous experiences with take-home exams from this professor.

The least popular assignments were group projects, a book critique and in-class exams.
- Students reported having bad experiences with group projects as a reason for not selecting them (in contrast, students who selected them reported positive experiences).
- Many students reported experiencing test anxiety due to the time pressure during in-class exams. Students completed the Test Anxiety subscale of the MSLQ and 4 of the 5 students with high test anxiety (>5 on MSLQ Scale) had reported this in interviews, but 3 of the 6 students who scored low on test anxiety (<4) also stated they had trouble with test anxiety in interviews.

Results

Participants
- 13 of the 16 enrolled students agreed to participate in the study.
- 12 females, 1 male; 11 seniors, 2 Juniors.

General Themes

Table 2: MSLQ Motivation Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>MSLQ</th>
<th>Percentile</th>
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<tbody>
<tr>
<td>Total</td>
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</table>

Conclusions

- Results were mixed regarding improving motivation based on this pedagogical method.
- It’s possible that this technique may be more impactful in a lower-level course, since most of these students were highly motivated by impending graduation.
- In general, many students reported selecting assignments because they would be challenging or areas that they needed to improve on.
- Students also used previous experiences and identified strengths to determine assignment selection.
- When students selected assignments because they thought they would be “easy” the result was often poor by not making the assignment a “priority” or taking time to complete it well.
- This method did seem to improve student meta-cognition: Students recognized the importance of:
  - balancing type of assignment (one student selected mostly writing assignments because she was good at them, then lamented at all the writing she had to complete),
  - timing of the assignment (one student selected an exam that was scheduled the day after a huge sporting event)
  - and responsibility (one student forgot to complete a paper she selected).
Prioritize and Plan: Keys to Student Success at RMPA

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Rona J. McCall
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Conference attendance can be one of the most valuable student experiences in reaching future academic and career goals. Students attending the conference may be coming to present their own research, travel as a leader for a club or group, or because they have a desire to learn more about their field of interest. Regardless of the reasons, such students usually have aspirations toward graduate school and careers in Psychology. Educating students on how to maximize their conference experiences can enhance the achievement of their future goals. This student-oriented session focused on setting goals for their conference experience, prioritizing and planning their attendance at talks and presentations. In addition convention protocol, and building professional relationships were emphasized.

Setting goals
Offering this session during the teaching preconference allowed students time to set goals for their conference experience, as well individualize what each student hopes to gain through conference attendance. Through a guided activity, students were asked to think about what opportunities exist at the conference, and to identify and their goals.

Prioritize and Plan
Students were presented with information about how to strategically select the talks they would like to attend. This included how to review the program and plan their conference experience. Some examples include selecting talks based not only on subject matter, but also on who is presenting; possible benefits of attending different types of talks and presentations; and how to attend talks offered during sessions at that the same time.

Convention protocol
Standards for student behavior during the conference is an important issue, particularly for students who are first attending conferences. Students were presented with conference protocol basics to help them navigate the social nuances associated with conferences. This aspect of the workshop is beneficial for students as well as their mentors, the institutions they represent, and the potential success for the conference running smoothly in general.
Building relationships

It can be difficult for students to introduce themselves, let alone begin building relationships with conference presenters and faculty. Building relationships in such a way that impresses their mentors/advisors/ and future colleagues will aid them in developing career goals or navigating the graduate school process. These relationships can have life-long consequences and are critical for students in learning collegiality with colleagues. Helping students in this process is critical for maximizing their conference experiences.

This session was interactive and ended with a question-and-answer session to address any other concerns students may have about their conference experience.
Pluralistic Ignorance and the Motive Behind Student Requests for Trigger Warnings

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Katherine Muschler  
*Macalester College*

*Presented at: Association for Psychological Science  
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What is the primary motive behind the growth in requests for ‘trigger warnings’ in the classroom? No empirical research in psychology exists to date, but some social commentators (e.g., Lukianoff & Haidt, 2015) have argued that students who request trigger warnings are primarily motivated by a belief that instructors can and should protect them and their peers from challenging or threatening ideas. We suggest, alternatively, that students who request trigger warnings are primarily motivated by a prosocial interest in standing up on behalf of traumatized peers; that they generally desire to engage with faculty in genuine discussions of the pedagogical value of potentially sensitive materials; and that they do not generally seek to preemptively “punish” faculty who select such materials. Our three studies conducted at a famously left-leaning college provide a conservative test of, and ultimately all support, this less divisive way of characterizing students.
A critical problem that instructors face in their classes is getting students to actually read their textbooks. In one survey, researchers found that only 28% of undergraduate psychology students complete their reading assignments prior to class (Clump, Bauer, & Bradley, 2004). I would argue that the solution to this problem is two-fold. First, we must increase accessibility to course materials for our students. Second, we must create assignments that actively engage them with those materials. The following summary addresses affordability of textbooks and describes an activity to help students think more critically about their readings.

In our efforts to increase student success, we would be remiss not to consider the rising cost of education, which presents a barrier to many of our students. A report by the Government Affordability Office (GAO) in 2013 showed an 89% increase in college fees and tuition (and an 82% increase in textbook prices) between 2002-2012. Compare this to the national average consumer inflation of only 28% and we can see that college is a cost many students cannot bear.

The Higher Education Opportunity Act of 2008 (HEOA) was passed to address concerns in higher education, including the transparency of higher education costs. Sections 112 and 133 of the HEOA called to make pricing information for course materials more accessible to students. Publishers now must provide extensive pricing information to instructors and bookstores and bookstores must publish this information in a timely manner so that students may use pricing information in the course selection process. Instructors may be surprised to learn that students use textbook prices to make decisions about which courses to take. A study conducted by the Student Public Interest Research Groups (Student PIRGs) in 2014 surveyed a representative sample of university students regarding their textbook purchasing behavior. This survey revealed that:

- Approximately 65% of students do not purchase required course materials because they are too expensive.
- Roughly 50% of students use textbook costs to decide which classes to enroll in.
- Over 80% of students reported that they would do better in their classes if the textbook was available for free.

There are many evidence-based methods that instructors can use to improve student success, but what if instructors could improve student learning simply by making sure students actually read their course materials? Although no guarantee, providing our students with affordable course materials is a step in the right direction. One way to provide affordable course materials is to make use of open educational resources (OER; defined as materials that are “in the public domain... [and] anyone can legally and freely copy, use, adapt and re-share them”(UNESCO)).
There are several OER textbooks for Introductory Psychology. For an extensive list, visit OpenStax (https://openstax.org/details/psychology), the College Open Textbooks directory (http://collegeopen textbooks.org/textbook-listings/textbooks-by-subject/psychology), or the Open Textbook Library (https://open.umn.edu/opentextbooks/). I use an open textbook from Noba Project (www.nobaproject.com). Noba Project has enlisted psychology experts author individual modules on the topics central to an introductory course, as well as additional topics that can supplement instruction in intro and other courses such as abnormal or developmental psychology. The modules are written at an accessible, 10th grade level, and can be accessed online, or downloaded as a PDF to be printed. Instructors can use Noba’s pre-built textbook or design their own by curating only the modules they want to use.

According to an old adage: “You can lead a horse to water, but you can’t make it drink.” Using open educational resources goes a long way to leading the “horses” to the water. In my experience, a technique called a reading anticipation guide can lead the horses to drink, so to speak. A reading anticipation guide is an assignment designed to engage students more meaningfully with their textbook reading (Kozen, Murray, & Windell, 2006). The assignment is formatted as a series of complex statements regarding the material students will read about (see Appendix). Prior to completing their reading, students read and respond to each of the statements, indicating whether they agree or disagree. Students later use their knowledge from the reading material (while reading or afterward) to evaluate whether their initial responses to the statements were correct. They write a couple of sentences to support their evaluation using evidence synthesized from across the reading. In this way, the reading anticipation guide actively engages students in:

- Activating prior knowledge about a topic. Perhaps students have an existing idea or belief about a topic or perhaps have no prior knowledge - both types of awareness are important.
- Synthesizing information across the reading. Because the statements are written with different wording than the text, students cannot simply skim the reading for “right answer”.
- Evaluating the information presented in the text. Often, the statements about the reading are complex, without simple answers. This means that students must assess multiple pieces of information to generate explanations.

The reading anticipation guide can secondarily serve as an outline of the important topics in the reading and, once completed, a study guide for exams. Thus, the assignment helps to address issues related to differences in student preparedness and reading levels. Instructors may also use reading anticipation guides as a basis for class lectures and discussions. Using statements that are ambiguous can lead to a lively class discussion about the “right answer” - provoking critical thinking and debate among students. Assigning anticipation guides as pre-class homework can also ensure that students come to class better prepared to discuss the topics.

If you’d like to find out more about reading anticipation guides, and how to use them in your class, you can access a “How-To” guide on the Noba Project instructor material website (http://bit.ly/2acqz2c). The Noba website even has 50 ready-to-use reading anticipation guides that are perfectly suited to accompany ANY course reading materials (not just OER) and can be tailored to other resources.
Overall, I have made two suggestions for how to help improve student learning: increasing accessibility to the course textbook and using reading anticipation guides in conjunction with textbook readings. Using a completely free open textbook removes the financial barrier to success, potentially addressing a major issue for up to 65% of our students. The reading anticipation guide aims to not only increase the percentage of students completing the reading, but provides a meaningful way for them to do so.

References

Appendix: Sample Reading Anticipation Guide
Reading Anticipation Guide: Motives and Goals

Name: _______________

Instructions:
1. Before reading in your textbook, determine whether you agree or disagree with each of the statements on the back of this page.
2. Read the module Motives and Goals in your textbook.
3. After or during your reading, decide whether your original agree/disagree decision for each statement was correct, based on information you’ve found in the text. Place a Y (yes) or N (no) in the “Were you right?” column.
4. In the “Why/why not” column, write a few sentences about why you were correct or incorrect with your initial guess. Try to think critically about how new information has supported or changed your original belief and display this in your answer.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Agree or Disagree?</th>
<th>Were you right?</th>
<th>Why/why not?</th>
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<tr>
<td>Goal pursuit and motivation depend</td>
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<tr>
<td>primarily on a person’s personality.</td>
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<tr>
<td>A student’s motivation will always increase if a teacher emphasizes how an assignment benefits the students.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Seeing your past efforts toward a goal as “commitment” and as “progress” influence your behavior in the same way.</td>
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<td></td>
<td></td>
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<tr>
<td>Exercising self-control leads to a greater ability to exercise self-control in another situation.</td>
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<tr>
<td>Having a self-control conflict is a helpful part of pursuing a goal.</td>
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</table>
The Student Motivation Tree: A Useful Heuristic for Psychology Instructors

*Emily Anne Hallendy, Dara Shapiro, and Steven Meyers*
*Roosevelt University*

Presented at: Midwestern Psychological Association
For further information, contact: smeyers@roosevelt.edu

Abstract

Promoting student motivation to learn is an important aspect of teaching, as motivation is associated with a variety of positive outcomes for students such as increased intention to persist in school and higher GPA. This poster outlines a new model for increasing student motivation consisting of three branches, which instructors “climb to reach the top of the tree” of student motivation. We propose a useful model for instructors consisting of the following three branches: encouragement, student autonomy, and engagement. Instructor encouragement involves presenting an encouraging attitude and communicating personal investment in students’ progress. Student autonomy includes listening and incorporating students’ suggestions into class activities. Student engagement consists of active learning techniques that are associated with increased student motivation to learn. If students value their learning experience and have intrinsic motivation to succeed in school, they may also be more likely to exhibit this motivation in other areas of their lives.
The Student Motivation Tree: A Useful Heuristic for Psychology Instructors
Emily Anne Hallendy, M.A., Dara Shapiro, M.A., & Steven Meyers, Ph.D.

Introduction
Many students appear to struggle with motivation to learn in the classroom setting. However, motivation is associated with a variety of positive outcomes for students, such as increased intention to persist in school and higher GPA (Guiffrida, Lynch, Wall, & Abel, 2013). Thus, it is important for instructors to take measures to promote student motivation to learn. In this poster, we outline a new model for increasing student motivation. This model consists of three branches, which instructors "climb to reach the top of the tree" of student motivation. These three branches are instructor encouragement of students, promoting student autonomy in the classroom, and engaging students with use of active learning techniques.

Instructor Encouragement
The first branch on the tree of student motivation is instructor encouragement. This involves presenting an encouraging attitude and communicating personal investment in students' progress. Examples of instructor encouragement include:
- Demonstrate enthusiasm for course material during presentations.
- Explain the reasons for your personal interest in the course material and why the course is relevant to students.
- Display genuine interest in student progress. Praise students when they do well, and express concern when students are having difficulty with the course.
- Develop personal relationships with students.
- Hold high but realistic expectations for students.
- Utilize humor in an appropriate and tasteful manner.

Student Autonomy
Once instructors have reached the encouragement branch, they may advance to the next branch: student autonomy. Increasing students' perception of autonomy in the classroom is associated with greater interest, engagement, and enjoyment in the classroom (Reeve & Jang, 2006). Techniques for increasing student autonomy include:
- Show students you're listening while they speak by providing verbal and nonverbal feedback.
- Incorporate students' suggestions into class activities.
- Praise students for being engaged in course activities and asking questions.
- Provide student encouragement through statements, such as "Almost," or "You can do it!"
- Allow students to alter the syllabus of the course, within the boundaries of the course goals.

Student Engagement
The final branch on the way to the top of the motivation tree is student engagement. These active learning techniques are associated with increased student motivation to learn:
- Promote active participation by providing incentives to participate or verbal encouragement.
- Assign both small group and whole-class discussions to give all students an opportunity to participate.
- Design in-class writing activities to provide students with an opportunity to work independently on the topic discussed.
- Use conceptual questions to promote interaction between students as well as to help them conceptualize key concepts regarding the topic of interest.
- Incorporate games and polls into class lessons.

References


Section XXV
Student Success

1. Why don’t they study? Faculty and students disagree about studying
2. How to succeed in college: Incorporating teamwork and authentic learning in the classroom
3. Characteristics of the Test-Anxious Student: The Roles of Personality, Motivation, and Control Beliefs
4. First Time College Freshmen: The Importance of Health and Learning Skills
5. Conscientiousness and the Intro Psych Student
6. Textbook Reading: Students' Perceptions of Noncompliance and What Would Help
7. Is the Pen Mightier than the Keyboard?: Assessing Whether Distinct Types of Note-Taking Influence Retention
8. Time Management Helped Me Get an A: Students’ Perceived Benefits of a Time Management Assignment in an Introductory Psychology Course
9. Time Management Assignments in an Introductory Psychology Course Can Boost Students’ Performance
10. Do We Do No Harm? Acknowledging the Unacknowledged Risks to the Psychology Student Researcher
11. Where did all the Studying Go? Getting through College with Little Investment
12. A Day in the Life of a Course Mentor: Competency-based Learning in an Online Educational Psychology Course
13. Building Confidence and Strengthening Exam Performance Using Bloom and Generic Study Guides
14. Critical Thinking and First-Generation College Students Critical Thinking and First-Generation College Students
15. Passion for Academic Activities: Does It Matter, and What Can We Do About It?
16. How to Put on a Successful Conference Showcasing Student Research and Creativity
17. The Influence of Framed Feedback on Self-Efficacy in a Mathematics Task
Why don’t they study? Faculty and students disagree about studying

Karen Bendersky
Towson University

Kristina L. Dandy
Georgia College & State University

Presented at: Southeastern Psychological Association
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Abstract

We identified similarities and differences in faculty and student perceptions of studying, motivation, and grades at a liberal arts university. This is important because diverging perceptions could create unnecessary tension between faculty and students, adversely affecting the learning atmosphere and student learning. Participants completed online surveys that included open-ended and Likert-scale questions. Faculty and student perceptions of study behavior did not match, but they did agree that grades are somewhat accurate. Students reported that their study strategies were working and that they were more motivated to study than faculty believed. These perceptions could reflect different course goals or learning objectives between faculty and students. We recommend faculty clarify learning expectations and explain how objectives relate to students now and in their future. Knowing that students are actually motivated to study could prevent transfer of lower expectations to students and help faculty with cynical attitudes about teaching students in core courses.

References


Why don’t they study? Faculty and students disagree about studying

Bendersky, K.1 & Dandy, K. L.2
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INTRODUCTION

There is a history of clashing academic views among university faculty and students. For example, faculty believed that the top objective of higher education was intellectual growth, while students ranked vocational preparation as their top objective (Jervis & Congdon, 1958). Further, faculty were more likely than students to agree that grades corresponded with student learning (Goulden & Griffin, 1997) and that deeper processing was more important to studying than rehearsal (Lynx, 2007). We wondered whether these discrepancies between faculty and student perceptions of academics extended to views regarding studying and grades in a liberal arts university that places high value on teaching and broad acquisition of knowledge. We felt this was important because diverging perceptions could create unnecessary tension between faculty and student, adversely affecting the learning atmosphere and student learning. Therefore, the goal of this exploratory study was to identify similarities and differences in faculty and student perceptions of studying.

METHOD

Participants
- Mid-sized southeastern liberal arts university
- 27 faculty
- 12 undergraduate students
- 76 women, 25 men
- 74 upper class, 27 lower class
- Age, M = 21 (SD = 1.92)
- GPA, M = 3.12 (SD = .42)

Materials
- 12 Assistant, 8 Associate, 5 Full, 2 Lecturers
- 101 undergraduate students
- 21 women, 6 men
- 12 faculty

RESULTS

Facility and Student Disagreement

How do students study differently for courses inside and outside their major?

How well do students’ study strategies work for them in terms of their learning?

Qualitative Findings

- Students study differently because major courses have different time requirements
- Students study differently because they have different attitudes toward courses.
- Faculty believed students study differently because of students’ attitudes toward courses.
- Faculty and students believe that exams and projects were the best way to assess learning.

SUMMARY & CONCLUSIONS

Summary

Faculty and student views of student study behavior did not match
- Students believed they study similarly for courses inside and outside major
- Students believed their study strategies are working
- Students motivated to study within major
- Faculty more motivated to study outside major than believed
- Faculty and students agreed that grades somewhat accurately reflect learning and that instructor assessments are the best way to measure learning.

Issues and Solutions

Student beliefs that study strategies are working and that grades are somewhat accurate could reflect lower course goals or different learning objectives
- Faculty could clarify the level of learning that they expect
- Faculty could explain how the course objectives relate to the student now or in the future

Knowing how motivated students are to study both within and outside their major could:
- Help faculty with negative or cynical attitudes about teaching students, particularly in required core courses
- Prevent transfer of lower course grades to students and a dereliction of a self-fulfilling prophecy

Suggestions for Further Work

- Assess specific views of student studying behavior (time, type)
- Assess whether awareness of these beliefs can positively affect learning
- Measure why faculty do not think study strategies are effective
- Assess the study strategies students and faculty believe are effective
- Determine the specific expectations that faculty have of students in their courses (and that students have)
How to succeed in college: Incorporating teamwork and authentic learning in the classroom

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The following activity was designed to be used in a course focusing on cognitive theories of learning. The activity was a semester-long collaborative group project for groups of 4-5. At the beginning of the semester students were divided into small groups based on shared interests in a particular student demographic: e.g., student athletes, freshmen, non-traditional students, etc. Each group had the goal of developing a “How to Succeed in College” guide that was geared toward their particular student group and divided into chapters by theoretical perspective. That is, there was a chapter for tips based on behaviorism and social cognitive learning theories, another for tips based on cognitive theories (like Information Processing), another for tips based on developmental and context-based theories (like Piaget and Constructivist theories), etc.

Throughout the semester groups met regularly in class as we worked our way through the various theoretical perspectives on learning. Each student wrote two specific tips for success that were grounded in one of the relevant theoretical perspectives, and then they wrote a one-paragraph rationale for the tip, explaining how to implement the tip, how it aligns with the relevant theory, and then briefly discussing and citing a current research study that lends support for implementing the tip. All this was to be done clearly and in a way that non-psychology students would be able to understand. Group members took turns taking responsibility for various tasks such as formatting the documents uniformly, proofreading and making suggestions for revisions, and collecting group members’ work.

Prior to the start of the semester I had acquired the support and cooperation of three faculty/staff members at my institution, the director of our Center for Student Success, one of our learning specialists, and a fellow psychology professor who was also heavily involved in student advising and student support at the college. These three served as external reviewers of the final projects and rated the projects based on a rating scale I designed. Final projects, which were all in the form of booklets, were then evaluated based on external review feedback as well as instructor feedback. Finally, students all completed self-evaluations and group member evaluations, which also factored into course grades.

There are numerous potential applications for this type of project model in psychology courses. The main consideration is that students develop a product that could be useful in the real world. In Developmental Psychology courses, for example, students could develop specific
parenting guides or guides for caring for the emotional and cognitive needs of aging adults. Abnormal psychology instructors could assign students a project in which they create pamphlets or wikis which provide mental health information for incoming college students. In many courses these types of projects would simply be supplemental homework projects or could be used to replace an exam.
Characteristics of the Test-Anxious Student: The Roles of Personality, Motivation, and Control Beliefs

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Presented at: Rocky Mountain Psychological Association
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Test anxiety is a nationwide epidemic that impairs students, impeding academic performance and damaging self-esteem. Specifically, according to American Testing Anxieties Association (AMTAA, 2015), students report that tests and schoolwork cause more anxiety than any other anxiety triggers in their lives. Students with test anxiety rarely seek accommodations for their anxieties, causing them fall further behind academically. Because of the ubiquity of testing anxiety (TA) and its important effects on students, it is valuable to determine which students may be most vulnerable to TA, with the goal of intervening with such at-risk students to help them develop strategies to overcome their TA, and ultimately to promote their academic success.

In one such attempt, Fitch (2004) investigated correlations between the Big Five Personality traits and TA. High levels of neuroticism and conscientiousness were associated with greater sensitivity to negative emotional stimuli, causing a negative long term effect when such emotional stimuli were encountered. Because TA is a negative emotional state that often leads to academic challenges, students high in these two traits may be more likely to develop TA in the first place, and the testing anxiety may subsequently become reinforced once academic difficulty is encountered. Chamorro-Premuzic, Ahmetoglu, and Furnham (2008) also investigated predictors and correlates of TA. Their study identified multiple factors that influence TA, including poor academic self-efficacy, poor self-regulatory skills, and external academic locus of control.

Together, these studies support the contention that individual differences and personality contribute to susceptibility to TA. Nonetheless, there are questions that still need to be answered. The current study focused on how one’s academic motivation (i.e., intrinsic or extrinsic), combined with personality traits and control beliefs, correlate to students’ reports of TA, examining the potential for combined predictive capacity when examining the Big Five traits, academic motivation, and potential interactions among these predictors, in accounting for observed differences in TA. We expected that the Big Five personality traits and academic belief variables would each account for unique variance in TA. It was also hypothesized that the positive correlations between neuroticism and conscientious and TA, as observed in Fitch (2006) would be replicated, as would relationships between extrinsic control beliefs and poor academic self-efficacy and TA.

Data were collected from 161 participants (99 female, 60 male, 1 nonbinary, 1 undisclosed) recruited from the Psychology participant pool, comprised of students enrolled in the
Introductory Psychology course. The study was conducted online, using an anonymous survey. Specifically, participants completed basic demographic questions and general questions regarding their overall academic performance (e.g., current cumulative university GPA). Also included were a measure of the Big Five personality traits (i.e., 10 items per trait), drawn from the International Personality Item Pool (cf. Goldberg et al., 2006). All subscales exhibited good internal consistency (α’s range from .77 to .86). Participants also completed the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991). The MSLQ comprises several subscales to assess individual constructs in an academic context, including Intrinsic Motivation (k=4; α=.69), Extrinsic Motivation (k=4; α=.75), Control Beliefs (conceptually similar to the locus-of-control scales utilized by Chamorro-Premuzic et al., 2008; k=4; α=.75), Academic Self-Efficacy (k=8; α=.93), and Test Anxiety (k=5; α=.84). Because the MSLQ TA subscale is quite brief, we also used the Suinn Test Anxiety Behavior Scale (STABS; Suinn, 1969; k=50; α=.84).

Participants reported moderate levels of TA. TA scores were first regressed onto the Big Five traits; together, personality accounted for 28% and 35% of variance in the MSLQ-TA and STABS measures, respectively (both p’s<.001). In each case, neuroticism positively (p’s<.001) and openness negatively (p’s<.02) individually predicted TA. Adding the MSLQ subscales accounted for significant additional variance in the MSLQ-TA (ΔR²=.22) and STABS (ΔR²=.11, both p’s<.001). Neuroticism and openness remained significant predictors of MSLQ-TA; in addition, Intrinsic and Extrinsic Academic Motivation positively predicted TA, and Academic Self-Efficacy negatively related to MSLQ-TA (p’s≤.004). For the STABS, neuroticism remained a significant predictor of TA; however, openness was no longer significantly related to TA (p=.69) and conscientious emerged as a positive predictor of TA (p=.003). Similarly to the MSLQ-TA, Extrinsic positively, and Self-Efficacy negatively predicted TA (p’s≤.004), but Intrinsic motivation was not related to TA (p=.16).

These results demonstrate that personality and academic predictors make unique contributions to predicting TA. Neuroticism and Extrinsic Motivation were reliable risk factors for TA, across TA measures and analyses. Academic self-efficacy was a reliable protective factor for TA. We did not replicate Fitch’s finding that extraversion related to TA, and found mixed evidence that openness, conscientiousness, and Intrinsic motivation might predict TA. These findings point to potential risk factors that might be used to identify test-anxious students, as well as protective factors that might be promoted through interventions to reduce TA.

References


First Time College Freshmen: The Importance of Health and Learning Skills

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Freshman year is a critical period where students’ impressions and experiences can have a substantial influence on how well they integrate into the university, and whether they decide to remain in college. According to Bai and Pan (2009), it is during freshman year that approximately a quarter of students drop out, and it is during the first two years that the most dropouts occur. Additionally, early behaviors are thought to impact how likely a student is to remain in college (Goenner, Harris, & Paul, 2013; Pascarell, Terenzini, & Wolfle, 1986). While there is a body of literature dedicated to experiences that lead to student attrition—when students drop out of college, research on the importance of learning strategies, student wellness, and the effectiveness of tools designed to assist students during their transition to college is limited. Therefore, the current study’s purpose is to evaluate whether students at-risk of dropping out are impacted similarly as regularly admitted students by support in the form of an online tool that helps students develop important college skills. Students at-risk for attrition are expected to score lower on assessments of learning strategies and wellness, and are anticipated to be more impacted by the use of a tool that was created to assist them in developing important skills for college success.

The outcome of good academic integration in most cases is better academic performance and ultimately a higher GPA. According to Tinto (1993), a student’s academic performance is an indication of the student’s integration into the university and freshman GPA is one of the strongest predictors of whether a student will remain in school. When students have positive or negative experiences with their academic performance it can then go on to influence their future performance and their decision to remain in school. Success Net, a tool developed by the University of Colorado Colorado Springs for freshmen, was created to assist students in the development of skills that are needed for college success so that they would have more positive academic experiences. If students who use Success Net are found to have higher end of fall semester GPAs than students who did not use Success Net then the effectiveness of aiding college transition by providing an interactive tool for students would be supported. The end of fall GPAs for students who were exposed to the content and assessments in Success Net were compared to students who were not exposed to Success Net. This is because of the importance of first semester GPA as a predictor of academic integration according to Tinto.
Students who were exposed to Success Net received assessments and information for three domains: academic, community, and wellness. In the academic domain students were given the option to take: the VARK assessment of learning type (visual, auditory, read-write, kinesthetic), the Motivational Strategies for Learning Questionnaire (MSLQ), Multiple Intelligences Self-Assessments, an interactive time-wheel, and the Holland career assessment. In the community domain students were instructed in how to use Mountain Lion Connect, a UCCS website for clubs and activities on campus, and a campus map. In the wellness domain students could take the College Freshman Wellness Scale (CFWS), a Test Anxiety scale from the MSLQ, and were given a link to the UCCS mental health screening and the campus counseling center.

This study is part of a larger evaluation of Success Net. In this study only the MSLQ learning strategies (Pintrich & DeGroot, 1990) and CFWS (Al-Tabaa, Norelli, Vayer, Kilcoyne, & Durham, 2015) were compared for both regular admit students and students labeled as more likely to drop out of college (at-risk students). According to the Office of First Year Experience at UCCS, the at-risk groups at UCCS are: students who have a low composite score (<92), which is a combination of their high school GPA and their SAT or ACT score, are undecided in their major or are a pre-major (pre-nursing, engineering, or business) because they did not meet the requirements of the major. In this for the Motivational Strategies for Learning Questionnaire the organization, rehearsal, elaboration, and critical thinking subscales were evaluated. At-risk students are believed to score lower in these areas, but the literature only shows that a few empirical studies researching these differences have been performed. Therefore, if at-risk students score lower on these assessments it would provide further evidence for supporting these skills early during college. The study by Proctor, Prevatt, Adams, Reaser, and Petscher (2006) is one study that discuss differences been high achieving and lower achieving students for developing proper study skills. They found that academically struggling groups scored lower on assessments of study skills, which they defined as competence in: acquiring, recording, organizing, synthesizing, remembering, and using information and ideas.

Wellness has also been found to be essential for student success. Nutrition and eating habits have been found to be a large problem among students (Haberman & Luffey, 1998), and exercise has been found to impact learning and mood (Yeung, 1996). In the study by Curcio, Ferrara, and Gennaro (2006) they found that sleep was also important for overall health in students and that lack of sleep is related to academic performance and both declarative and procedural learning. Additionally, Misra and Ches (2000) found that freshmen and sophomore experience higher reactions to stress than juniors and seniors.

In this study all incoming Fall 2015 UCCS freshmen had Success Net available to them. Students were also informed of Success Net in their Gateway Program Seminar (GPS) course, and through the psychology department in order to gain research credit. Students received either class credit or extra credit. A one-way ANOVA comparing the assessment scores of the five different student groups, the three different at-risk groups, those students who have multiple at-risk labels, and the regular admit student group was performed for the MSLQ subscales and the CFWS. Additionally, a 2X2 ANOVA was performed for Success Net use and GPA for the different at-risk groups.
References


Conscientiousness and the Intro Psych Student

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Conscientiousness, as envisioned by Big Five trait theories, combines competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Costa & McCrae, 1992). Not too surprisingly, conscientiousness predicts a host of health, academic, and work outcomes (Bogg & Roberts, 2004; Hill & Roberts, 2011; Kenford, Smith, Wetter, Jorenby, Fiore, & Baker, 2002; Weiss & Costa, 2005; Mount, Barrick, & Stewart, 1998). Among college students, conscientiousness predicts high grade-point averages (Paunonen & Ashton, 2001). An investigation of student conscientiousness within the introductory psychology course can meet a number of useful objectives, including exposure to research methods, familiarity with trait theories of personality and personality assessment, and application to real-world student success.

The introductory psychology course presents a unique opportunity to dispel some of students’ misconceptions about the field (Gurung, Hackathorn, Enns, Frantz, Cacioppo, Loop, & Freeman, 2016). As noted by Gurung et al. (2016), the incorporation of experiential, hands-on exposure to research-related activities is essential to establishing the idea of psychology as a science.

Very few experiential activities engage students more than taking personality tests. Tests that can be taken quickly in class and self-scored can be shared immediately using a variety of technologies, such as audience response systems. Students not only learn about the implications of their own results, but become aware of where they fit within the context of their population of classmates. In this presentation, I share a proof-of-concept study of the relationships between conscientiousness and student performance as well as ideas for incorporating a learning activity about student conscientiousness into the introductory psychology course curriculum.

Method

Participants
One hundred four students enrolled in general education psychology courses at a large, public, Western university participated.

Instruments
In exchange for extra credit, participants completed the short version of the Chernyshenko Conscientiousness Scales (CSS; Hill & Roberts, 2011). Students’ final percentage in the course was used to measure student success. This percentage included 50% exams, 15% audience response measures (iClicker REEF), and 35% online homework.
Procedure
Students completed the CSS and returned a paper copy to the investigator, who had access to their final grade percentage.

Results
Overall, CSS scores and final grade percentages were moderately positively correlated, $r(102) = .32$, $p = .001$. To test whether this correlation was moderated by student experience, I computed correlations separately for first-year students ($N = 26$) and upper-year students ($N = 78$). CSS scores and final grade percentages were strongly positively correlated for the first-year students, $r(24) = .60$, $p = .001$. As shown in Figure 1, CSS scores and final grade percentages were also positively correlated for upper-year students, $r(76) = .26$, $p = .02$. To compare the strength of the relationships between the first-year and upper-year students, a Fisher $r$-to-$z$ transformation was conducted using a two-tailed test. The results approached significance, $p = .07$.

Discussion
Conscientiousness and Student Performance
In this proof-of-concept demonstration, conscientiousness scores predicted final grade percentages in general education psychology courses, and raised the possibility that the effect of conscientiousness on the performance of first-year students might be larger than for upper-year students. It is possible that students with low conscientiousness learn to compensate for this trait. After experiencing unsatisfactory results, the student with low conscientiousness might make more concerted, conscious efforts to use better time management or other organizational skills.

The current results are limited by small sample size and the lack of diversity of the sample, which derives from the relative lack of racial and ethnic diversity of the campus. Efforts to replicate these data in a more representative sample would be useful. Future research could also incorporate correlations among the subdomains of conscientiousness outlined by Costa and McCrae (1992). Some of these (e.g. self-discipline, achievement striving) might have stronger relationships with student success than others (e.g. order, dutifulness).

Implications for Teaching
The results of this study suggest an opportunity to engage students enrolled in introductory psychology in a relevant, real-world application of personality theory while also promoting scientific reasoning and student success. The 20-item short CSS takes just a few minutes to complete and score. A learning activity based on completion of the CSS could be incorporated into the introductory psychology class on the first day as an ice-breaker (“real” personality testing versus “pop” testing), discussed again during a unit on research methods (sampling, central tendency, relationship versus causal conclusions), and during a unit on personality and personality assessment (trait theory, self-report). Following exams, the CSS data could be revisited and correlated with student results.

Regardless of the presentation context chosen by the instructor, discussions of the implications of conscientiousness for student success could encourage awareness among students with low scores at a time when their performance might be most vulnerable.
Discussion of how to compensate for low conscientiousness (as well as the traps of having high conscientiousness, such as perfectionism) benefit all students.

References

Figure 1. Relationships between CSS scores and course grades. CSS scores and course grades (in percent) were positively correlated for both first-year and upper-year students, but the relationship appeared to be somewhat stronger for first-year students ($r = .60$) than it was for upper-year students ($r = .28$).
Textbook Reading: Students' Perceptions of Noncompliance and What Would Help

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Abstract
The current study explored why students are not reading their textbooks. Participants were 272 undergraduate students enrolled in a general psychology course. As part of a larger study, students were asked about their reading habits, reasons for not reading, and what factors they perceived as likely to increase their reading. Consistent with previous studies, most students are spending very little time reading, and most are not fully completing the assigned reading. One of the more frequently endorsed reasons for not reading was lack of time. In terms of encouraging reading, frequently endorsed items included more closely linking course grades with reading, and having smaller sections to read. Implications of these findings are discussed.

Introduction
Previous research suggests that students are spending very little time reading textbooks. For example, in a finance course, Berry, Cook, Hill, and Stevens (2011) found that, in a typical week, 18% of students reported not reading at all, 43% reported reading less than one hour, 31% read between one to three hours, and only 8% read more than three hours a week. Similarly, Sikorski et al. (2002) found that, in a given week, most (> 80%) students from introductory college courses reported reading their textbook less than three hours a week. Regarding when students read, many wait to read until right before an exam (e.g., Clump, Bauer, & Bradley, 2004; Sikorski et al., 2002).

Although there is evidence that students are not reading, there is less research on why this is occurring and the factors students perceive as potentially increasing reading compliance. Hoeft (2012) found that students often blamed their work schedules and social life activities for reading noncompliance. Similarly, for business undergraduates, Starcher and Proffitt (2011) found that the most frequently cited reason for reading noncompliance was lack of time. Students in that study also cited factors such as the textbook was “boring” and “not meaningful” and that the “professor rarely refers to the textbook” (Starcher & Proffitt, 2011, p. 401). Regarding factors students perceive as potentially increasing reading compliance, one suggestion involved the professor telling students what is important to read (Berry et al., 2011; Baier, Hendricks, Gorden, Hendricks, & Cochran, 2011). Hoeft (2012) found that the most frequent suggestions given by students throughout the semester involved the use of quizzes, supplemental materials based on the reading, and reminders given by the professor.
The current study further explored characteristics (e.g., how much, when they read) of textbook reading for general psychology and the importance students placed on textbook reading. This study also explored students’ perceptions of why they do not read their textbooks and what factors they perceived as likely to increase their reading compliance.

Method

Participants

The current sample consisted of 272 (96 men, 176 women) undergraduate students enrolled in a general psychology class. Most students in the sample were between 18 and 21 years old (92%), Caucasian (58%), and in their first semester of college (53%). The participants were recruited from the psychology research pool, and all received course credit for their participation.

Materials and Procedure

In groups, students completed a lengthy survey. For the purpose of this study, only questions related to textbook reading were examined. Using multiple choice questions, students were asked how much time each week they devoted to textbook reading, and how much of the assigned reading they completed. Additionally, on 5-point scales (1 = strongly disagree, 5 = strongly agree), students who did not complete all of the assigned reading rated various possible reasons (e.g., I did not have time to read) for not fully completing the reading assignment, and in another set of items, rated factors (e.g., there were more assignments based on the grade) that might increase their reading compliance. Also, on similar 5-point scales, all students were asked about the importance of reading (e.g., reading the textbook had a positive effect on my grade). For ease of presentation, results for these scales are presented as agree/strongly agree, neutral, and disagree/strongly disagree. On 5-point scales (1 = Never, 5 = Always), all students also were asked when they read (e.g., right before the test or a quiz).

Results

Students reported spending very little time reading their textbook. In fact, 58% of students reported spending one hour or less each week reading for general psychology. Additionally, 32% reported spending two to three hours per week. Thus, 90% of the students reported reading 3 hours or less per week. Further, 70% of students reported reading half or less of the required readings. Only 11% reported completing all of the assigned readings. Regarding when they read, 58% of students reported almost always/always reading just before a test or quiz, and 65% reported almost always/always reading the textbook when doing homework. Only 11% reported almost always/always reading the material before it was covered in class lecture, and 33% reported that they almost always/always read it after the topic was covered. As can be seen in Table 1, most students believed that reading the textbook was important.

Students who reported not reading all of the assigned text were asked what prevented them from doing so. As can be seen in Table 2, one of the most frequently endorsed reasons was a lack of time (50%). Other frequently endorsed reasons included only reading the amount necessary to complete study guides (55%) and chapter handouts (66%).
Students who did not complete all of the readings also were asked what factors would encourage them to read their textbooks (Table 3). The most frequently endorsed reasons included: more quizzes on the assigned readings (59%), more test questions on the assigned reading material (65%), greater impact on grades (69%), more assignments based on the readings (73%), smaller reading sections (72%), and having less going on in their life outside school (63%).

Discussion

Although students in this study acknowledged the importance of textbook reading, consistent with previous research (e.g., Berry et al., 2011), this study found that most students spent very little time reading their text. Further, for most students, reading the textbook occurred in conjunction with graded material. For example, similar to other research (e.g., Sikorski et al., 2002), many students reported that when they did read, it was right before a test. Additionally, many students reported reading only the amount necessary to complete homework assignments.

In examining students’ perceptions of factors that hinder textbook reading compliance, several different themes emerged. Consistent with the work of Hoeft (2012), time constraints associated with nonacademic commitments were cited by many students who did not complete all of the reading. In that light, perhaps students view only reading the minimum amount necessary to complete homework and study guides to be an efficient use of their time. Although less frequently endorsed, another theme for noncompliance involved the textbook (i.e., being overwhelmed by the amount of information; being boring). Finally, a significant number (42%) of those who did not complete all of the reading indicated that they did not want to do the assigned reading.

In this study, students’ perceptions of what would increase textbook reading (e.g., assignments based on readings; quizzes; smaller reading sections) are generally consistent with suggestions offered from similar studies (e.g., Clump et al., 2004). In a survey of business faculty, Starcher and Proffitt (2011) found that pre-class assignments were the activities most frequently recommended by professors to encourage textbook reading. Consistent with some faculty comments in the Starcher and Proffitt study (2011), however, students tend to read only the minimal amount of text necessary to complete these types of assignments. Therefore, pre-class assignments need to be detailed enough to require an in-depth reading of a textbook. Further, the results of this study also suggest that time management skills might be helpful in light of students’ reports of other commitments.

Despite a relatively small sample size and other limitations, the current study joins other studies (e.g., Clump et al., 2004; Hoeft, 2012) in identifying factors that may potentially increase student textbook reading. As indicated from the results of this study, increasing students’ textbook reading is a multifaceted issue.

References


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Table 1

*Students’ Perceptions of the Importance of Reading*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree/Agree</th>
<th>Neutral</th>
<th>Disagree/Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was important to read the textbook to perform well in the course</td>
<td>61</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>It was important to read the textbook to understand the material</td>
<td>70</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>It was important to read the textbook to understand the lecture</td>
<td>43</td>
<td>25</td>
<td>32</td>
</tr>
<tr>
<td>Reading the textbook had a positive effect on my grade</td>
<td>57</td>
<td>28</td>
<td>15</td>
</tr>
</tbody>
</table>

*Note. N = 178.*
Table 2

*Reasons Why Students Chose Not to Read the Assigned Readings*

<table>
<thead>
<tr>
<th>Reason</th>
<th>Strongly Agree/Agree %</th>
<th>Neutral %</th>
<th>Disagree/Strongly Disagree %</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not need to read to be successful in the class</td>
<td>28</td>
<td>25</td>
<td>47</td>
</tr>
<tr>
<td>I did not have time to read</td>
<td>50</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>I was overwhelmed by the amount of information in the textbook</td>
<td>36</td>
<td>29</td>
<td>35</td>
</tr>
<tr>
<td>I did not want to read the assigned readings</td>
<td>42</td>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>The textbook was boring</td>
<td>34</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td>The textbook information was not related to the questions on the test</td>
<td>13</td>
<td>13</td>
<td>74</td>
</tr>
<tr>
<td>I did not read entire chapters, but just enough to do the study guides</td>
<td>55</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>I did not read entire chapters, but just enough to do handouts/chapter checkups</td>
<td>66</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>I read the chapter summaries instead</td>
<td>26</td>
<td>21</td>
<td>53</td>
</tr>
<tr>
<td>I went to tutoring sessions instead of reading</td>
<td>6</td>
<td>7</td>
<td>87</td>
</tr>
</tbody>
</table>

*Note. N = 132-134.*
Table 3

Factors That Would Have Encouraged Students to Read More of the Assigned Readings

<table>
<thead>
<tr>
<th>I would have read more of the assigned readings if…</th>
<th>Strongly Agree/Agree %</th>
<th>Neutral %</th>
<th>Disagree/Strongly Disagree %</th>
</tr>
</thead>
<tbody>
<tr>
<td>…there were more quizzes on the assigned readings</td>
<td>59</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>…there were more test questions on the assigned reading material</td>
<td>65</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>…reading the textbook actually seemed to impact my grade</td>
<td>69</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>…there were more assignments based on the readings</td>
<td>73</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>…the sections of reading were smaller (e.g., sections of pages instead of whole chapters)</td>
<td>72</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>…the readings were more interesting.</td>
<td>60</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>…I didn’t have so much going on in my life outside school</td>
<td>63</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>…the setup of the textbook (e.g., loose-leaf and in a binder) was more like a traditional textbook</td>
<td>40</td>
<td>27</td>
<td>33</td>
</tr>
</tbody>
</table>

Note. N = 133-134.
Is the Pen Mightier than the Keyboard?: Assessing Whether Distinct Types of Note-Taking Influence Retention

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Most college students take notes (Palmatier & Bennett, 1974), and research has shown a strong correlation between academic performance and note-taking (Baker & Lombardi, 1985; Kobayashi, 2006). Students report being goal-directed in their note-taking, using note-taking as a way to maintain their attention during lecture, to understand and organize the material presented in lecture, and to achieve good grades in the course (Van Meter, Yokpoi, & Pressley, 1994). Two hypotheses have been offered to explain the beneficial aspects of note taking: the encoding hypothesis and the external-storage hypothesis (Di Vesta & Gray, 1972). The external-storage hypothesis, which is better understood in academic literature, posits that note taking benefits performance by acting as an external storage of information that can be reviewed. Less is known about the second perspective, the encoding hypothesis, which states that the benefits of notetaking are derived from the deep encoding processes resulting from the generation of information. This perspective, which serves as the theoretical foundation of the current experiment, predicts that verbatim note-taking methods will yield more shallow cognitive processes and thus poor retention of information.

Computer note taking often involves writing a greater number of verbatim notes. Longhand note taking methods require students to condense and prioritize the information presented, and thus indicates deeper processing. Mueller and Oppenheimer (2014) asked participants to take either longhand or laptop notes on a pre-recorded lecture and then, after completing distractor tasks, respond to both factual recall items and comprehension-application items about the lecture. Their results indicated that participants who took notes on a laptop performed significantly worse on comprehension application questions than longhand note-takers. We are conducting a replication and extension on Mueller and Oppenheimer’s (2014) investigation into the relationship between retention of information and the type of note-taking employed (i.e., paper and pen or computer). We propose that the deep encoding processes required to condense information using the slower longhand method best explains these results. Through our replication and extension of Mueller and Oppenheimer’s (2014) experiment, we are disentangling these effects. We have added a condition called restricted computer, in which participants will be required to type with only two fingers to reduce verbatim note taking and encourage deeper processing. We hypothesize both longhand and restricted laptop performance on comprehension-application questions will be superior to that of the laptop condition.
Why Replication?

Reproducibility is a defining element of research; if the findings of a study cannot be reproduced they cannot be considered reliable. There is a tendency in academic research across all fields to claim conclusive findings from a single study. Scientific theories are established only after they have failed to be falsified through repeated replications (Duncan, Engel, Claessens, & Dowsett, 2014). The majority of published research findings in the psychological sciences have not been reproduced. This dearth of replication studies has become so problematic in the psychological sciences that a recent APA convention dedicated an entire two-hour block to “The Replication Crisis” (Beran, Mohl, Stam, & Graham, 2015). A recent large-scale collaborative effort to replicate over 100 psychological findings discovered only 36% of findings could be replicated, demonstrating the need for replication (Open Science Collaboration, 2015).

Extension of Mueller and Oppenheimer (2014)

Our extension was a between-participants design that adds a third condition in which computer note takers will only employ the index fingers of their right and left hands. This should reduce verbatim note taking and encourage deeper processing. Verbatim note taking methods, associated with laptop note taking, have been shown to yield shallow cognitive processes and poor retention of information when compared to more elaborative methods. We propose the results obtained by Mueller and Oppenheimer (2014) are best explained by the deep encoding processes required to condense information using the slower longhand method. We hypothesize that restricting the number of fingers participants use would slow down their note taking, causing them to write fewer words and more deeply encode the presented content. Consequently, we expect the performance in the restricted laptop and longhand conditions to be equivalent. If the findings of Mueller and Oppenheimer (2014) can be reproduced and extended, it would have critical implications for both student success and technology-related classroom policies.

References


Previous research on academic success has indicated that effective time management skill is one of the most critical components that predict students’ academic success (Claessens, Van Eerde, Rutte, & Roe, 2007). It was also suggested that time allocation and management practices can greatly improve students’ overall academic performance (Congdon, Morgan, & Lebovitz, 2014; Nadinloyi, Hajloo, Garamaleki, & Sadeghi, 2013; Britton & Tesser, 1991).

However, many of these findings do not place primary focus on the role of students’ self-perceived benefits of these time management interventions. Some concerns may thus arise based on the fact that students may feel less motivated and more overwhelmed by these interventions, especially when they become more aware of the limited free time availability. While Ackerman and Gross (2003) argued that students’ perception of limited time availability seemed to correlate with higher academic performance, others have demonstrated that students identified lack of time as one of the most significant factors in their academic failure (Hashim, Hameed, Ayyub, Ali, & Raza, 2014).

In the face of such divide, the current study sought to question whether time management instruction within a college course is perceived to be beneficial by the students in their self-reports, irrespective of any increase in their course performance marked by their exam scores. Moreover, whereas previous studies did not incorporate the time management instruction in the course curriculum, the present study included students in an introductory psychology course who had participated in a semester-long time management intervention that included weekly evaluation reports as course assignment.

The current study included students enrolled in an introductory psychology course, who received a 15-minute instruction on time management at the beginning of the semester, and participated in a semester-long intervention on time management that included weekly reports on their progress. The instructions included explicit tips and techniques on time log analyses and time saving plans; the weekly reports included weekly performance evaluations, reflections, as well as modifications for the upcoming week. Towards the end of the semester, students completed a final report, which included questions targeting students’ perceptions of the usefulness of the time management assignment, along with reflections on their overall time management skill. From the final report, a total of 70 students’ answers to the four open-ended questions were compiled and further categorized based on content: 1) What was the best part of using the scheduler? 2) What were some of the biggest challenges of using the scheduler? 3) Do you think the scheduler was helpful for the course? If so, how? 4) What are some skills learned from this assignment, if any?
Students’ answers revealed an interesting pattern; many reported that the reflection activity helped them not just on enhancing their time management skills (30%), but on various other components necessary to do well in a college course: task organization (30%), course content management (27%), as well as study skills (13%). When asked to describe the most important skills they had acquired as a result of the time management training, students’ answers included not just effective time management skills (25%), but also other academic skills helpful to successful performance in a course (overall study skills: 37%, course organization skills: 15%): “I have learned how to chunk workloads into manageable amounts so that I retain the information better but do not feel overwhelmed;” “Spreading out my studying hours helps me stay focused.” As for the biggest challenges of this intervention, many students identified the lack of motivation for completing the weekly evaluations (29%) as well as their lack of expertise in academic time management (22%). Nevertheless, the majority of the students (88%) found the intervention to be helpful in assisting their performance in the course: “Always reminded me of due dates;” “It helped me remember to do the readings;” “It forced me to have a dedicated time to study psychology.” Students’ answers indicated that they attributed their successful academic performance to the time management assignment, particularly in their increased awareness of limited time availability throughout the semester. Furthermore, when asked the likelihood of employing such practices in their later academic attempts, the majority (84%) expressed their plans for using the strategy in future college courses.

These results demonstrate that explicit awareness of lack of free time does not inhibit students’ perceived academic performance, contrary to Hashim et al. (2014). Instead, the results corroborate and extend the findings of Ackerman and Gross (2003) in that students actually attribute their academic success to this particular awareness. Given that the majority of the students indicated their plans for using strategies similar to that of this training intervention in their future college courses, the findings suggest that 1) time management interventions can be successfully incorporated into coursework, 2) these interventions can be effective in students’ self-perceived academic success, and that 3) students’ explicit awareness of limited time availability seems to be the one of the core components of the time management exercises that promotes, not prohibit, successful gains in time management skills. These findings also suggest that with continued encouragement for sustained motivation, time management assignments can greatly enhance students’ academic experiences in a college course, as they could aid in students’ self-perceived academic success.

References
Time Management Assignments in an Introductory Psychology Course Can Boost Students’ Performance

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Previous research on students’ learning assessment has identified time management skill to be one of the most critical components of academic success (Claessens, Van Eerde, Rutte, & Roe, 2007). The positive impact of learners’ time management skills on academic performance has been demonstrated across all levels of schooling; the educational advantage of effective time management practices has been illustrated in elementary students (Hoff & Ervin, 2013), secondary students (Cyril, 2014), high school and traditional college students (Indreica, Cazan & Truta, 2011), as well as non-traditional college students (MacCann, Fogarty, & Roberts, 2012).

However, research has also demonstrated that many college students are limited in terms of time allocation and management skills (Ozsoy, 2014; Fernex, Lima & de Vries, 2015). Given that time management is a learnable skill, there have been attempts to introduce educational intervention to learners, within the educational context but also outside the classroom. For example, Nadinloyi, Hajloo, Garamaleki and Sadeghi (2013) reported that after 10 training sessions, college students demonstrated increased general and academic time management skills.

To date, little research has investigated the effectiveness of time management intervention directly incorporated into the classroom setting, over the span of a college course.

The present study sought to extend inquiry to consider time management instruction within a college course. To test the most effective intervention method within the classroom, three different approaches were used: 1) No Study Plan group: a 15-minute instruction on time management at the beginning of the semester, which included explicit instructions on time log analyses, timewaster analyses, time saving action plans, as well as tips on effective time management; 2) Semester Plan group: a 15-minute instruction plus pre- and post-semester reflection report assignments, which included goal/distractor/resource identification in the pre-semester, and achievement/progress analysis and reflection in the post-semester; and 3) Weekly Plan group: a 15-minute instruction plus a weekly reflection report assignments, which included performance evaluations and modified plans for the upcoming week. Under this setup, the main hypothesis was that the presence of self-management reflection would boost students’ performance in the course, and that the frequency of the reflection exercises would lead to differences in academic performance.

Data were collected from three different sections of introductory psychology, taught by the same instructor. A total of 238 students’ exam scores were analyzed; of those, 112 students did not complete the reflection report. Of the 126 students who completed the report, 70 students completed the report on a weekly basis. For each of the students, score gains between exam 1 and exam 3 were calculated. For example, if a student earned an 80 on the first exam and 95 on the second exam, the score gain was computed to be 15.

From these results, pair-wise comparison analyses were performed on the score gain between the intervention groups. Students who received the instruction and exercised self-
reflection report had a significantly higher score gain than those who only received the instruction ($t(236) = -1.02, p = .05$), demonstrating the effectiveness of the reflection activity. Following this result, further analyses were run on score gains from the bottom 10% and the top 10% of each group. A 3 (Group) x 2 (bottom vs. top) factorial analysis revealed a significant two-way interaction ($F(2, 24) = 7.33, p < .05$), as well as main effects for both the bottom and the top performance groups. Tukey’s post hoc tests indicated that the pattern of significant variation differed across performance groups (bottom vs. top). In particular, among low performing students, significant differences were found between No Study Plan vs. Weekly Plan, and also between No Study Plan vs. Semester Plan, but not between Semester Plan vs. Weekly Plan, indicating that the self-reflection activity may be beneficial regardless of the frequency. Contrastively, among high performing students, significant differences were found between No Study Plan vs. Semester Plan and also between Weekly Plan vs. Semester Plan, but not between No Study Plan vs. Weekly Plan, indicating that the presence, not the frequency, of self-reflection activity matters in determining the effectiveness of this intervention.

These results confirm that acquisition of time management skills can positively boost students’ academic performance, as evidenced by greater score gains and lesser score loss found in groups with self-reflection exercises. For high-performing students, the intervention increased score gains, whereas for low-performing students, the intervention mitigated the score losses, further demonstrating that these interventions can be successfully incorporated into classroom instruction. As for the specific details on the frequency and the contents of the intervention, the results suggest that while a simple instruction on time management is insufficient, a combination of instruction and self-reflection activity can be effective. As the effectiveness of the intervention differs by performance range in the course, it is important to note that it is not the frequency of the evaluations but the presence of self-reflection that serves as the determinant of success in mastery of academic time management skills. Therefore, the findings suggest that in integrating the intervention into the coursework, perhaps the weekly evaluation is not the most ideal practice, but the semester-wide evaluations may be more beneficial for the students.

Given that students’ initial time management skill before the intervention was not explored in the current research, future research will include a baseline time management questionnaire to further investigate the intervention effectiveness. Additionally, the most effective frequency for course-incorporated time management training will also be further explored.

References
Nadinloyi, K. B., Hajloo, N., & Garamaleki, N. S. (2013). The study efficacy of time

Student research assistants (RAs) may experience substantive risks when implementing psychological studies. As examples, RAs may experience physical risk when conducting research under unsafe conditions (e.g., late at night), psychological risk when interviewing participants about sensitive topics, or social risk when acting as a confederate engaging in embarrassing tasks in front of their peers (for a review, see Naufel & Beike, 2013). In order to handle these risks, Naufel and Beike proposed that principal investigators (PIs) adopt a Research Assistant Bill of Rights. Such rights inform RAs of the risks of research, the benefits of serving as an RA, and the procedures for reporting incidents should they themselves experience harm.

Anecdotal evidence suggests that faculty members agree that RAs need to be protected from risks, but they may not know what risks RAs experience. Indeed, when our lab presents the RA Bill of Rights at conferences or to colleagues, we primarily hear how this topic is something that faculty have yet to consider. We therefore aim to disseminate information to help RA mentors identify risk and methods for reducing risks. Table 1 provides a summary.

**Identifying and Reducing Physical Risk**

Physical risk is the potential harm to one’s body. RAs may experience physical risks if they conduct research in an unsafe area (e.g., late at night or in a dangerous location), handle hazardous materials (e.g., body fluids, chemicals, pathogens), or have the potential of being attacked by a participant (Naufel & Beike, 2013). When assessing the extent that a setting is safe, a researcher should consider if the setting is outside of the lab or after normal working hours. In such settings, RAs may be less likely to receive help if needed. Other settings may also pose risk, such as collecting data alongside a busy highway. The PI should consider if alternatives research methods exist that would reduce such risks. For instance, if there is no reason for the study to be conducted at night, then perhaps move the study times to be only during the day. Likewise, if a video camera would record the same data on a busy road as the RA, perhaps rely more on the technology than the RA. If the study must be conducted outside of normal working hours or in the field, have at least two RAs travel together.

RAs may also experience risks if the study involves materials that are hazardous, such as chemicals, pathogens, or other hazardous waste (Naufel & Beike, 2013). In these situations, extensive training of the RA is key. The Occupational Safety and Health Administration can serve as a resource for knowing the current standards for safe working environments.
(United States Department of Labor, n.d.). Their website includes training tools to help supervisors identify hazards, including a request form to have their work area evaluated.

Finally, RAs could also experience physical risk if participants attack them (Naufel & Beike, 2013). Although participants may react in any study, they are more likely to react in some studies more than others. For example, studies that intend to manipulate aggressive tendencies, concern a controversial topic, involve deception, or violate social norms are likely to elicit aggressive responses more than other studies. In such studies, it is important that the RA have a safety plan in place and is trained extensively on how to handle this behavior. This plan could include leaving the room if the participant becomes belligerent, pressing a panic button to alert police, or engaging in steps to deescalate aggressive behavior.

RA supervisors should also assess the risk that a participant would pull a weapon on an RA. State laws vary on the extent that students can carry weapons such as guns in public. Certain studies (such as a field study measuring if someone will intervene when witnessing a crime) could put the RA in grave danger.

**Identifying Psychological Risk**

RAs may also experience psychological risk when implementing their tasks. For instance, RAs have reported experiencing posttraumatic stress disorder symptoms when transcribing narratives about unpleasant events (Naufel & Beike, 2013). One research institute suggested limiting the extent that RAs are exposed to such material (Jewkes, Dartnall, & Sikweyiya, 2012). In their protocols, Jewkes et al. suggested limiting interviews to three interviews a day, four times a week. To make data transcription more practical, an RA mentor may wish to have several RAs rotate through the task. Additionally, the RA mentor should frequently ask RAs how coding is going, offer them a break, and have an alternative assignment ready.

RAs may also experience psychological risk when engaging in deception. Deceptive research can be stressful for a researcher (Oliansky, 1991). The steps for reducing the psychological risks associated with deception are the same for reducing other psychological risks: Give breaks, limit the number of times that an RA deceives participants each week, check in, and have an alternative assignment ready.

**Identifying Social Risk**

RAs can experience social risks when implementing their tasks (Naufel & Beike, 2013). For instance, RAs may provide their picture for a criminal line up for a study about eyewitness testimony. Or, RAs may serve as confederates and engage in socially unacceptable behavior (e.g., acting racist or sexist for a study). As Naufel and Beike note, participants may view the RA unfavorably in such situations. Such negative evaluations can be especially problematic if the RA interacts with participants outside of the lab, which is likely for research conducted on college campuses. If such a risk is possible, consider alternative methods for conducting the study. Perhaps consider if a computer program could take the role of the RA. Or, have the RAs be persons not associated with the college in order to reduce the likelihood that RAs and participants would interact. If having RAs from other areas is not possible, then the participant should be fully debriefed immediately after the study and should interact positively with the RA.
Conclusions

The first step to reducing risk is to identify the risks that RAs may encounter. PIs must work together with RAs to ensure that they understand the physical, psychological, and social risks that they may encounter while being involved in research. Informing RAs of the risks of research and the procedures for reporting harm is vital to creating an environment that ensures safety to all parties involved in research.

References


Suggested Resources

For more information regarding RA Rights, please visit https://sites.google.com/a/georgiasouthern.edu/rabillofrights/ or contact Dr. Karen Naufel at knaufel@georgiasouthern.edu.
Where did all the Studying Go? Getting through College with Little Investment

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Abstract

Research showing a lack of improvement in important thinking skills in college (e.g., Arum & Roska, 2010) prompted calls for higher expectations from faculty. Students are not highly engaged in their studies (NSSE, http://nsse.iub.edu/) and often fail to follow instructors’ guidance related to studying and learning (Clump, Bauer, & Bradley, 2004). Unfortunately, grades do not reflect such findings, and in fact, have risen steadily over the years (Bojatczer & Healy, 2010). We examined student effort and outcomes in 440 students from a diverse range of majors. Students reported spending an inadequate amount of time studying, but nonetheless received high grades which they believed were earned by their work.

Introduction

The amount and quality of student learning in college has been disappointingly low in recent research. For example, Arum and Roska (2010), in an examination of more than 2,300 students attending 24 schools from across the country found:

- no improvement in critical thinking, writing, and problem-solving in two years of college for about half of their participants, and fewers than a third made significant gains in these areas across the full course of their college curriculum.

The causes of these alarming findings are certainly many and complex, and are situated in the broader trends in education and society at large.

However, it is important to examine the factors over which individual students and faculty have some control: effort and expectations.

Method

Participants

- 440 participants recruited in Fall 2011 (n=276) and Spring 2013 (n=164) from introductory psychology course
  - 232 females, 193 males, 5 unreported
  - Age: M = 18.87, SD = 2.43, MD = 18.00
  - Various majors: e.g., undeclared 24%, education 17%, nursing 11%, criminal justice 9%, psychology 7%
  - GPA: M = 3.01, SD = 0.76 (4.0 scale)

Materials and procedure

- Incentive: partial course credit
- They self-reported number of courses/credits for given semester, how much time spent studying in the previous week, intentions for studying, perception of workload, expectation for grades, and whether faculty give unearned good grades
- 205 participants gave permission to access grades

Results

Workload

- Courses: M = 5.17, SD = 1.17/credits: M = 14.64, SD = 2.80
- Expected time studying: 29-30 hours/week
  - Reported time studying: 12-14 hours/week
    - 5-6 hours reading M = 5.41, SD = 5.87
    - 7-8 hours other work M = 7.76, SD = 8.38
  - Intended to study much: M = 3.17, SD = 1.28
    - 1 = intended to study much more, 7 = intended much less

Expectations/perceptions of workload

- 88% were aware of 2:1 rule i.e., 2 hours studying outside of class for each 1 hour in class for a 2.0 grade; http://wwwampus.yorkcollege.press/academics/curriculum/academic-strategies.html
  - Believed rule applied to only 2 of 5 of their current classes
  - Believed 2:1 rule was “slightly more” than needed
- M = 3.68, SD = 3.16, workload too much, 7 = workload too low
- 33% had asked a professor about workload expected
- 25% had asked about quality of thinking expected

Grades (on A=4.0 scale)

- Expected to earn M = 3.20, SD = .97
- Received M = 3.21, SD = .86
- Do not believe faculty give underserved grades! M = 0.6 professors, SD = 1.27, Max of 10

Discussion

Students were studying less than half the recommended time, by intention, despite knowing guidelines. Furthermore, they were given grades higher than what would be expected based on the 2:1 rule, though believed the high grades were deserved. Faculty are reinforcing low effort.

Possible explanations for paradox

- Pressure to lower expectations
  - Faculty desire lower workload for themselves
  - Faculty believe lower expectations will lead to higher student ratings
  - Faculty fear consequences to students of assigning low grades
- Faculty incorrectly assess students’ capabilities
  - Faculty attribute poor performance to ability vs. effort
  - Faculty overlook alternative ways to challenge students or provide sufficient scaffolding

Downward spiral

Ever lower moving target: Lower student performance → lower faculty expectations → lower student performance

Ways to address

- Absolute, rather than relative, thresholds (e.g., AACU rubrics, course guidelines, APA Guidelines for the Undergraduate Psychology Major)
- High impact assignments
  - Best practices research (e.g., NSSE http://nsse.iub.edu/)
  - Disciplinary research (e.g., Teaching of Psychology)
  - Pedagogical research on one’s own courses (e.g., Druen, Shedlowsky, & Strassel, 2014)
- Faculty insist upon program and campus-wide decision-making and coordination about appropriate levels of expectation, in both workload and quality of work, and suitable ways to incorporate into evaluation
Welcome to This Poster!
Please proceed at your own pace and feel free to ask questions anytime.

Your learning objectives (LOs) include:
1. Define Competency-based Education (CBE). Provide examples of practitioners.
2. Compare and contrast CBE with traditional delivery methods.
3. Explain what it means by faculty role deconstruction.
4. Demonstrate how students interact with course.
5. Demonstrate the role of the Course Mentor (CM) in CBE.

LO2. Compare and Contrast

<table>
<thead>
<tr>
<th>CBE</th>
<th>Traditional</th>
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<tbody>
<tr>
<td>Flexible time frame</td>
<td>Real time frame</td>
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<tr>
<td>Personalized learning</td>
<td>Standardized learning</td>
</tr>
<tr>
<td>Technology-based</td>
<td>Technology-enhanced</td>
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<tr>
<td>Asynchronous learning</td>
<td>Synchronous learning</td>
</tr>
<tr>
<td>Assesses mastery of skills and knowledge</td>
<td>Assesses need and requires Carnegie units</td>
</tr>
<tr>
<td>Remote work environment</td>
<td>Centralized work environment</td>
</tr>
<tr>
<td>Less control of student activity</td>
<td>More control of student activity</td>
</tr>
<tr>
<td>6-month term, no breaks</td>
<td>Various term lengths, seasonal breaks</td>
</tr>
<tr>
<td>Designed for nontraditional students</td>
<td>Designed for traditional students</td>
</tr>
</tbody>
</table>

LO3. Faculty Role Deconstruction

Course mentors: content experts who help students master course content via online webinars, emails, phone conversations, videos, and other learning resources
Student mentors: advisors and coachers who create student schedules, and monitor student progress regularly throughout student’s academic career
Instructional designers: create a duplicable course content with input from course mentors and industry experts
Assessment developers: create assessments, monitor reliability, validity
Third-party processors: administer objective assessments
Evaluations: grade subjective assignments

LO4. Student Interaction with Course

Students work through course content at open pace (usually 6 weeks)
- Text and other learning resources embedded in course modules
- Optional synchronous online learning experiences
- Virtual community to facilitate student interaction
- Meetings with course mentors optional, encouraged as needed
- Mastery in this course assessed through objective assessment
- Students demonstrate readiness by taking assessment
- If student does not pass, he/she works closely with course mentor on remedial areas. Course mentor determines readiness for retake
- Motivation, self-regulation, technology skills vary widely among students
- Managing priorities can be more challenging for adults

LO5. Role of the Course Mentor

Primary focus is on student success in course and in obtaining degree
- Assist students in mastering course concepts—any concept, any day
- Identify at-risk students through detailed analysis and provide just-in-time academic assistance
- Create and facilitate synchronous online learning experiences for students

Paradigm:
- Work primarily from home, 40-45 hours total
- Student appointments: 15-20 hours
- What time: 3-5 hours
- Course development: 1-5 hours
- Workshop/launch meeting: 2 hours
- Training/rotation development: 2 hours

Find answers here:

A Day in the Life of a Course Mentor:
Competency-based Learning in an Online Educational Psychology Course

Deanna K. Douglas, Ph.D. and Anastasia Betts Rh. D.

Presented at: National Institute on the Teaching of Psychology
Western Governors’ University

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Building Confidence and Strengthening Exam Performance Using Bloom and Generic Study Guides

Kyle Hennings, Clarissa A. Thompson
Kent State University

Jeffrey Nevid
St. John’s University

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Critical Thinking and First-Generation College Students
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Abstract
The University of California serves a diverse student population. With this diversity comes variation in experience and preparation. Critical thinking is an essential skill for university education. Parental education is positively correlated to performance on the first critical thinking exam (r = 2.1, p < .01). First-generation students show marked improvement during the middle of the quarter. However, grades for students from less educated backgrounds suffer at the end of the quarter.

Introduction
- The University of California is succeeding in enrolling low-income, under-represented, and first-generation students.
- Ensuring success, not just enrollment, is essential.
- Critical-thinking courses are an essential component of being an autonomous thinker (Broadfield, 1987) and is the foundation of scientific thinking.
- Research Methods in Psychology is a lower-division course, typically taught to 1st or 2nd-year students.
- The focus of the course is on thinking critically about construct validity and internal validity.
- Students are explicitly shown the sort of thinking that is expected and are given multiple assignment that require sophisticated thinking.
- Are first-generation students as prepared to demonstrate critical thinking as students whose parents have experienced more formal education?

Method
- Research Methods in Psychology is taught each quarter to sections of 300 students.
- Data was gathered from 600 students enrolled across Fall 2013, Winter 2015, and Spring 2015.
- Predictor Variables:
  - Parental Education:
    - Self-report of mother’s and father’s education level.
    - Coded as: “No College”, “Some College” (but no degree) and “College Degree” (at least one degree)
  - Exam,
  - Midterms are given during weeks 4, 7 and 10 of a 10-week quarter

Outcome Variable:
- Critical Thinking
  - Examine a written critical-thinking question (see example) that requires the student to generate a plausible alternate explanation for a claim and specify how that explanation could be ruled out.

Results
- The average performance on the first exam was predicted by parental education level (r = 0.8), p < .01.
- The students from families with college degrees performed significantly higher (M = 43%) than those with either some college (79%) or no college (26%).
- The achievement gap closed for the second exam. Parental education was not related to performance on the second exam (r = 0.16, n.s.)
- Performance dropped on the third exam. Performance on the third exam was positively related to parental education (r = 0.15, p < .01).
- There was a significant main effect of both Parental Education (r = 0.6, p < 0.1) and Exam (r = 0.6) on Critical Thinking Grade. There was no interaction (r = 0.15), n.s.

Discussion
- Those students with at least one parent having earned college degrees performed well on the critical thinking portion of the exam throughout the class.
- Those students whose parents have attended some college, but not a college degree, performed moderately well early in the quarter but showed a dramatic decline at the end of the quarter.
- Those students whose parents did not attend college began the quarter with a low score, but showed significant improvement on the second midterm, and then their performance dropped on the last midterm.
- Critical thinking exam questions were consistent across the quarter. They did not vary in difficulty.
- The students were exposed to practice critical thinking questions both during lecture and on homework throughout the quarter.
- Why did they not improve across the quarter? Why did the students from less educated backgrounds particularly suffer at the end of the quarter having previously demonstrated competence?
- Could it be due to stress at the end of the quarter?
- Could it be that the other material on Midterm 3 is more difficult?
- What interventions might ensure continued improvement across the quarter?
  - Before the first exam – assign additional practice exercises with extensive feedback
  - After the first exam – invitation to additional office hours for those performing <70% on Midterm 1
  - Before the last exam – invitation to additional office hours for those performing <90% on Midterm 2

References
http://www.nytimes.com/interactive/2015/09/27/usضبط colleges doing the most for low-income students.html

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Passion for Academic Activities: Does It Matter, and What Can We Do About It?

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Over the past few decades, educators have spent a lot of time trying to identify what factors lead to college-student success. A growing body of research suggests that passion might be one of these factors. In this brief review, I will discuss the concept of passion along with a model showing that passion can be either good or bad depending on how it is displayed. I will also discuss recent research showing that passion for academic activities can be associated with various good and bad outcomes. Finally, I will spend some time discussing what teachers might be able to do to promote a good type of passion in their students.

Passion for Activities: A Brief Review

Vallerand and colleagues (2003) first proposed the concept of passion for activities, which has its roots in Ryan and Deci’s (2000) self-determination theory (SDT). SDT suggests that people become intrinsically motivated—and ultimately reach their highest potential—when they experience autonomy (freedom of choice), competence (effectively interacting with their environments), and relatedness (social connections with others).

Vallerand et al. suggested that passion—which entails loving, spending time on, and valuing an activity—emerges in a similar fashion. First, during life, people necessarily engage in different activities. Some of those activities are more enjoyable than others, so people spend more time on them. If people find those interesting activities to be valuable or important for different reasons, they can develop into passions. Vallerand et al. also suggested that when people are passionate about an activity, that activity becomes self-defining. For example, students who are passionate about psychology say, “I am a psychology major,” not simply, “I study psychology.”

In addition, Vallerand and colleagues proposed that there are actually two different types of passion that can develop. Harmonious passion (HP) emerges when people freely choose to engage in an activity they love and value and then receive “autonomy support” from people around them. Because of the freedom involved, HP comes to occupy a strong but not overwhelming place in a person’s self-identity and produces the feeling of being “in control.” This feeling of control is associated with numerous positive psychological outcomes and frequently produces better performance outcomes (see Vallerand, 2008).

In contrast, obsessive passion (OP) emerges when people experience “psychological control,” or the feeling of being pressured to engage in an activity (which is the opposite of autonomy support). Although they still enjoy and value the activity, the choice to engage is largely due to external pressures. Consequently, OP comes to overwhelm a person’s self-identity, produces
the feeling of being “out of control,” and creates numerous negative psychological outcomes. Moreover, the negative psychological outcomes that people experience while engaging in their passionate activity often interfere with performance.

**Passion for Academic Activities**

Although a growing body of research has validated Vallerand et al.’s (2003) model of passion, few studies have examined passion for academic activities. Consequently, over the past few years, my lab has focused on the topic of passion for academic activities, with the primary purpose of better understanding what happens when students are (or are not) passionate about their academics, majors, and career choices. Here are just a few of the (yet unpublished) results we have observed during that time:

1. A good percentage of students (approximately 60%) meet the criteria for being passionate about their majors, but over half of those passionate students have high levels of OP.
2. HP students show less academic entitlement than OP or non-passionate students.
3. HP students experience more academic success (including significantly higher cumulative GPAs) than students who are OP or non-passionate.
4. HP students experience less burnout, less stress, and more academic satisfaction than students who are OP or non-passionate.
5. OP for academic activities predicts numerous problematic health behaviors (e.g., eating disorders, sleep problems).
6. HP is associated with a growth mindset (the belief that basic abilities, like intelligence, can be developed through hard work), whereas OP is associated with a fixed mindset (the belief that basic abilities are fixed; see Dweck, 2006).

In addition to examining how HP and OP are associated with different psychological and performance outcomes, we have begun to study the factors that might cause the different types of passion to emerge. For instance, students who have high levels of autonomy support from teachers, parents, and friends are more likely to show high levels of HP for academic activities. Conversely, students who experience high levels of psychological control from teachers, parents, and friends are more likely to show high levels of OP.

We have also found that HP for academic activities is positively related to student-teacher rapport. Currently, we are conducting studies to identify whether passion might cause rapport to develop or whether rapport leads to passion.

In sum, our studies seem to suggest that passion for academic activities is an important factor for understanding the psychological and performance outcomes that students experience during their time in college. These results also suggest that teachers should take steps to promote HP in their students.

**What Can Teachers Do to Promote Harmonious Passion? Some Preliminary Suggestions**
Based on existing data, there are some things teachers can do to promote HP in their students. First, in line with self-determination theory (Ryan & Deci, 2000), teachers should take steps to increase autonomy, relatedness, and competence in their students.

In addition, although the data are preliminary, our work suggests that student-teacher rapport might be a determinant of HP. As such, teachers should take steps to increase rapport with their students by doing simple things such as saying hello, asking students a little about their lives, and telling a joke or two (for more examples, see Buskist & Saville, 2004).

Finally, teachers should take explicit steps to reduce psychological control. This means (a) reducing threats of punishment, (b) limiting statements intended to make students feel guilty, and (c) urging students to pursue mastery goals (where the goals is to learn as much as possible) rather than performance goals (where the goal is simply to obtain a good grade).

In Summary

For many reasons, it is important to identify the factors that lead to college-student success. And over the past few years, a growing body of evidence supports the notion that “passion matters” in educational settings. But the type of passion that students show toward their academic activities is important. When students experience HP for academic activities, they are more likely to receive many of the psychological and performance benefits that emerge from this type of passion. In contrast, OP tends to produce negative outcomes. As such, teachers should take steps to promote HP in their students. With increased HP come many of the positive educational outcomes that teachers have sought for decades.

References


How to Put on a Successful Conference Showcasing Student Research and Creativity
Diane E. Wille and Todd M. Manson
Indiana University Southeast

Student conference – a win for everyone
- Student: Provides professional skill development
- Faculty: Valuable one-on-one activities (annual salary reviews and tenure and promotion), Feelings of accomplishment
- Institution: Great press showing university excellence and why potential students should attend

How to Start
- Small or large
  - Campus wide or program specific
  - Conference length – half day, whole day, etc.
- Planning committee
- One person ultimately in charge
- Task list and timeline
- Everyone needs to be involved:
  - Administrators
  - Faculty (research mentors and judges)
  - Staff (IT, Physical Plant, Admissions, etc)
  - Students (presenters and volunteers)
  - Public

Need
- Dedicated schedule date
- Call for submissions
- Venue
- Posters and/or oral presentations
- Financial support
  - Prizes
  - Food
  - Conference Programs and other printing

Results
12th Annual IU Southeast Student Conference
- Over 200 presentations
- Over 275 presenters (Graduate and Undergraduate)
- 58 Research Mentors
- 48 Judges

Conference participants are retained at a greater rate and more likely to graduate in 4 years.

Table 1: Percent of Students Agreeing with Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed participating in the conference.</td>
<td>81%</td>
</tr>
<tr>
<td>I have a better understanding of my research.</td>
<td>83%</td>
</tr>
<tr>
<td>The conference helped me learn presentation skills.</td>
<td>83%</td>
</tr>
<tr>
<td>I am now more comfortable presenting research.</td>
<td>84%</td>
</tr>
<tr>
<td>I am more interested in presenting at a professional conference.</td>
<td>70%</td>
</tr>
<tr>
<td>This experience will help me in my future job/educational plans.</td>
<td>72%</td>
</tr>
</tbody>
</table>

Table 2: Percent of Faculty Sponsors Agreeing with Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating helps my students understand their research.</td>
<td>93%</td>
</tr>
<tr>
<td>Participating helps my students develop presentation skills.</td>
<td>93%</td>
</tr>
<tr>
<td>The conference is a valuable contribution to the university.</td>
<td>93%</td>
</tr>
<tr>
<td>My work with students on research is valued by my school.</td>
<td>90%</td>
</tr>
</tbody>
</table>
We examined whether feedback influenced perceptions of self-efficacy in a mathematics task. Participants were assessed pre and post completing mathematics problems. We found self-efficacy to be influenced by the valence (near average or near ceiling) of feedback presented after problem completion.

Student motivation has become an increasingly popular area of study with connections to student learning by facilitating student interest in a topic (Hidi & Harackiewicz, 2000). One factor that can influence student motivation is self-efficacy (i.e., the perceived ability to perform a task at a given standard; Bandura, 1997). When examining what affects self-efficacy, as well as intrinsic motivation, it has been found that competence feedback can play a role (Campbell & Hackett, 1986; Deci, Koestner, & Ryan, 1999; Deci, Koestner, & Ryan, 2001; Hackett & Campbell, 1987; Hackett, Betz, O’Halloran, & Romac, 1990). Particularly, negative feedback has been associated with lower levels of intrinsic motivation.

The purpose of this study was to examine whether manipulating performance feedback influenced participants’ self-efficacy for a mathematics task. Specifically, we manipulated and then examined how the type (positive or negative) as well as the valence (near ceiling versus average) of the feedback provided would influence self-efficacy. We also examined whether this relationship held after controlling for baseline levels of self-efficacy.

Methods

Participants
Participants (n = 133) were recruited from an undergraduate psychology research pool. Participants were predominantly female (56.7%), Caucasian (62.3%) and freshman (64.6%).

Materials
Task self-efficacy. Rating scales for mathematics self-efficacy were constructed based on Bandura’s guidelines (2006). Participants answered two rating scales about mathematics self-efficacy. The first scale was a global scale on how certain they were about solving the problems on a 0 (cannot do at all) to 100 (highly certain can do). We also assessed participants’ efficacy to solve a certain percentage of problems correct in 10 percent increments (e.g., rate your degree of confidence you can solve 30 percent of the problems).
Demographic items. Participants answered questions about age, academic major/minor, academic classification, race/ethnicity, and gender.

Procedures
All data were collected online via Qualtrics software in a lab setting. Participants were presented with three practice mathematics problems with no established time limit. All mathematics problems were taken from practice ACT tests. After completing the practice problems, participants were assessed on self-efficacy. Participants were then given a set of 15 mathematics problems to be completed in 15 minutes. After completing the 15 problems, or after fifteen-minutes, participants were exposed to one of four manipulated feedback conditions that was not dependent upon their performance: high perception of performance with positive feedback (You answered 11 out of 15 problems, which is better than 90 percent of your peers), high perception of performance with negative feedback (You answered 11 out of 15 problems and were outperformed by 10 percent of your peers), average perception of performance with positive feedback (You answered 8 out of 15 problems, which is better than 60 percent of peers) and average perception of performance with negative feedback (You answered 8 out of 15 problems and were outperformed by 40 percent of peers). After seeing the feedback, participants were again asked to rate their self-efficacy in anticipation of another set of mathematics problems.

Results
To examine whether self-efficacy was influenced by feedback, a two-way ANCOVA was performed examining both valence and type of feedback after controlling for pre-measures of self-efficacy. There was a main effect of valence such that those who were presented with near ceiling performance ($M = 66.35, SD = 16.59$) had higher perceptions of self-efficacy than those presented with average feedback ($M = 53.62, SD = 16.72$), $F(1,121) = 18.63, p < .05, \eta^2_p = .14$. Positive versus negative feedback was not statistically significant.

Discussion
Results indicated that valence was influential on perceptions of self-efficacy, but there were no differences based on whether the feedback was framed in the positive or negative direction. Future research should examine if these patterns persist when presented with multiple blocks of tasks and in other subject matter.

References


Section XXVI
Undergraduate Research

1. But I was just a mentee! Becoming an undergraduate research mentor: A workshop for early career faculty

2. Do it again: APS research replication projects with student

3. Undergraduate Research at Small Institutions in the Southeast: Honoring Dr. L. Butler’s Legacy

4. Testing the Prototype of BRITE Lite (Brief Research Instruction through Experiments)
But I was just a mentee! Becoming an undergraduate research mentor: A workshop for early career faculty

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The American Association of Colleges and Universities identifies undergraduate research as a "High Impact Practice" or HIP (AAC&U; Kuh, 2008). Yet, for early career faculty, the prospect of leading and mentoring students through this process can be daunting. Transitioning from “mentee” to mentor, lack of support for undergraduate research endeavors, and lack of formal knowledge of mentoring best practice may all be barriers to cultivating an effective mentoring relationship. Additionally, junior faculty are also contending with managing new course preparation, advising students in a new program, and maintaining their own research agenda for tenure and promotion.

This session explored the importance of undergraduate research and mentoring best practice. Participants were encouraged to consider their current approach to mentoring, obstacles to mentoring undergraduate research, and practical solutions for applying best practice recommendations.

There are many compelling reasons for engaging undergraduates in the research process. Any institution with an eye on undergraduate success and retention should be a partner in this effort. In fact, undergraduate research has received both empirical and policy attention in recent years. According to the Council on Undergraduate Research (CUR) undergraduate research experiences result in better retention of students, critical thinking, creativity, and increases enrollment in graduate education (cur.org). Students who have participated in research report a better understanding of the research process, more confidence, and a sense of scholarly independence (Searight, Ratwik, & Smith, 2010).

Not only does the AAC&U recognize undergraduate research as a HIP, but the ability to design and conduct basic research is Goal Two of the APA’s Guidelines for the Undergraduate Psychology Major: Version 2.0. As a core component of the ideal psychology major, courses can and should be designed to assist in attaining this goal. However, learning opportunities beyond
the classroom allow for unique interaction among faculty and students. This session addressed both in-and out-of-class opportunities for integrating research into the curriculum.

In addition to demonstrating the benefits and importance of undergraduate research experiences, a key feature of this workshop is sharing strategies for successful undergraduate mentoring. According to Bridgmon and Martin (2011) faculty need to initiate early research experiences with students. Early undergraduate exposure to research may increase interests in scientist activities and provide greater self-efficacy and practical skills in research methods beyond their coursework. Moreover, because these experiences are carefully structured and non-threatening, the collaboration may result in conference presentations or publications assisting with university exposure and the undergraduate student(s) if they wish to attend graduate school.

Advice for mentoring undergraduates varies by source. At times, these recommendations are tailored to the undergraduate research experience (for example, Pita, Ramirez, Joacin, Prentice & Clark, 2013) while others make more general recommendations for mentoring (see apa.org, Introduction to mentoring: A guide for mentors and mentees). Using a combination of sources and strategies, facilitators will summarize best practices and engage participants in considering their own approach to mentoring and ways to integrate best practice recommendations.

References
Do it again: APS research replication projects with students

Natasha D. Tidwell & Sue Kraus
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Presented at: Rocky Mountain Psychological Association
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Psychology has a long history of innovative research that we present to undergraduate students in a somewhat deceptive manner. Although we stress to our students the value of maintaining high scientific standards, most psychology students only learn that research is not as clean as they expected once they reach graduate school. In addition, we teach students that replication is the “gold standard” in science, but we often push them to do original research, devaluing replication efforts. As empiricists, we believe that science is self-correcting, and new findings revise established theory and minimize error in our research findings over time; however, in reality, careful and precise replication is rare. It is only the recent “crisis” of replication that has brought this type of work to the forefront and allowed replication to be carried out and published in a systematic way. For example, a study by Nosek (2015) found that only 39% of psychology replications attempts were successful. The implications of this lack of robust replication should be discussed and strongly considered by psychologists (and all scientists) at all levels of academia. What does it mean when a replication project produces significantly different results? Is this evidence of fraud, or merely a change in population or the impact of the independent variable over time? We should also evaluate the current bias and trends in publication. Should we publish null results? Should data and research plans be publically available? Is data mining a problem?

These issues inspired us to invite a group of undergraduate students to work as research assistants on an APS replication of a study examining priming in the context of commitment and forgiveness in romantic relationships (Finkel, et al., 2002). Students read and discussed the original research and related studies over several weeks before data collection began. They also read articles critiquing the science of psychology and calling for replication efforts. Our students’ original motivations were to gain any type of research experience to prepare them for graduate studies, but they came to value the unique “peek behind the curtain” that this type of work allows. Students report that they learned to think more critically about research and that knowledge of the criticisms in our science was valuable to them. They also learned a great deal about experimental design from adhering to the rigid rules governing true replication and have used this knowledge when designing their own senior research projects. As faculty, we found value in both the structured experience that this type of work provides and the ease of introducing students to research with studies that are already set up and ready to conduct. An additional benefit is that participation in the APS initiative guarantees publication, regardless of whether the results of the project replicate those of the original study. Session participants were invited to share their own experiences with this type of work, as well as any questions they might have. For more information, please visit the APS website to learn more about their
Replication Initiative and the website for the Finkel replication project on the Open Science Framework.

References
Undergraduate Research at Small Institutions in the Southeast: Honoring Dr. L. Butler’s Legacy

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It is important to examine the integration of research related coursework in psychology curricula at institutions in the Southeast due to the recent emphasis that has been placed on the value of having transferrable skills for employment (AAC&U, 2014; McNutt, 2014). Not only are verbal communication, problem-solving, analysis of quantitative data, planning and organization, creating written reports, and proficiency with computer software included within the top 10 skills sought after by employers (Gray & Koncz, 2016), but they are also sought after specifically for psychology graduates (APA, 2013). Moreover, all of these transferrable skills are also included in the American Psychological Association (APA, 2013) guidelines for the psychology curriculum across three goal areas. Goals 2.2-2.4 suggest that information literacy, innovative and integrative thinking and problem solving, interpreting, design, and conducting research are important for scientific inquiry.

There is precedent in the literature regarding how to translate these transferable skills into course offerings. Shanahan (2012) proposed the terms, “introduce, develop, and master” in order to dictate how research should be hierarchically structured across a curriculum. For example, research may be introduced across 100 and 200 level courses, developed in content intensive 300 level courses, and mastered in research methods, research labs, and capstone courses. These terms were used as guidance when looking for psychology courses that contained research-related content (Halonen, Bosack, Clay, & McCarthy, 2003).

A similar hierarchical structure of psychology course offerings arose out of the call to establish a core curriculum within the psychology major. A recent report (Norcross et al., 2016) demonstrated that the majority of programs sequenced their courses with a hierarchy placing introductory psychology at the bottom, research methods and statistics in the middle, and a capstone course at the top. The courses that were associated with the middle layer were statistics, research methods (I and II/advanced), independent research, and measurement. While the report presents a comprehensive review of 2,988 schools, it is hard to grasp a clear picture of program offerings because the requirements for programs are not stratified by the size of the institutions or by geographic locale. The current study adds to the literature by examining the psychology curriculum in more depth by differentiating between institution size and geographic location. Since the quality of the curricula may be a better indicator of program effectiveness than prestige (Dunn, McCarthy, Baker, Halonen & Hill, 2007) it is important to examine small colleges as they often lack status as assessed by national rankings.
Method

The Integrated Postsecondary Education Data System (IPEDS) was used to search for schools within 13 Southeastern states (see Figure 1) that met the criteria for Carnegie Classification (Indiana University Center for Postsecondary Research, n.d.) as small or very small (i.e., 7,11) 4-year primarily baccalaureate degree offering institutions. Small colleges (n=25) with enrollment between 1,000-2,999 students were representative of Dr. B. Laconyean Butler’s institution, Spelman College. Very small colleges (n=7) with enrollment less than 1,000 students were representative of the author’s home institution, Emmanuel College. Schools were excluded if they did not have a psychology program that was either free-standing or within a hybrid department (e.g., behavioral sciences, social sciences, natural sciences, etc.).

Consistent with previous studies, the pattern of course offerings were described (Norcross et al., 2016; Stoloff et al., 2010). The courses that were believed to integrate research to the greatest degree, and thus provided the focus of the analysis, were statistics, research methods, advanced statistics/ research methods, measurement, and independent study in research. National comparisons are derived from data in Table 2 of Norcross et al. (2016).

Results

Table 1 shows the percentages of small and very small colleges that offer the research-related courses selected for analysis. The results of binomial tests revealed that the schools in both categories resembled and diverged from national data in several ways. The percentage of small schools offering research methods (100% vs. 99%, ns) and measurement (52% vs. 67%, ns) resembled national data. Fewer schools in this category offered statistics (60% vs. 90%, p=.000) taught by psychology faculty, an independent research course (88% vs. 97%, p=.038), or advanced statistics/research methods (32% vs. 39%, p=.003). The percentage of very small schools offering statistics (100% vs. 90%, p=.478), research methods (100% vs. 99%, ns), advanced research methods (43% vs. 39%, ns) and measurement (29% vs. 67%, p=.086) was similar to national trends. A lower percentage of schools in this category offered an independent study in research course (71% vs. 97%, p=.017) compared to national data trends.

When the two institution types are compared to each other, it appears if more of the small colleges outsource statistics compared to very small colleges (40% vs. 0%, p=.002. Small and very small colleges do not differ on course offerings in measurement (52% vs. 29%, p=.26), advanced research methods (32% vs. 43%, p=.153) and an independent research (88% vs. 71%, p=.201).

Discussion

We examined the emphasis of research related coursework within the psychology undergraduate curriculum at institutions in the Southeast with student enrollment less than 3,000 students. Curriculum offerings in the Southeast resemble the recent national data summary with a few exceptions when examining each Carnegie classification category by specific coursework (Norcross et al., 2016). The most notable differences are that at small institutions, fewer programs offer statistics in-house; whereas, fewer very small
institutions offer independent study in research. Further research should assess how well graduates from these institutions are perceived by employers to possess the top transferrable skills. Further inquiry into the nature of resource allocation is also warranted given the courses that are preferred for graduate training (Lawson, Reisinger, & Fleming, 2012).

References

Association of American Colleges and Universities. (2014). Liberal arts graduates and employment: Setting the record straight.


Figure 1. 13 States represented in the Southeastern Region of the United States


Table 1. Comparison of Course Requirements Between Small and Very Small Institutions

aNational comparison data from Table 2 column c in Norcross et al. (2016)

<table>
<thead>
<tr>
<th>Carnegie Classification Category</th>
<th>Course Requirements</th>
<th>Small (n=25)</th>
<th>Very Small (n=7)</th>
<th>National Comparisona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>15 (60%)</td>
<td>7 (100%)</td>
<td>(95%)</td>
<td></td>
</tr>
<tr>
<td>Research Methods 1</td>
<td>25 (100%)</td>
<td>7 (100%)</td>
<td>(99%)</td>
<td></td>
</tr>
<tr>
<td>Advanced Research Methods</td>
<td>8 (32%)</td>
<td>3 (43%)</td>
<td>(39%)</td>
<td></td>
</tr>
<tr>
<td>Measurement</td>
<td>13 (52%)</td>
<td>2 (29%)</td>
<td>(67%)</td>
<td></td>
</tr>
<tr>
<td>Independent Research Project</td>
<td>22 (88%)</td>
<td>5(71%)</td>
<td>(97%)</td>
<td></td>
</tr>
</tbody>
</table>
Testing the Prototype of BRITE Lite (Brief Research Instruction through Experiments)

Sandra K. Webster  
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Alexander Bennett  
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In 2015 our team was awarded an NSF Innovation Corps –Learning (I Corps-L) grant to investigate dissemination of a prior NSF-funded project that integrates student built experiments using E-prime into the curriculum. Through "customer discovery" interviews with 125 academic professionals, we discovered interest in research design and instructions at the beginning level. Many faculty members said that students enter introductory psychology not expecting a science and get turned off because of the amount of empirical research covered in the course. They wanted a brief experimental psychology research instruction module for beginning level courses to 1) improve students’ understanding of psychology as a science, 2) improve their critical thinking skills, and 3) foster a positive attitude toward the science of psychology. We redirected our efforts to test the feasibility of such a module. This paper describes the test of the BRITE Lite prototype.

The BRITE Lite module begins with an in-class experiment with the method and results of the experiment immediately incorporated into a lecture. The learning objectives for the BRITE Lite module include introduction of the concepts of prior research through a scientific research report (Schneider, Hempel, & Lynch, 2013), thesis statement, hypothesis, independent and dependent variables, experimental design, descriptive and inferential data analysis, and interpretation of the results. The value of replication is stressed by showing students the class results as compared to the combined results of all the classes that had participated in the experiment and the original results of Schneider et al. (2013).

Students in two introductory psychology classes (n=31, 23) in the fall and spring semesters and a fall semester research design and statistics class (n=17) participated as part of their regular course of instruction. The module was conducted at the end of the first week of classes before students had much time to form negative attitudes toward psychological research. All students completed an informed consent form and a brief statistical reasoning pretest made up of five items taken from the ARTIST inventory (Garfield & delMas, 2010). This test was
selected as an indirect measure of critical thinking that could be administered and scored quickly. Next students participated in an experiment to test the Poker Face Effect (Schneider, Hempel, & Lynch, 2013).

The sample experiment was an adaptation of Schneider, Hempel, and Lynch’s (2015) study of the Poker Face Effect in which they demonstrated that suppressing facial emotion can impair emotion perception. Students were taken to a nearby lab in groups of 12 or fewer. The entire experiment took about 10 minutes during which the remainder of the class worked in teams on a different project. Half the students were instructed to suppress their own emotions as they selected the emotion that best fit a set of standard emotion pictures (Lundqvist & Litton, 1998). The other students were instructed to mimic facial emotions on the same task. After practicing with emoticons representing 7 emotions (three trials each), the participants identified the emotions from 70 standard emotion faces. The emotions depicted were afraid, angry, disgusted, happy, neutral, sad, and surprise. Half the images were faces of women, and half were faces of men. The results for each class were calculated and integrated into the BRITE Lite instructional module. The mini-lecture was presented in the next class period for the introductory psychology classes. The students in the laboratory course worked on a team project and then received the lecture within 20 minutes of completing the emotion detection experiment.

After the instructional module, students completed the post-test of statistical reasoning (Garfield & delMas, 2013). For the second introductory psychology class, the order of the tests was reversed so that test B was taken first and test A was taken second. Students were thoroughly debriefed on both the teaching/learning experiment and the embedded Poker Face experiment throughout the semester. A formal conference style presentation and poster were presented to the classes later in the semester.

It was possible to cover the module with the embedded experiment within two 60-minute class periods in Introductory Psychology and within 2 hours in each laboratory section. In the fall, data from the two classes were combined. Students’ statistical reasoning scores increased significantly between the pretest (form A; $M = 1.46$, $SD = 0.68$) and post-test (Form B; $M = 2.10$, $SD = 1.04$) sessions ($F(1, 44) = 10.89$, $p = .002$, $eta square = .19$). Analysis of the introductory psychology class results in the spring semester showed that Form A ($M = 1.43$, $SD = 0.90$) had lower scores than Form B ($M = 3.13$, $SD = 1.29$), ($F(1, 22) = 10.89$, $p < .001$, $eta square = .66$). This means that the two forms are not equivalent and that form A is more difficult, even when administered second.

We learned from the test of the prototype that it is possible to introduce all the major elements of behavioral experimental research design and statistics into one brief instructional module that engages students. We learned that the statistical reasoning tests used were not good ways to measure critical thinking. We also learned that although the Poker Face phenomenon interested students, it needed a control condition, and the gender interactions are too complicated to explain in a brief introductory module. We also learned that introductory psychology students who participated in the module were willing and able to learn to do their own small team research projects in lieu of a term paper.

Future instructional development is being conducted in classes outside psychology such as first-year seminars and other discipline-specific courses (e.g., sociology, economics, business, and social work). We must also demonstrate improved critical thinking with better and more appropriate measures. The prototype test confirmed that students learn about research best when they are engaged in research. The experiment should be conducted in class and allow for immediate integration of results into the statistics section of the lecture. Students can be engaged
as research participants when the specific research activities are explicitly connected to the concepts through immediate, targeted instruction.

References
Section XXVII
Writing

1. Using Music to Teach Students How to Paraphrase and Avoid Plagiarism
2. Batter Up! Using a Behavioral Rubric to Coach Students in the Development of Scientific Writing Skills
3. What We Talk About When We Talk About Writing
4. How Can We Teach Our Students to Write Effectively About Research?
5. Tools of the Mind – Gender and Educational Differences
Using Music to Teach Students How to Paraphrase and Avoid Plagiarism

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In a writing course specifically designed for psychology majors, students are taught the fundamentals of plagiarism and the importance of citing their references. An activity using music was developed in an effort to ease some of the difficulties students have with paraphrasing scholarly information. Students were asked to think about their favorite song and find the lyrics of that song on the internet. There were no guidelines for song choice, which gave the students an opportunity to freely express themselves and be fully engaged in the activity. Songs from a variety of musical genres were selected by the students, including pop, R&B, rap, neo-soul, and gospel music. After students read over the lyrics of their chosen song, they were asked to write a paragraph summarizing the song in their own words. After writing their summaries, all of the students were asked to read their summaries aloud to the class. If possible, their chosen song was playing in the background while the summary was being read. Afterwards, members of the class were able to give the students feedback on their summaries. This was especially helpful when some students found it difficult to use their own language to explain the meaning of the song. After the activity was completed, students commented on how the activity complemented the information they had learned on plagiarism and indicated that it would be useful when writing future papers.

Although students enjoy choosing their own song, this activity can be employed in an alternative format. Instructors can choose five or six popular songs for the students to choose from for this activity. This will give instructors more control over knowing the lyrics of the songs the students are summarizing. It should be noted that more songs may be needed, depending on the class size; this activity was originally designed for a class of twenty students. If this modification is used, then all of the students will not necessarily need to read their summaries, as this may become redundant and lessen student engagement.
Batter Up! Using a Behavioral Rubric to Coach Students in the Development of Scientific Writing Skills

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Overview

On the surface, the behaviors of hitting a baseball and writing a scientific paper may seem very different – one is a combination of largely observable actions; the other is a combination of mental processes that are ultimately expressed as a series of words on a page. On a more fundamental level, however, these two highly complex behaviors are very much the same – both are made up of smaller behavioral components, and both are developed through the process of shaping – just as the hitter swings, the writer writes, and, in response, the coach and teacher provide feedback that reinforces successive approximations to the target behavior.

This functional equivalence is the premise of this paper. In writing it, I have two goals: first, to offer what is an essentially Skinnerian point-of-view on best practices in the development of rubrics designed to assess complex skills; and, second, to describe an APA-style research report rubric that exemplifies this perspective and can be used as an effective tool for teaching scientific writing. Research on the rubric has shown that, as a scoring instrument, it produces scores that are significantly correlated with students’ grade-point-averages and highly reliable both between and within raters (Greenberg, 2012), and, that as a formative assessment device, it helps students write a higher quality report (Greenberg, 2015).2

On the Importance of Scientific Writing

Communication is a critical part of the process of conducting empirical research; indeed, the very progression of science requires that findings be shared with members of the scientific community. Thus, it is not uncommon that requirements for many research methods courses include the preparation of an APA-style manuscript. In spite of this implied consensus that writing such a report is an important part of the research methods curriculum, it is easy to see how one might question the value of this assignment for the large majority of students whose career goals are not research-oriented. However, if one takes a moment to consider the range of skills involved in writing this kind of paper, it becomes clear that the benefits of writing one extend to all students regardless of the career path they choose.

2 A copy of the rubric can be obtained by contacting the author at greenbergk@oldwestbury.edu.
For example, in order to write the Introduction, students must be able to search a computer database; make sense of what are often very complex ideas expressed in a dense and highly specialized language; summarize, analyze, and synthesize this information, and ultimately organize it – using deductive reasoning – so that it leads logically to the stated purpose of the study. In writing the Method section, they must know basic research concepts, and be able to discriminate essential from non-essential information. In the Results section, they must apply numeracy, quantitative reasoning, and computer skills in analyzing, organizing, interpreting, and presenting the data they collect. In writing the Discussion, they must again engage in the analysis and synthesis of information, but, this time, apply inductive logic when they consider the broader implications of the specific findings of the study. Even when assembling the References section, students must draw upon their ability to pay attention to minute (and seemingly trivial) details. And, of course, in every section of the report, they must be able to write in a manner that is clear, concise, and professional.

On the Importance of Baseball

In teaching a complex behavior like scientific writing or hitting a baseball, one must identify (i.e., operationally define) the behaviors to be taught. This process begins with the dimensionalization of the target behavior into its essential components. In the case of hitting a baseball, those might be “adopting a proper stance,” “using a proper grip,” and “executing a proper swing.” However, it is not possible to teach someone how to adopt a proper stance (for example) without specifying what a proper stance is – that is, without “unpacking” this composite behavior into its smaller behavioral components.

The same principles apply to the teaching of scientific writing (in this case, exemplified by an APA-style research report). Here, the goal is to teach students to “explain why the study was done,” “describe how it was done,” “report what was found,” and “discuss the findings in the context of existing learning.” But again, it is not possible to teach them how to explain why the study was done without defining what that means in terms of the behavioral components that comprise it.

On the Importance of Rubrics (and the Problem with Some)

Rubrics are all about operational definitions – they are valuable tools that force us to define exactly what it is we would like our students to be able to do. In establishing these learning outcomes, not only do we achieve transparency by making our assessment criteria explicit, we also provide our students with a source of detailed feedback on the quality of their work. A problem arises, however, when learning outcomes are expressed in conceptual terms, because no matter how valid a concept may be, it cannot be taught holistically. Returning to baseball for a moment, when coaches work on “stance” with their players, what they are teaching them is to “keep their elbows up,” to “put their weight on their back foot,” and to “keep their eyes on the ball.” It is only when these behaviors have reached a level of mastery that a player can be said to have learned the proper stance for being able to make contact with the ball.
Putting it All Together: A Behavioral Rubric to Help Teach Scientific Writing

The functional equivalence between learning how to “swing like a pro” and “write like a scientist” has important implications for the methods we use to help our students improve their scientific writing skills. When I teach students how to write an APA-style research report, I provide them with a “behavioral” rubric that I initially developed for use as a scoring instrument for grading this type of report (Greenberg, 2012). I refer to it as a behavioral rubric because all of the learning outcomes are expressed in behavioral terms – that is, as statements describing what I want my students to be able to do. It is structured around seven composite outcomes that correspond to the main goal of each section of the report (e.g., for the Method section, “explain how the study was done”). Each of these composite outcomes is then broken down further into smaller behavioral components that fall into content-, expression-, or format-related categories based on whether they respectively pertain to what was said, how it was said, or whether it was formatted properly. The degree to which each component has been achieved is rated on a 4-point scale from 0 (not at all) to 3 (achieved) to provide students with very specific feedback on what they have done well, and what they need to improve.

In recent research on the rubric, I found that students who used it as a guide in preparing their reports wrote higher quality reports than did students who did not use it. Students also improved the quality of their own report after using the rubric to score a classmate’s paper, suggesting that the rubric helps students to more clearly see the strengths and weaknesses in their own work (Greenberg, 2015).

Concluding Thoughts

One of the first things we learned when we entered the field of psychology is the textbook definition of learning – “a change in behavior as a result of experience.” Whether that experience is an undergraduate program, a course, or a class assignment, rubrics can play an important role in facilitating the behavioral changes we seek by forcing us to think more clearly and deliberately about what it is we want our students to learn. However, when we create our rubrics, we must remember that whether we are watching a ball sail over the outfield fence or reading an outstanding research report, the process by which the hitter and writer developed the skills to accomplish their respective feats is the same. As teachers, let us be the best coaches we can be by using effective techniques that will enable our students to do things they could never do before. Play ball!

References


What We Talk About When We Talk About Writing

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Students across the P20 continuum express frustration with a lack of clarity in what constitutes “good writing.” As college composition students reflect on their own writing experiences, many of them cite misunderstandings and ambiguity as sources of frustration and discouragement. Additionally, these students commonly carry the dismal results of these vague expectations forward in their academic careers as permanent labels for their own writing capabilities. Ironically, one of the aspects of writing instruction that seems to be transferrable for these students is the vivid memory of their writing “failures.” These students have been steeped in a “deficit” model of writing instruction in which errors and writing challenges are viewed as inherent to individuals.

This presentation explored liminality as an alternative writing pedagogy that frames writing errors and challenges as inherent to writing, not to writers. Lesley Gourlay’s (2011) essay, “Threshold Practices: Becoming a Student through Academic Literacies,” explains liminality as “a state of indeterminacy, emotional destabilization, and status ambiguity in transition...This focus may help theorize more fully the opaque, often implicit nature of writing practices as experienced by students in transition.”

When student writing from a liminal first-year composition classroom was examined, it was clear that students had made dramatic shifts in how they perceive themselves as writers. Patterns in these shifts ranged from understanding how writing presented in the deficit model discourages growth (writing can’t be improved or changed) and may even encourage plagiarism, to seeing mistakes as part of the process of writing and as fixable. Furthermore, the reconceptualization of writing as a liminal practice shifts the roles of teachers from grammar police to mentors of interpellation in process and disciplinary expectations.

Presenters also offered strategies for incorporating liminal practices into the classroom such as graded drafting and revision, evolving rubrics, opportunities for low-stakes writing assignments, and structured reflection about the process of writing.

The presenters concluded that by engaging in liminal practices in their classrooms, teachers of writing empower students to learn from new writing situations and to see themselves as capable of growth. These liminal practices are particularly important as faculty mentor their students to understand the contextual nature of disciplinary writing conventions. Additionally, liminal writing instruction supports transfer of student learning by explicitly teaching process, helping students create a mental map of writing contexts they encounter, and providing them with flexible writing strategies.

Reference
How Can We Teach Our Students to Write Effectively About Research?

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During this presentation, we discussed issues related to students writing about research. Specifically, we focused on writing literature reviews or introduction sections to papers. In these types of assignments, students often struggle with determining whether an article is relevant and also with tying the article in to their main topic or research project. During the session, we brainstormed in small groups the learning objectives we want our students to meet and some activities we could assign our students to do to meet those.

I also discussed several activities I have used in my own courses to successfully meet some of these learning objectives. I will only cover one here, but please feel free to contact me for other similar assignments. I discussed an assignment called “How Relevant Are Your Articles?” (See Appendix A). This assignment was used in a Social Psychology lab course. At Westminster College, Social Psychology is taught as an advanced Research Methods course with a lecture and lab in which students design and conduct a class research project. Labs have approximately seven students in them. During the lab, students completed the How Relevant Are Your Articles assignment in groups of two or three. Following completion of the assignment, students discussed them as a class. First, the student groups argued their case for their rank-ordered list of articles. In all classes, students had different rank-orders so this worked out well. After the discussion, I presented them with my order and explained to them why I ordered them the way I did. I also had students discuss how they would tie the article in to their research project. Because this activity was based on a published peer-reviewed journal article, students could see how the article’s authors actually tied the sources in to the paper.

Although I don’t have any quantitative data, I do have some student feedback about the effectiveness of this and related article activities. I asked my Social Psychology students to anonymously evaluate their abilities analyzing and understanding articles from the beginning to the end of the semester. Here are some student quotes:

“I think I understand articles better now than I did before and especially applying them to the real world... I now know how to apply studies to the real world and used this knowledge for my capstone. Also, writing about the important points in a research paper helped me better understand and read articles."

“My ability to critically analyze research articles has improved... I found it a lot easier to notice strengths and limitations in the study. It’s a challenging assignment but is helpful in the long run.”
“I really liked analyzing the research articles and thought this was very beneficial. I actually wish we could have done this in more classes. I feel like I made a lot of progress with this also.”

“I feel 100% more confident in analyzing research articles than I did before the semester started. Analyzing and critiquing these articles has helped me better understand them and use them for more research. Even though it seemed like tedious work, I think the article critiques was one of the most valuable tasks we did in the class.”

**Appendix A: How Relevant are Your Articles?**

Dr. O’Sullivan is doing a research project on attachment style and prosocial behavior. He knows about previous research suggesting that people who are avoidantly attached help less often, but wants to investigate this area further. He plans to test under which circumstances will people who are avoidantly attached help. In his study, he measures people’s attachment styles with the ECR-S and then asks them how likely they would be to donate to an environment-, person-, or animal-related charity. He measures how likely each participant reports being to donate to each charity based on their attachment style. He finds that, consistent with previous research, people higher in avoidant attachment are less likely to donate to the person- and animal-related charities. However, he also finds that attachment style does not affect likelihood of donation to the environment-related charities. As a secondary hypothesis, he examines whether empathy mediates the relationship between charity-type and amount donated for avoidantly attached people. He finds that empathy does mediate the relationship. That is, he finds that the reason that avoidantly attached participants donate less to person- and animal-related charities is that they feel more empathy (something that they are uncomfortable with).*

He asked his graduate student to provide him with a list of relevant articles to include in the introduction to his manuscript. Before he writes, however, he wants to understand the articles a little better. He finds it useful to figure out which articles are the most relevant first and then figure out how he is going to tie them in to his project.

Your assignment:

1) Examine the 5 articles provided. Read the abstracts and familiarize yourself with the manuscripts. Then, list the articles in order of relevance (with the most relevant article being #1 and the least relevant article being #5). In a sentence or two, please be sure to explain why you gave each article the rank that you did.

2) For each of the 5 articles, pretend that you are working on writing the literature review. Think about how you would incorporate each one into the introduction of your paper. Explain in a sentence or two of summary how that article is related to Dr. O’Sullivan’s research project and how you would incorporate it into the introduction to the paper.
Articles:


*Research design comes from Richman, DeWall, & Wolff, 2014

**Appendix B: Answers to How Relevant Are Your Articles?**

**Article Order:**
(1)- Gillath et al. 2005
(2)- Mikulincer et al., 2001
(3)- Shaw et al., 1994
(4)- Spielmann et al., 2012
(5)- Wei et al., 2007

**Tying in Articles (quotes are directly from Richman, DeWall, & Wolff, 2014):**

Gillath et al, 2005: This article explains the background research and theories that this study is based on, specifically that avoidant attachment relates to lower helping (a premise of this study).

“A series of studies using multiple methods, participants from multiple countries, and several indicators of real and imagined helping yielded a consistent conclusion: avoidant attachment related to lower helping... Avoidant attachment is consistently associated with a behavioral profile of unhelpfulness.”

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Mikulincer et al, 2001: This article explains how empathy might be involved in the relationship between attachment style and helping behavior, the secondary hypothesis of the study.

“Helping situations expose avoidantly attached people to factors that can threaten their feelings of security because such situations often involve the expectation of emotional connection. Prior research indicates that avoidantly attached people feel less empathy when asked to respond to helping situations.”

Shaw et al., 1994: Explanation of empathy avoidance in general and how it relates to helping. Empathy avoidance is the reason why empathy might mediate the relationship between avoidant attachment and helping.

Such empathy avoidance is a phenomenon that occurs when, before exposure to a person in need, people are aware that they will be asked to help and that helping will be costly. Given their aversion to emotional closeness, likely stemming from their fear of rejection, avoidantly attached people may engage in empathy avoidance in helping situations to protect themselves against this uncomfortable possibility.

Spielmann et al, 2012: This article explains some background research on avoidant attachment. Specifically, how they view relationships, which is related to why people who are avoidantly attached might help less

“Avoidantly attached people want connections, but fear being rejected. They thus tend to have lower expectations for a connection as a self-protection mechanism.”

Wei et al., 2007: This scale is what is used to measure attachment style. Since the article is related to the background research, rather than the methodology, it belongs in the method section and not in the introduction section. It is not relevant to the study beyond citing the methodology used.

“Participants completed the 12-item Experiences in Close Relationships scale to assess attachment style

The ECR-S measures avoidant (e.g. “I get uncomfortable when a romantic partner wants to be very close”) and anxious attachment (e.g. “I need a lot of reassurance that I am loved by my partner”).”
Learning to write as early as possible has been shown to be the best way to keep the momentum going for future development in literacy (Gerde & Bingham, 2012). Writing as defined by Gerde and Bingham (2012) as the “activity of expressing ideas, opinions and views in print: writing for communication of composing”. Gerde and Bingham (2012) also outlined good practices for teachers to incorporate into the classroom for helping children with writing; guidelines include: daily journals of various writing forms (invented spelling), scaffold writing, out loud reading, making writing creative, full access to materials with surroundings of encouragement (theme-related words), group activities (connecting with peers and family) and to use technology to help support writing. One of the ideas outlined by Gerde and Bingham is scaffolding writing; a program that focuses on the aspect of Tools of the Mind. Tools of the mind is a Vygotsky based approach to writing, utilizing the Zone of Proximal Development and “Scaffolded Writing” (Diamond, Barnett, Thomas & Munro, 2007). The zone of proximal development is “the space between the child’s level of independent performance and the child’s maximally assisted performance” (Bodrova & Leong, 1998); “Scaffolded Writing” is a technique which uses a combination of materialization (physical actions with mental processes) and private speech (reciting the mental process out loud while learning it). The purpose of this study is to evaluate writing and writing proficiencies of students who used the Tools of the Mind program as kindergartners. Additionally, this study is interested in individual differences in writing proficiency in children trained with Tools of the Mind, specifically if writing proficiency differs by demographic factors such as gender, age, social economic status and if they attended a pre-kindergarten that utilized the Tools of the Mind curriculum.

Method
This study is part of a larger study which is being conducted in four local low income school with 180 pre-kindergarteners and 180 kindergarteners; with writing samples being collected over the 2015-2016 school year. In this study we used the data from the kindergarteners from one school, for a single point in time. The writing samples were scored by the teachers while collecting samples from the students. The teachers are using a well-established grading rubric (Bodrova & Leong, 1998).

Results
Currently, data has been collected. We entered this data into a data file and conducted a One-Way ANOVA to determine if writing proficiency differs by pre-kindergarten status and the demographic variables. By looking at this comparison we were able to see which population may need more help in learning to write using the Tools of the Mind curriculum.

Discussion
“Scaffolded Writing” is at the core of the Tools of the Mind curriculum. During this study we expected to find that the participants who are using Tools of the Mind curriculum as preschoolers would have better writing proficiency than of those who did not have Tools of the Mind lessons as preschoolers. Possible implications, if we found expected results, could be extra help at home with writing, in the form of
parents learning the Tools of the Mind curriculum and helping their student. Other implications could be a more wide spread use of the Tools of the Mind curriculum in pre-kindergartens in low income schools and schools not classified as low income.

References