Essays from E-xcellence in Teaching
Volume XII

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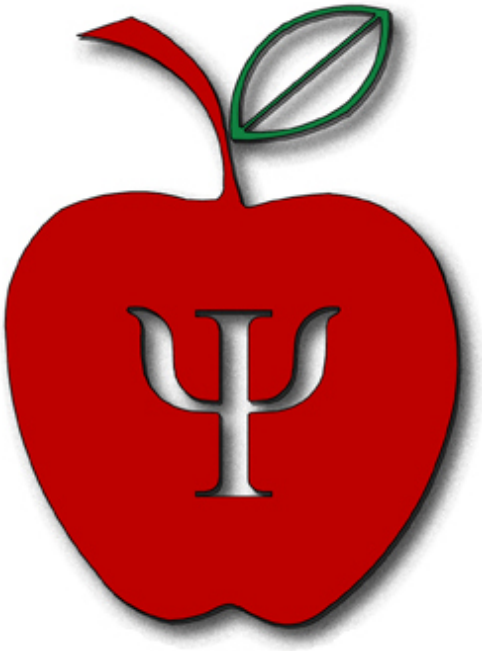

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Introduction

This year's volume of *E-xcellence in Teaching* contains invited essays originally published on the Society for the Teaching of Psychology's PsychTeacher listserv. Since its launch in 1998, the listserv has provided a forum for discussion of issues related to the teaching of psychology at all levels. The *E-xcellence in Teaching* essay series has been featured on the listserv since the spring of 2000. This year's essays present both practical strategies and food for thought on a wide range of topics.

Several of this year's essays focus on the burgeoning role of technology in teaching. For example, in Chapter 1, K. Robert Bridges, Richard Harnish, and Deborah Sillman describe how both students and instructors can benefit by blogging as part of undergraduate psychology courses. The authors illustrate how they use blogging in their own positive psychology course, and they place blogging into the broader context of working with the so-called "digital natives" who currently populate most college classrooms. Karen Freberg and Laura Freberg describe in Chapter 5 a number of approaches for utilizing social media to aid teaching and research. Freberg and Freberg emphasize the relevance of social media outlets such as Facebook and Twitter to students' lives both during and after their college years. The authors then provide a number of specific examples for using social media to engage students, enhance instruction, and college data for research. In Chapter 9, Harnish and Bridges describe the practice of employing live video stream courses that are delivered simultaneously to classrooms in more than one location. The authors address both advantages and disadvantages of live video stream courses relative to more typical online courses, and they provide a brief list of best practice principles for instructors considering implementation of a live streamed course.

Other essays in this volume provide specific, practical strategies for teaching. For example, in Chapter 2, Meera Rastogi explains how instructors can use visual arts materials to teach various psychological concepts. Rastogi's examples illustrate connections between artistic principles and human perception, but they also extend to other areas of psychology including consciousness, memory, language, and human development.

Stuart McKelvie (Chapter 3) demonstrates how he uses published empirical articles to help students understand statistical analyses and research methods. McKelvie provides students with a set of objectives that guide them through their consumption of published research and helps them to better understand how psychologists learn about behavior.

In Chapter 4, David Daniel discusses potential downsides to various pedagogical strategies and learning aids. He notes that many tools can improve learning when used properly, but that the same strategies sometimes hinder learning because many students employ them to avoid rather than supplement true study strategies. Daniel also provides some guidelines for educators seeking to maximize the effectiveness of learning strategies.

Several other essays take a broader look at teaching principles. In Chapter 6, Eric Goedereis and Heather Mitchell explain how they have used metacognitive principles to develop effective assignments for their introductory psychology classes. The authors recommend pedagogical approaches that extend beyond content knowledge and encourage students to examine their own thinking and study strategies. The authors found that such an approach led to improved performance on introductory psychology exams.

In Chapter 7, Salvador Macias addresses the importance of including socioeconomic status as a cultural variable in classroom discussions. Macias notes that overgeneralized conclusions based on non-representative research samples may marginalize students from diverse backgrounds. He also provides specific examples of established research findings that must be reconsidered when SES is included as a variable of study.

Jacki Fitzpatrick and Ryan Gerrity (Chapter 8) provide an intriguing look at how principles of athletic coaching are relevant to teaching practice. The authors emphasize that many of the principles that make for good coaching–such as observation, practice, and reflection – also make for good teaching.

In the final chapter of this volume, Claire Lyons advocates that college instructors should teach in a manner that fits the developmental stage of current college students. Lyons uses the concept of emerging adulthood as a backdrop for illustrating the potential benefits of matching instructional approaches to student developmental level. She then provides several examples of how instructors can be deliberate in their responses to the developmental level of their students.

Together, these essays make up Volume XII of *E-xcellence in Teaching.* We hope our readers find both thought-provoking ideas and practical teaching help in these essays. We thank the contributors for sharing their experiences and ideas with the readers of PsychTeacher, and with the rest of the psychology teaching community.

Chapter 1

Blogs in Undergraduate Psychology: Applications and Advantages

K. Robert Bridges, Richard J. Harnish, and Deborah Y. Sillman
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The word blog is a contraction of "web-based logs," online journals in which a writer publishes a series of chronological entries or posts. The post, often written in a subjective voice, can be updated on a regular basis (Farmer, Yue, & Brooks, 2008). As such, blogs are part of a larger category of Web 2.0 technologies, which include social networking applications and technologies, RSS (Really Simple Syndication), and wikis, which allow individuals who consume media, access the Internet, and use the Web, to be active users of information. Such technologies afford individuals the opportunity to customize web-based media for their own purposes, and those of their communities (Boyd & Ellison, 2007; Minocha, 2009b). As with all Web 2.0 technologies, blogs have only been widely available for a few years; indeed the word "blog" was first used in 1999 (Minocha, 2009b). Consequently, there is not a large body of pedagogical research on academic applications. Nevertheless, some recent work (Farmer et al., 2008) suggests that student blogs can be an effective tool for student-centered, participatory learning. Used in an academic setting, blogging increases student opportunities to participate in class and can result in increased student interest in learning.

Blogging in a psychology class increases student interaction with other students in that it allows for easy access to the thoughts of others. Lychak (cited in Algonquin College Innovation Station, 2010) suggested blogs permit psychology students to add their own personal touch to information they are receiving in class. In this way, students can convey their views on the information they are given, or add some of their personal experience to their assignments. Further, de Leeuw (cited in Vassar College Faculty Focus, 2011) observed that this guarantees that students will have an audience of at least their fellow students and instructors. This may be especially helpful to students who want to express themselves but who may be reluctant to speak in the classroom setting. Further, if an instructor requires students to provide feedback on the blog entries of classmates, this experience provides the opportunity to teach students the proper way to interact with others in a professional and informative fashion.

Blogging and Students

The current generation of students, referred to by Nevid (2011) as Millennials, tend to be superficial processors of information. One of Nevid's suggestions to help students more critically evaluate information and therefore become more effective learners was to include course-based personal journals and diaries via student blogs. He argued that this will engage them in deeper thinking which leads to more enduring learning. Similarly, Chong (2010)

suggested that for students learning in a Web 2.0 world, blogging provides a tool that extends beyond traditional information gathering. Unlike traditional web-based student research, blogging can teach discipline specific skills, producing better comprehension of course material (Chong, 2010). As evidence, Pursel, Xie, and Camplese (2011) reported a positive relationship between course-related blogging activity and students' grade point averages.

Blogging and Instructors

Psychology instructors can decide to choose between a hosted blog site such as WordPress, which describes itself as the largest self-hosted blogging tool in the world (WordPress, 2012), Blogger, which was developed by Pyra Labs and purchased by Google in 2003 (Blogger, 2012), or Tumbler (stylized tumblr), a microblogging platform. Microblogging is a form of blogging; however it differs from traditional blogging because its content is typically smaller in file size (Kaplan & Haenlein, 2011). Faculty may also choose a non-hosted blog site that many universities support (e.g., the Penn State Blog Platform). Differences exist between platforms; however, two issues seem to be most critical to those who blog: Ease of use and ownership (i.e., hosted vs. non-hosted sites). Reviewers have suggested hosted sites are easier to use but ownership of the posted material is not guaranteed (e.g., it can be censored, or archived without notice). Non-hosted sites, on the other hand are said to be more difficult to use, usually requiring some background in HTML, but ownership of the posted material is guaranteed because the blogger pays a monthly hosting fee (Nelson, 2009).

Anderson (2010) observed that social media present psychologists with a vast communication potential, i.e., the ability to reach large numbers of people. This could be in a classroom setting or with a larger audience. However, these outlets also present psychologists with potential hazards requiring thoughtful attention. For example, information may go viral spreading quickly across the Internet. Nevertheless, carefully created instructor blogs can serve many purposes. Anthony (2010) reported that he uses his own blog to present activities to his psychology class online and to deliver resources and materials in electronic form. As examples he mentioned exercises, Word documents, assignments, Power Point presentations, links to websites, videos, and podcasts. He noted that not only is blogging an efficient method to deliver teaching and learning strategies, it also provides the opportunity to model the ways psychologists think, collaborate, and contribute to psychological knowledge. For example, in one of his recent posts Anthony (2011) blogged about strategies students use to deal with stress. A few strategies were posted, and students were then encouraged to post and compare their own strategies for reducing stress.

Student Blogs

Hsu (2008) characterized students as digital natives and faculty as digital immigrants; that is students are no longer the people the educational system was designed to teach. The suggestion is of course that instructors need to pay closer attention to the strengths of today's students, one of which is competency in conversational technologies such as blogging. This being the case, we anticipated that students would have had some experience creating and maintaining their own blog. However, we were surprised to find that in the three years since

we began assigning blogs none of our students who were assigned to create one had ever previously done so. This does not appear to be a problem, as our students were able to develop the necessary skills quickly after a brief training session. We have utilized student blogs in our positive psychology classes with other courses soon to follow. For example, our internship course requires daily journals, and a new Penn State course, Psychology and a Sustainable World, which examines sustainable behavior, also requires a daily journal documenting student actions to reduce negative impacts on the environment. It seems to be quite appropriate to use a paperless approach in these courses by replacing paper journals with blogs.

Blogging and Positive Psychology

In our positive psychology course, we have used student blogs to teach positive psychology interventions. Martin Seligman and his colleagues (Seligman, Steen, Park, & Peterson, 2005) described several empirically supported Internet-based interventions which we adapted as active teaching tools via student blogs. These exercises have been found to decrease depressive symptoms and increase happiness for several months. We utilized three of these techniques by converting them into blogging assignments. After training by the third author, which required less than half of a 50-minute class period, students were instructed to post their assignments on an individual blog using the Penn State blog platform. The exercises were referred to as: 1) Three Good Things; 2) Signature Strengths; and 3) the Gratitude Letter. Each of the assignments is due at the date that ends a course segment. As these are interventions that have been empirically supported and used by positive psychologists, our blogging assignments are well grounded in the pedagogical activities of the course (Minocha, 2009a).

The assignments are particularly well suited to blog posts. Three Good Things requires that students post three good things that happened to them every day for three weeks; Signature Strengths requires them to take an online signature strengths test, found on the University of Pennsylvania's authentichappiness.org web site (http://www.authentichappiness.sas.upenn.edu/ Default.aspx) and use one of their top strengths in a new and different way every day for a week. One potential concern for instructors using such techniques is that students may reveal very personal information in the assignment – information that they only wish the instructor to read. Such privacy concerns can be addressed through the use of privacy setting that are available on many blogging platforms. For example, on the Penn State Blog Platform, students have the option of a protected blog (only course faculty have access); however, very few of our students chose this option. By requiring students to complete the assignments via blogs, instructors can ensure students are posting their entries daily, instead of fabricating all of them in one sitting. Further, this method should reduce concerns about plagiarism inasmuch as student blogs are based entirely on their own experience.

Instructors at other universities are beginning to report novel uses of blogs in the classroom as well. For example, Davi, Frydenberg, and Gulati (2007) assigned blogging exercises in courses in several disciplines which could be readily adapted to psychology. They describe discussion blogs in which students post their commentary on a topic covered in the *New York Times* or other major newspaper. Their classmates had several days to respond to the posts.

This is followed by a rejoinder from those who made the original posts. Davi et al. (2007) also described a technique in which students were asked to blog about the course readings and service-learning experiences outside of the classroom on a weekly basis. Students are required to read and respond to at least one other student blog by their classmates every week.

Professional Society Blogs

In addition to assigning student blogs, instructors can incorporate blogs from the American Psychological Association into their psychology courses. The APA Style Blog (http://blog.apastyle.org/) is a companion piece to the *Publication Manual of the American Psychological Association*. It provides weekly posts on writing using APA Style. PsycCRITIQUES is another APA blog (http://psyccritiquesblog.apa.org/) which is designed to provide a discussion forum about books, films, and APA videos. An additional resource is provided by the British Psychological Society. It maintains a research digest blog (http://bps-research-digest.blogspot.com/) on the brain and behavior which provides original reports on recent psychological research. Instead of covering only studies reported on by typical news outlets, the research blog provides accessible reports on a variety of recent articles published in peer-reviewed journals.

Concerns

There are several concerns which may cause instructors to be reluctant to add a blogging component to their psychology courses. Chief among them is that blogs can be time intensive for the course instructor. For example, if students are required to post a daily blog entry, instructors must monitor the blogs continuously to ensure that students are updating their blogs on a daily basis with authentic entries, rather than creating all of their posts at the due date. However, this is also one of the primary advantages of this approach; faculty reading all of the blogs daily helps prevent students from writing all of their assignments simultaneously, which defeats the purpose of a daily log. To minimize the time required to access our positive psychology blogs, the third author, who is a university Instructional Design Specialist, created a website where all the student blogs in a particular class could be accessed simultaneously by the course instructor. This should not be a difficult task for any university IT department. A second concern for instructors is the use of class time for training students in the university blog platform. However, in our experience, and after a little practice, we have found it necessary to only dedicate one half of a 50-minute class period to train students to become proficient in creating and maintaining a blog. A third concern, noted by Minocha (2009a), is that the invasion of students' personal space could be a problem for students who wish to maintain a separation of their personal and academic lives. However, the use of a protected blog addresses this issue. The fourth cause of reluctance for faculty to assign student blogs is the lack of formal guidance in the assessment of student blogs in psychology courses. Consequently we have developed a system to grade our students' blogs that integrates blogging as a formative assessment exercise in order to reinforce student participation. The grading criteria are as follows: one third of the grade of each assignment is based on timeliness (the blog is posted on or before the due date), one third on completeness (all the required elements are

posted), and one third on writing quality (clear, comprehensible writing with correct grammar and spelling). Nonetheless, in our experience, student writing does vary considerably, so to model the type of writing we are looking for, at the beginning of the semester we provide samples of the types and quality of writing we are expecting in the student blog entries. See Farmer et al. (2008) for additional ideas on grading student blogs.

Conclusion

We described the use of blogs in undergraduate psychology courses and what instructors can expect when they add a blogging component to their course. It appears to us that the advantages of using blogs in the classroom far outweigh any concerns faculty may have about doing so if sufficient technical support is available. Even digital immigrants such as veteran psychology instructors should be able to create, assign and assess blogs in their psychology courses with little difficulty.

References

Algonquin College Innovation Station. (2010). *New learning experiences in psychology using blogs*. Retrieved from http://lyceum.algonquincollege.com/innovation/innovationstation/?p=1479

Anderson, N. B. (2010). APA continues to expand its social media outreach. *Monitor on Psychology*, *42*, 9.

Anthony, P. (2010). *Using blogs in psychology*. Retrieved from http://blogs.triplealearning.com/2010/12/diploma/dp_psychology/using-blogs-in-psychology/

Anthony, P. (2011). *Helping students improve their mood, regain their energy and cope with stress*. Retrieved from http://blogs.triplealearning.com/2011/11/diploma/dp_economics/helping-students-improve-their-mood-regain-their-energy-and-cope-with-stress/

Blogger. (2012). *About Blogger*. Retrieved from http://www.blogger.com/about

Boyd, M. B., & Ellison, B. E. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*, 210-230. doi: 10.1111/j.1083-6101.2007.00393.x

Chong, E. K. M. (2010). Using blogging to enhance the initiation of students into academic research. *Computers & Education*, *55*, 798-807. doi:10.1016/j.compedu.2010.03.012

Davi, A., Frydenberg, M., & Gulati, G. J. (2007). Blogging across the disciplines: Integrating technology to enhance liberal learning. *MERLOT Journal of Online Learning and Teaching*, *3(3)*.

Farmer, B., Yue, A., & Brooks, C. (2008). Using blogging for higher order learning in large cohort university teaching: A case study. *Australasian Journal of Educational Technology, 24*, 123-136.

Hsu, J. (2008). Innovative technologies for education and learning: Education and knowledge-oriented applications of blogs, wikis, podcasts, and more. *International Journal of Web-Based Learning and Teaching Technologies*, *3*, 62-81. doi: 10.4018/jwltt.2008070106

Kaplan, A. M., & Haenlein, M. (2011) The early bird catches the news: Nine things you should know about micro-blogging. *Business Horizons*, *54*, 105-113. doi:10.1016/j.bushor.2010.09.004

Minocha, S. (2009a). An empirically-grounded study on the effective use of social software in education. *Education + Training*, *51*, 381-394. doi: 10.1108/00400910910987192

Minocha, S. (2009b). Role of social software tools in education: A literature review. *Education + Training*, *51*, 353-369. doi: 10.1108/00400910910987174

Nelson, M. (2009). *Blogging basics 101: What do you want to know?* Retrieved from http://www.bloggingbasics101.com/2009/01/choosing-a-blogging-platform/

Nevid, J. S. (2011). Teaching the Millennials. *APS Observer*, *24*, 53-56.

Pursel, B., Xie, J., & Camplese, C. (2011). *The education technology ecosystem at Penn State University*. Unpublished manuscript, The Pennsylvania State University, The Schreyer Institute for Teaching Excellence.

Seligman, M.E.P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist, 60,* 410-421.

Vassar College Faculty Focus. (2011). *Blogging in an introductory psychology course*. Retrieved from http://computing.vassar.edu/academic/facultyfocus/deleeuw.html

WordPress. (2012). *About WordPress*. Retrieved from http://en.wordpress.com/about/

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Chapter 2

Using Art to Enhance the Teaching of Psychology

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"Creativity involves introducing novel perspectives, trying unusual approaches to problems, experimenting with new ideas, and taking intellectual risks" (Conner-Greene, Young, & Murdoch, 2005, p. 215). According to Conner-Greene, Young, and Murdoch (2005) "Higher level thought involves both critical and creative thinking skills" (p. 215) since there are numerous ways to produce and interpret a creative product. Furthermore, "Creativity is something that touches every part of an individual's life, regardless of what you do" (Kaufman, as cited by Packard, 2006, p. 76). Creative products can also produce "A deeper understanding of how to attain creative practices and communicate with people coming from a whole bunch of different experiences [which] can help you gain an understanding of yourself" (Kaufman, as cited by Packard, 2006, p. 76) and increase students' ability to understand the viewpoint of others (Conner-Greene et al., 2005). How can we use creativity to enhance our psychology classes?

Several psychology instructors have integrated the arts in psychology courses to enhance learning. For example, Simpson (2009) argued that using biographies of famous people in a Psychology of Genius course helped to "broaden students' appreciation of visual art, music, literature, and the natural sciences…" (p. 46). He found that by the end of the course students reported an increase in understanding of general psychology, methods, key concepts, and the connection between psychology and the personal experience of genius. Similarly, Krauss, Whitbourne, and Collins (1999) used "images of aging" in the media, television, film, art, or literature to teach core concepts in a psychology of aging course. These authors found students were able to challenge their stereotypes of aging and apply course knowledge to real-life examples. Fleming, Piedmont, and Hiam (1990) argued that the use of film helps to "make students aware of the important interaction between art and psychology" (Fleming, Piedmont, & Hiam, 1990, p. 185). After teaching a 15 session course entitled Psychology and Film: Images of Madness, students felt they observed accurate portrayals of numerous disorders (for example, PTSD, substance abuse, antisocial behavior, and depression) and gained knowledge about how people's perceptions of the mentally ill are influenced by film.

How might the discussion of fine art affect learning in the classroom? Housen (2001-2002) conducted a longitudinal study to examine how viewing fine art aides the development of critical thinking skills. Housen used Visual Thinking Strategies (VTS) in the classroom and found "that VTS causes the growth of critical thinking and enables its transfer to other contexts and content" (p. 99-100). Based in Housen's theory on aesthetic development, VTS uses three open-ended questions to elicit students' thoughts about specific pieces of art. These foundation questions are: (1) What is going on here?, (2) What do you see that makes you say that?, and

(3) What more can you find? The foundation questions have students observe the piece of art and use the visual stimulus to support their responses. These three questions increase student curiosity and enhance students' ability to test their thoughts using reasoning.

How can Visual Thinking Strategies be specifically used in the psychology classroom? Utilizing my own academic background in psychology, art, and art history I found 12 pieces of art to illustrate concepts in introductory psychology (biopsychology, sensation and perception, memory, treatments, human development, and more). My introductory psychology students noted that the art used in class "let me learn and view things in a different way," "gave me a new perspective," and "gave me a visual idea of what we were learning about." Additionally, I found that the use of visual art to teach concepts in psychology increased student engagement, and encouraged higher level thinking and understanding.

In the examples below, I have included links to the works of art, along with information about the artist's background and inspiration, description of the art piece(s) and their connections to psychology, and sample questions for students. These descriptions provide instructors with materials that can increase student understanding and knowledge of psychology, enhance student engagement, encourage higher level thinking, and possibly decrease or challenge stereotypes (for example, Fairey's *Israel/ Paelstine* print and Gosn's *My Name is Arab*).

Biopsychology

Artist: Pablo Garcia Lopez
Artist's Images:
http://pablogarcialopez.com/section/280834_Silk_basso_relieve_sculpting_the_wall.html
Background of Artist: Lopez is fascinated by the work of Santiago Ramon y Cajal who is known as "The Father of Neuroscience." Lopez is especially fascinated by Cajal's metaphor of the brain's similarities to a garden.
Image for Class: *Sculpting the Wall* (2009)
Description of image and connection to psychology: Using silk and hair styling gel, Lopez creates the neuron. The viewer can see how Lopez has created the dendrites using braided silk formations that extend outward. The cell body is formed by silk braids wound around in a tight circle. Finally the axon consists of a thinner piece of silk with the terminal button in the form of a flower.
Questions for students: What is missing from this piece of work? Describe Lopez's accuracy in recreating the neuron.

Sensation and Perception

Artist: Chuck Close (http://www.chuckclose.coe.uh.edu/)
Artist's Image: http://www.chuckclose.coe.uh.edu/life/silkscreen.htm
Image for Class: *John* (1998)
Description of image and connection to psychology: Close's paintings are made up of small blocks on a grid. Close up his paintings look like abstract art, however from a distance the viewer sees only a large portrait not the small, abstract pieces thus illustrating gestalt principles

of perception.
Questions for students: First show an image of the painting close up and ask students what they see. Then show students an image of the full piece and ask them if they are able to see the small, abstract pieces. Why do you think our brain processes those tiny squares as a large portrait? How might this tendency apply to other situations where our brain processes the whole and not the parts?

Consciousness

Artist: Rene Magritte
Artist's Image: http://www.learner.org/courses/globalart/work/102/index.html
Image for Class: *The False Mirror*
Description of image and connection to psychology: As a surrealist painter, Magritte seeks to connect our unconscious and conscious states. Here you have an image of the eye with clouds as the Iris. According to Caws (2009), Magritte is "connecting the "dream and real world."
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? What might the artist be saying about consciousness in this piece?

Memory

Artist: Colin Chillag (http://colinchillag.com)
Artist's Image: http://www.lostateminor.com/2011/01/11/collin-chillag/
Image for Class: *Portraits*
Description of image and connection to psychology: Chillag's paintings reflect the "way the mind works in relation to memory…they evoke the emotional satisfaction of remembering and the pain of forgetting…no matter how valuable we consider a moment in the past, time imposes gaps and sketch marks…" (Williams, 2011, p.52).
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009) What do you think the artist is trying to say about our memories?

Language

Artist: Various Hmong Textile Artists
Artist's Images: http://www.artisansofasia.com/traditional_textile.php
Images for Class: Images of textiles
Description of image and connection to psychology: There are many ways that we communicate. One form of communication is through symbols. The Hmong had limited formal education and thus recorded their history and experiences through textile art (Craig, 2010).
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009)

Human Development

Artist: Salvador Dali
Artist's Image: http://photos1.blogger.com/img/299/1551/640/The%20Three%20Ages.jpg
Image for Class: *The Three Ages*
Description of image and connection to psychology: In this one piece, the artist shows three stages of development: infancy, adolescence, and late adulthood.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009)

Emotion

Artist: Edvard Munch
Artist's Image: http://www.edvard-munch.com/gallery/anxiety/scream.htm
Image for Class: *The Scream*
Description of image and connection to psychology: This popular piece shows strong emotions of anxiety and fear and will elicit these emotions from the viewer.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009) Do you feel anxious while viewing this image? Why or why not?

Stress and Health

Artist: Frida Kahlo
Artist's Image: http://www.learner.org/courses/globalart/work/57/index.html
Image for Class: *The Broken Column*
Description of image and connection to psychology: Kahlo survived a bus accident and was in physical pain for much of her life. Her physical pain greatly affected her psychological well being.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009) How does her physical pain seem to affect her psychologically?

Social Psychology

Artist: Shepard Fairey
Artist's Image: http://obeygiant.com/prints/israel-palestine-print
Image for Class: *Israel/ Palestine Print*
Description of image and connection to psychology: Fairey believes that many people are unaware of their surroundings. He uses his art to challenge people's thoughts. This piece has shown up on buildings throughout the US and is a catalyst for conversations about the war, our stereotypes of the "others," and an opportunity to challenge one's assumptions.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009) What assumptions does

Fairey challenge with this piece? How does his use of placing his art throughout cities help/ hinder the message he wants to send?

Artist: Saad Ghosn
Artist's Image: http://i431.photobucket.com/albums/qq31/r-lippert89/Louisville%20Cardinal%20Magazine%20Photos/100_2686.jpg
Image for Class: *Issmee Arabee (My Name is Arab)*
Description of image and connection to psychology: Ghosn works focus on his experiences as an Arab American as he explores conflicts with his dreams of peace and his experiences of oppression in the United States. In this piece he addresses how currently Arabs are being profiled and discriminated against.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009)

Disorders

Artist: Maxine Seelenbinder-Apke
Artist's Image: http://maxineapke.files.wordpress.com/2010/08/img_0110-copy.jpg
Image for Class: *A Crap Shoot*
Background of Artist: Seelenbinder-Apke is a retired art teacher who raised a son with schizophrenia and who has dealt with depression herself. Her work focuses on social issues surrounding mental illness.
Description of image and connection to psychology: Seelenbinder-Apke sees the "roll of dice" as a metaphor of the chance one has of developing a mental illness. Seelenbinder-Apke created these pieces using thousands of dice that surround images of brains. The colors indicate different mental illnesses (black for depression, red for schizophrenia, white and green for post traumatic stress disorder, blue for obsessive compulsive disorder/ anxiety, and yellow for bipolar disorder). The white cube is used to represent a "normal" brain while the black cube represents one's chance of developing a mental illness.
Questions for students: How can you apply the diathesis stress model to Seelenbinder-Apke's *Crap Shoot?* Do you agree with her view of mental illness? Why or why not?

Treatments

Artist: Vincent Van Gogh
Artist's Image: http://www.vangoghmuseum.nl/vgm/index.jsp?page=12267&lang=en
Image for Class: *Window of Vincent's Studio at the Asylum*
Description of image and connection to psychology: Van Gogh created 150 pieces during his time in the asylum. This piece shows Van Gogh's confinement to the indoors until his mental state improves.
Questions for students: What is going on in this picture? What do you see that makes you say that? What more can we find? ("Visual Thinking Strategies," 2009) Van Gogh omitted the bars on the window, why do you think he did this? ("the therapy of painting").

As prior research indicates, different forms of creativity (literature, film, and media) have been successfully used in the psychology classroom to broaden students' exposure, increase understanding of key concepts in psychology, and challenge stereotypes. As shown with the above examples, the visual arts can greatly expand the number of resources for psychology instructors and can enhance the students' understanding of various psychological concepts. Future research will include an examination of the effectiveness of using the visual arts in teaching psychology and the development of critical thinking in students in the psychology classroom.

References

Caws, M. (Featured Art Historian in Documentary). (2009). *Art through time.* Burlington, VT: Annenberg Media.

Close, C. (1989). John [Silk Screen]. New York. Retrieved June 22, 2011, from http://www.chuckclose.coe.uh.edu/life/silkscreen.htm.

Connor-Greene, P. A., Young, A., Paul, C., & Murdoch, J. W. (2005). Poetry: It's not just for English class anymore. *Teaching of Psychology*, *32*, 215-221. doi:10.1207/s15328023top3204_2

Craig, G. (2010). Patterns of change: Transitions in Hmong textile language. *Hmong Studies Journal, 11*, 1 - 48.

Dali, S. (1940). Three Ages [Painting]. Retrieved from: http://photos1.blogger.com/img/299/1551/640/The%20Three%20Ages.jpg.

Fleming, M. Z., Piedmont, R. L., & Hiam, C. M. (1990). Images of madness: Feature films in teaching of psychology. *Teaching of Psychology, 17,* 185-187.

Ghosn, S. (2007). *Issmee Arabee (My Name is Arab)* [Woodcut Print]. Cincinnati, Ohio.

Housen, A. C. (2001-2002). Aesthetic thought, critical thinking, and transfer. *Arts and learning research journal, 18*, 99-132.

Kahlo, F. (1944). The Broken Column [Oil on Masonite]. Retrieved from: http://www.learner.org/courses/globalart/work/57/index.html.

Krauss Whitbourne, S. & Collins, K. (1999). Employing interactive learning methods in a course on the psychology of aging. *Teaching of Psychology, 26,* 48-49.

Lopez, P. G. (2010). *Pablo Garcia Lopez*. Retrieved from http://pablogarcialopez.com/home.html.

Magritte, R. (1928). The False Mirror [Painting]. Retrieved from http://www.learner.org/courses/globalart/work/102/index.html.

Munch, E. (1893). The Scream [Tempera and Pastel]. Retrieved from: http://www.edvard-munch.com/gallery/anxiety/scream.htm.

Seelenbinder-Apke, M. (2010). *Post family secrets.* Retrieved from http://maxineapke.wordpress.com/.

Simpson, K. E. (2009). "Beautiful minds": A seminar course on the psychology of genius. *Teaching of Psychology, 36,* 46-50.

The therapy of painting (n.d.). In the Van Gogh Museum. Retrieved from http://www.vangoghmuseum.nl/vgm/index.jsp?page=12267&lang=en

Visual thinking strategies: understanding the basics. (2009). *Proceedings of the visual thinking strategies workshop* (pp. 01-09). New York: Visual Understanding in Education.
Williams, J. (2011). The two colliding worlds of Colin Chillag. *Hi Fructose, 19*, 48-53.

Chapter 3

Understanding Statistics and Research Methods via Discussion of Published Articles

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Students majoring in psychology are generally required to take courses in statistics and research methods (McKelvie, 2000), sometimes in sequence and sometimes integrated in a single course. These courses allow students to read the psychological research literature and perhaps also conduct research themselves. Although students probably understand the importance of these courses, they do not usually list them among their favourites. Perhaps this occurs because many students are drawn to psychology from their interest in the human condition and from their desire to help others. For such students, quantitative reasoning may not be one of their strong points.

Formal instruction in statistics and research methods usually includes descriptions of various inferential statistical techniques, of various research methods, and sometimes brief examples from psychological studies. It is my contention that student understanding can be enhanced by reading and discussing research articles that have been published in peer-reviewed journals. In the traditional approach, the principles and concepts in statistics and research methods are presented in a lecture. The activity described here is offered as a supplement to this traditional approach. Students read articles and try to identify and critically comment on the methods and statistical techniques. Hopefully, exposure to real research reports on interesting topics will increase student motivation to grapple with the principles of statistics and methods.

In the psychology program in which I teach, students take a one-semester statistics course followed by a second statistics course in conjunction with a one-semester research methods course. The present exercise is incorporated into the latter, with one period each week devoted to class discussion of an article.

Critical Discussions of Published Articles

Advance organizers are statements or questions presented to students before they read the required material. Although they do not always enhance learning, they can do so under certain conditions (Kiewra, Mayer, Dubois, Christensen, Kim, & Risch, 1997; Kreiner, 1996; Preiss & Gavie, 2006), particularly if they take the form of questions that provide a context or framework for the material being studied (Kreiner, 1996). Many textbook writers employ this technique by inserting learning objectives or specific questions into their chapters (e. g., Coon & Mitterer, 2007; Myers, 2013).

In the present exercise, I provide students with 16 questions to keep in mind when reading an article (see Appendix 1). A selection of the questions is signaled as important for each article, but the first four are always mandated for discussion. I also encourage students to list any questions or observations of their own. I do not lay down any hard and fast rules about how they should generate their own comments, but I point out that they might consider strengths and weaknesses of the study, aspects that they do not understand, and suggestions for future research.

For each article, students should know the research question and the results, and should be prepared to comment on the first four items from the list of questions: to identify and understand the research method (experimental or nonexperimental and then subcategories), the statistical analysis, the source of the research question and the area of psychology that is represented. Students are taught in lectures that the four major sources of research ideas are theory, past research, practical intervention and everyday life. In the first case, the researcher describes or proposes and theory and derives predictions for testing. In the second case, the researcher points out inconsistencies in past research and/ or identifies ways in which it might be extended. In the third case, the goal of the study is to assess the effectiveness of an intervention designed to change behavior or a mental process. In the fourth case, the study is based on an observation from everyday life. The goal is usually to determine whether the casual or anecdotal observation can be formally captured and studied scientifically. To identify which area of psychology is represented, students consider the chapters in their introductory textbook and the courses offered in the psychology department. I emphasize that the article may fall into more than one category for each question.

The Articles and Corresponding Issues for Discussion

I have assembled a list of 18 articles that were chosen to represent various methods, statistics, sources and areas of psychology. I also sought articles that had identifiable strengths and weaknesses and that covered topics of interest to students. The 18 articles are listed in Appendix 2 in the order in which they are discussed in class. Also included are the associated method, statistics, source and area of psychology, together with some other important features.

Below, as an example, I provide a description of how the first paper on the list is treated in terms of content and the issues that students discuss.

Detailed Example

Carsello and Creaser (1978): Does transcendental meditation training affect grades?

In this study, students who had taken a Transcendental Meditation (TM) programme were placed in what was termed the experimental group. A control group was formed by searching the university records for other students who could be matched individually to the TM students on five variables. Grade point averages were compared for the two groups before the course was taken by the meditation group and then at two later times. Test results were not significant, showing that the two groups did not differ before meditation and still did not differ later. The authors conclude: “no effect on grades was found from TM training” (p. 645).

Discussion Questions with Expected Answers

1. *What type(s) of research method is (are) involved? In particular, is this a true experiment?*

A true experiment requires both manipulation of an independent variable and control of confounding variables, usually by random assignment of participants to conditions. Although there is an independent variable (meditation), participants were not allocated randomly. Therefore, the method is not experimental. However, because the authors label the meditation group "experimental," students may seize upon this information and blindly classify the study as an experiment.

On the other hand, participants were matched on five variables, four of which Carsello and Creaser state had been associated with grades in previous research (sex, college, year of study, and prior grades). The fifth matching variable was the first letter of the student's last name. The authors do not say why they did this, but students might speculate that matching the participants on a variable that is not associated with grades may serve as a simulation of random assignment. If the second requirement of a true experiment is expressed as control of confounding variables, one might argue that this study can be classified as experimental. At the same time, the groups may have differed on other unknown variables and the only way to control for this is randomization. I encourage an active discussion about whether to classify this study as an experiment or not and, if not, whether it might be quasi-experimental or simply a post hoc design with a subject variable.

2. *What statistics were used? Were they appropriate?*

Paired *t*-tests were employed because each student in the meditation group was matched with a specific student in the control group. This is an important point for students to appreciate because they often think that the paired samples *t*-test only applies when the same participants are tested twice.

3. *What is (are) the source(s) of the problem (theory, past research, practical intervention, everyday life)?*

Because the TM organization claims that TM can improve academic performance, the study evaluates a practical intervention. Carsello and Creaser summarize past research on this question, but they raise objections. Specifically, they note that one previous positive relationship occurred with selected students who were enthusiastic about TM. In their study, participants were "run-of-the-mill" (p. 644) TM volunteers.

4. *What content area(s) of psychology is (are) represented?*

Meditation usually appears under the topic of consciousness. Because TM may improve grades, the study is relevant to educational psychology.

5. *What is the participant population? How were the participants selected from the population and allocated to conditions?*

The population was undergraduates who were selected if they had taken a TM course and had grades available. The control group was formed by matching (see above).

6. *What is (are) the hypothesis (es)?*

Careful scrutiny of the introduction does not indicate an explicit hypothesis. The authors identify a flaw in previous research (see above), but do not state what they expected to find with their correction. However, students might recall that the TM organization would expect a positive relationship.

My Comments on this Article

This article is only two pages long so it is very accessible, but it is packed with many useful lessons. Students might ask why a paired-samples *t*-test was not performed on the grades before and after meditation. They might also ask why a 2 X 2 (Group X Time) mixed model ANOVA was not conducted. However, the table of means and standard deviations shows that there is almost no difference at all between the grades over time for either group. Students might debate the matching technique. Does it simulate randomization? Would it be practically possible to conduct a completely randomized experiment on this question? If so, would a simple control group with no intervention be sufficient?

Conclusion

The course activity offered here illustrates principles of statistics and research methods using published articles. The advance organizer questions provide a context for the students' reading and should help them focus on key points and retain more information. This can lead to class discussion in which the studies are critically evaluated, showing students that they can think like research scientists. Finally, the exercise provides a rich source for examination questions (perhaps the actual study questions) to assess student understanding of the material.

Appendix 1
List of Questions (Advance Organizers) for Discussions

1. What type(s) of *research method* is (are) involved? In particular, is this a *true experiment*?
2. What *inferential statistics* were used? Were they appropriate?
3. What is (are) the *source*(s) of the problem (theory, past research, practical intervention, everyday life)?
4. What *content area*(s) of psychology is (are) represented?

5. What is the *participant population*? How were the participants selected from the population and allocated to conditions?
6. What is (are) the *hypothesis* (es)?
7. What are the *independent and dependent variables*?
8. Is it possible to identify *confounding* variables that were specifically controlled?
9. What are the *operational definitions* of the variables?
10. What *techniques* were used to *control* variables?
11. Was the method *described clearly* so that you could replicate it?
12. Were the *hypotheses* (predictions) *confirmed*? Are discrepancies discussed?
13. Have you any *criticisms* (particularly regarding the logic, method, data analysis or interpretation of the results)?
14. Can the results *be generalized (*does the study have *external validity)*?
15. What should be done *next*?
16. Do you have any *ethical concerns* with this work?

Appendix 2
Discussion Papers in Sequence

For each paper, I list my answers to the four mandatory questions about research method, statistics, source of the research and area of psychology, and also include sundry comments.

Carsello, C. J., & Creaser, J. W. (1978). Does transcendental meditation affect grades? *Journal of Applied Psychology, 63*, 644-645.
Answers: Nonexperimental; paired-samples *t*-test; past research, practical intervention; consciousness, educational psychology, treatment for psychological disorders.

Motley, M. T., & Camden, C. T. (1985). Nonlinguistic influences on lexical selection: Evidence from double entendres. *Communication Monographs, 52*, 124-135.
Answers: Experimental (Studies 1 and 2) and nonexperimental (Study 3); independent samples *t*-test, chi square, one-way between groups ANOVA; theory; cognitive psychology.
Comments: The speech errors are sexual double entendres, hopefully sparking student interest. Because the introduction is difficult, I supply a summary and tell students to begin at the first study.

Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58*, 203-210.
Answers: Experimental (probably; the authors do not say explicitly that participants were randomly assigned to conditions, which is something for students to detect); independent samples *t*-test; theory; social cognition.
Comments: This famous paper is cited in most introductory and social psychology textbooks. Students may ask why the authors conducted a number of *t*-tests rather than a one-way between groups ANOVA. The large number of deceptions can raises the issue of research ethics.

Silverman, L. H., Frank, S. G., & Dachinger, P. (1974). A psychoanalytic reinterpretation of the effectiveness of systematic desensitization: Experimental data bearing on the role of emerging fantasies. *Journal of Abnormal Psychology, 83*, 313-318.
Answers: Experimental; independent samples *t*-test; theory, past research, practical intervention; treatment for psychological disorders.
Comments: This paper tests the intriguing idea that systematic desensitization, a behavioural technique, might operate via a psychodynamic mechanism. Students can discuss why one-tailed tests were employed, and ask why a 2 X 2 mixed ANOVA was not conducted.

Rideout, B. E., Dougherty, S., & Wernert, L. (1998). Effect of music on spatial performance: A test of generality. *Perceptual and Motor Skills, 86*, 512-514.
Answers: Experimental (probably; randomization is not explicit); paired samples and independent samples *t*-tests; past research, practical intervention; intelligence, music psychology.
Comments: Interesting features of this paper are the content (Mozart effect) and method (eight counterbalanced conditions). The two major conditions (control, music) in the table are given misleading labels (control group and music group) because they were tested within subjects.

Khouzam, H. R., Ghafoori, B., & Nichols, E. A. (2005). Use of a religious hymn in remission of symptoms of social phobia (social anxiety disorder): A case study. *Psychological Reports, 96*, 411-421.
Answers: Nonexperimental; no statistics; practical intervention; treatment for psychological disorders.
Comments: In complete contrast to the previous papers, this is the study of a single case – a man who reported that listening to a religious hymn ("*Be still my soul: the Lord is on my side*"; music "Finlandia") relieved his chronic social anxiety. The story is quite compelling. However, discussion can focus on whether the attribution is true and, if so, whether the result can be generalized. I provide an audio clip to a beautiful choral rendition of this piece.

Schellenberg, E. G. (2004). Music lessons enhance IQ. *Psychological Science, 15*, 511-514.
Answers: Experimental; independent samples t-test; practical intervention; intelligence, music psychology.
Comments: Here the independent variable is not listening to music, but playing an instrument or singing. There is a pure control group and one with practice in another art: drama.

Furnham, A. (2001). Remembering stories as a function of the medium of presentation. *Psychological Reports, 89*, 483-486.
Answers: Experiment; one-way between groups ANOVA plus Scheffe post hoc; past research; memory.
Comments: The independent variable contains interesting comparisons: reading vs listening vs viewing and listening. Furnham is one of the most prolific researchers in the world.

Bolduc, J. C., & de Man, A, F. (2000). Alternative learning program and self-esteem in early adolescence. *North American Journal of Psychology, 2*, 323-326.
Answers: Nonexperimental; two-way between groups ANOVA, independent groups *t*-test; practical intervention; educational psychology.
Comments: Interesting issue: is placement in a special learning programme for students with difficulties associated with improved self-esteem?

Marks, D. F. (1973). Visual imagery differences in recall of pictures. *British Journal of Psychology, 64*, 17-24.
Answers: Nonexperimental; two-way between groups ANOVA; past research; memory.
Comments: This paper provides students with good examples of subject variables: sex and vividness of visual imagery. In the second case they can discuss how people are allocated to the good and poor groups. Careful experimental control is exercised over cognitive activity during the picture memory task. As with the TM study, students may be deceived by the labeling of the studies as "experiments."

Charnetski, C. J., Riggers, S., Brennan, F. X. (2004). Effect of petting a dog on immune system function. *Psychological Reports, 95*, 1087-1091.
Answers: Experiment; two-way mixed ANOVA; paired-samples *t*-test; practical intervention; health psychology.
Comments: There is an interesting control group: petting a stuffed dog. Questions might be raised about whether it was appropriate to follow up the ANOVA with simple comparisons when the interaction was not statistically significant. Note that there are two errors in the paper: (i) the difference scores in Table 2 do not correspond to the difference between the means in Table 1 for the dog and stuffed dog conditions; (ii) the *t*-test value for the dog group ($t = 2.43$) is incorrect, as can be shown by calculating it from the data in Table 2. Also, degrees of freedom are not given with the *t*s, as APA style says they should be.

Morris, P. E., Jones, S., & Hampson, P. (1978). An imagery mnemonic for the learning of people's names. *British Journal of Psychology, 69*, 335-336.
Answers: Experimental (probably; there is no explicit statement of randomization); two-way mixed ANOVA; practical intervention; memory.
Comments: Learning people's names is an important social skill!

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology, 67*, 371-378.
Answers: Nonexperimental; no statistics; everyday life; social psychology.
Comments: This famous paper allows students to see that a study may have a great impact even if it is not an experiment and does not contain any statistical analysis. However, Milgram collects data for a prediction. Discussion can focus on exactly what kind of nonexperimental study this is and whether the procedure is ethical. Note that William Shatner played Milgram in the film "*The 10th level*."

Milgram, S. (1964). Group pressure and action against a person. *Journal of Abnormal and Social Psychology, 69*, 137-143.
Answers: Experiment; two-way mixed ANOVA; past research; social psychology.
Comments: This is one of Milgram's many modifications to his basic design, with an experimental manipulation. Students see a massive statistical interaction effect.

Page, S. (1977). Effects of the mental illness label in attempts to obtain accommodation. *Canadian Journal of Behavioural Science, 9*, 85-90.
Page, S. (1998). Accepting the gay person: Rental accommodation in the community. *Journal of Homosexuality, 36*, 31-39.
Answers: Experimental; chi square; theory, everyday life; social psychology.
Comments: These two papers show that experiments can be conducted outside the laboratory.

Freedman, J. L., & Fraser, S. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology, 4*, 195-202.
Answers: Experiment; chi square; past research; social psychology.
Comments: This well-known study is a field experiment. Their second experiment builds nicely on the first one.

Mill, D., Gray, T., & Mandel, D. R. (1994). Influence of research methods and statistics courses on everyday reasoning, critical abilities, and belief in unsubstantiated phenomena. *Canadian Journal of Behavioral Science, 26*, 246-258.
Answers: Experimental and nonexperimental; correlation, one-way ANOVA, *t*-test, chi square; practical intervention; educational psychology.
Comments: This might interest students: can studying research methods affect reasoning and critical thinking outside the course? The complex design must be read carefully.

Wilson, T. D., DePaulo, B. M., Mook, D. G., & Klaaren, K. J. (1993). Scientists' evaluations of research: The biasing effect of importance of topic. *Psychological Science, 4*, 322-325.
Answers: Experiment; correlation, independent groups *F*-test with two conditions, *t*-test; "everyday life" in the world of science; cognition (bias in judgment).
Comments. This paper shows students how scientists might not be as objective as we would like them to be.

References

Coon, D., & Mitterer, J. O. (2007). *Introduction to psychology: Gateways to mind and behavior*, 11th ed. Belmont, CA: Wadsworth.
Kiewra, K. A., Mayer, R. E., Dubois, N. F., Christensen, M., Kim, S.-I., & Risch, N. (1997). Effects of advance organizers and repeated presentations on students' learning. *The Journal of Experimental Education, 65*, 147-159.
Kreiner, D. S. (1996). Effects of advance questions on reading comprehension. *The Journal of General Psychology, 123*, 352-364.

McKelvie, S. J. (2000). Psychological testing in the undergraduate curriculum. *Canadian Psychology, 41*, 141-148.

Preiss, R. & Gayle, B. M. (2006). A meta-analysis of the educational benefits of employing advance organizers. In B. M. Gayle, R. W. Preiss, N. Burrell, & M. Allen, *Classroom communication and instructional processes: Advances through meta-analysis* (pp. 329 – 344). Mahwah, NJ: Lawrence Erlbaum Associates.

Myers, D. (2013). *Psychology*, 10th ed. New York, NY: Worth.

Chapter 4

The Dark Side of Pedagogy: An Ecological Perspective on the Study and Use of Pedagogy in the Classroom

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Scholarship of Teaching and Learning (SoTL) efforts and attempts to apply findings in the Science of Learning (SoL) are both influencing teaching and pedagogy in psychology courses from very different vantage points. Yet, both have yet to thoroughly address critical issues that are important for informing classroom teaching practice.

Like many emerging fields, the field of SoTL has amassed literally hundreds of studies describing concrete classroom applications. A closer look at these studies, however, reveals a conflicting array of main effects with little effort in the field to develop theoretical models to integrate these findings into an organized explanatory system (Gurung & Schwartz, 2010) or to address the basic psychological mechanisms responsible for the main effects in question. On the other end of the spectrum, findings in the Science of Learning that explore the basic mechanisms of learning are just beginning to move from the controlled setting of the laboratory toward acknowledging the complexity of the teaching and learning process in the many contexts in which it occurs (Daniel & Poole, 2009). These are not new problems in science, and certainly not new to psychological science (see Brofenbrenner, 1977; 1979).

From a teaching perspective, this abundance of conflicting main effects and decontextualized findings can lead to a rather simplistic array of techniques and explanations that lack the sophistication and complexity to properly generalize to the classroom. For example, much of the pedagogy in introductory-level textbooks is derived from a literature devoted to improving reading. Poor readers may have difficulty prioritizing their reading or knowing what information in the narrative is primary and what is supportive. Features such as bold words, summaries, and key word lists signal to the poor reader what is important. In the lab, that is. In a very interesting study on the pedagogical features of textbooks, Regan Gurung (2004) found neutral to negative effects for such pedagogical features when assessing classroom performance. How is a teacher to resolve these conflicting findings?

One of several concepts that can be brought to bear on this issue is Gibson's concept of affordances (1977). Briefly, objects may have many properties and uses to an individual, realized or not, other than those for which the object was designed. For example, while a chair may be designed to sit upon, it can also be used as a support to reach a light bulb, to fight a lion, to make squeaky noises and even to chew on (although I do not recommend it, there are better sources of fiber!). If a student adopts goals different from those around which a pedagogical strategy was developed (for example efficiency rather than learning impact), if a

student lacks sufficient prior knowledge or is deficient in requisite skills to interact with the technique properly, or if a student is unaware or confused about the optimal way in which to use the method, the strategy may actually be used in a way that inadvertently subverts learning in the desired manner. That is, the affordance(s) that were intended by design may not be the same affordances that students choose to interact with independently. Thus, while a particular metacognitive or pedagogical strategy may work under supervised, constrained or guided conditions, it may not work as designed to encourage learning in a less structured context (e.g., Daniel & Poole, 2009).

Let's examine a very typical example: While students may use bold words in a textbook as a signaling device to prioritize the reading when instructed to do so (and, perhaps, when supervised), they may interact with that very same feature as a tool to avoid the reading when left to their own devices. Thus, while the bold words are designed to support reading, the way they are presented in textbooks also offers more salient affordances that support focusing on learning decontextualized vocabulary words.

The fact that pedagogical tools and strategies can be used to enhance or subvert learning puts the onus of learning squarely in three areas: The learner, who we are used to blaming, the context (by default, this is actually most often the teacher, who is a major player in developing learning goals, classroom culture, course design, assignments, structure and support), and the designer of the pedagogical or learning strategy. I would like to suggest that, much like the design of objects like ipods or aircraft cockpits, pedagogical strategies can be better designed for the learner and practitioner by making the unwanted affordances less salient, or removing them completely, in favor of a more targeted and strategic interface. Until this becomes part of the process of moving from the lab to the classroom, I suggest a few guidelines for teachers to improve the likelihood that students will interact with pedagogy in the way we hope they will:

1) Design – As much as possible, design away the potentially subversive affordances and make the desirable ones more prominent.

2) Instruct – Teach the students how to properly use the technique. Textbooks, while nominally replete with pedagogy, rarely meaningfully instruct the student on how to use these components (and even fewer provide quality evidence that using the included pedagogy correctly will actually enhance learning!).

3) Align Goals - As mentioned above, a common student goal is to get finished quickly, while teachers are looking for learning impact. In both cases, however, these goals are often implicit. Making your teaching goals explicit and mapping them onto the desired strategy can motivate certain students to interact with the pedagogy more appropriately.

4) Find Your Level – Make sure that the strategy or tool that you are making available is accessible to the level of the student in terms of prior knowledge and requisite skills. A technique that is above the level of the student's skills may encourage shortcuts while one far beneath the student's skills may be ignored or misused.

5) Cognitive Load – The more complex or unfamiliar the strategy, the more the student has to devote effort to navigating its use rather than learning. Target the strategy and scaffold it appropriately.

6) Formative Assessment – Build in opportunities for the student to assess the impact of a learning tool. This could provide critical feedback to the student as to whether they are using a technique or learning tool improperly and encourage appropriate adjustments.

7) Don't Commit - Pilot pedagogical techniques and strategies in YOUR context before committing to them100%. Remember, not everything works for everyone, everywhere, every time.

Lastly, I encourage teachers to be very picky consumers. Demand from the literature, the Teaching and Learning Center and the publishers, evidence that specific techniques hold promise in your context before adopting or including it in your classes with confidence. Even then, remember that you will have to adapt pedagogical strategies to your own goals, style and students to make them work effectively. By paying attention to the various ways in which students use, or misuse, particular pedagogical tools, a good teacher has the opportunity to intervene and optimize their learning impact.

References

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32,* 513–531.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge, MA: Harvard University Press.

Daniel, D. B. & Poole, D. A. (2009). Learning for life: An ecological approach to pedagogy. *Perspectives on Psychological Science. 4,* 91-96.

Gibson, J.J. (1977). The theory of affordances. In R. Shaw & J. Bransford (Eds.), *Perceiving, acting and knowing* (pp. 67-82). Hillsdale, NJ: Erlbaum.

Gurung, R.A.R. (2004). Pedagogical aids: Learning enhancers or dangerous detours? *Teaching of Psychology, 31,* 164–166.

Gurung, R. A. R., & Schwartz, B. M. (2010). Riding the third wave of SoTL. *International Journal for the Scholarship of Teaching and Learning, 4(2),* 1-6.

Adapted with permission from:

Daniel, D. B. (2011, October). Applying Gibson's concept of affordances to the study and use of pedagogy in the classroom: An ecological approach. *Developments: Newsletter of the Society for Research in Child Development, 43(4).*

Chapter 5

Incorporating Social Media in Teaching and in Research

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You might think of social media sites like Facebook and Twitter as providing fun (possibly addictive) ways to keep track of your friends and share your thoughts with others, or at worst, distractions for your students that interfere with classroom learning. The idea of using social media in your teaching and research might raise the specter of "friending" or "following" your students or of working just a bit too hard to appear "cool." What we would like to do in this essay is to offer a counterpoint to some of these preconceptions and encourage instructors and researchers to look a bit closer at the opportunities and advantages presented by social media.

Why Use Social Media?

In his *Talks to Teachers,* William James advised teachers to "work your pupil into such a state of interest in what you are going to teach him that every other object of attention is banished from his mind" (1899, p. 10). While this might seem overly idealistic, we do have the advantage of teaching one of the most fascinating topics on the planet, and cynicism shouldn't interfere with our using James' words as inspiration. Using a range of social media platforms can help bridge the real world and the classroom and connect generations, meeting our students halfway in a language they understand and appreciate.

Engaging our students is always a worthy goal, but we also have responsibilities for preparing them for what is coming next. Social media are different from traditional media (newspapers, magazines, television, and radio) in that any individual with Internet access now has a voice (Freberg, 2012). In many cases, that amateur voice is heard and trusted well above the voices of professionals. In 2006, the influential annual Edelman Trust Barometer showed that global opinion leaders ranked "a person like me" as the most credible source of information about a company, surpassing doctors and academic experts for the first time in the survey's history (Creevy, 2006). Students often need our guidance about how to assess the many voices online, which provides us not only with opportunities but obligations to promote critical thinking and information competence.

Social media are also becoming an integral part of the workplace, and academics are being held increasingly accountable for their students' abilities to translate degrees into jobs. In a recent survey of healthcare professionals, 54 percent used social media for healthcare-related education, 33 percent used social media to share research or articles with colleagues, 18

percent used social media to communicate with their employers, and 6 percent used social media to find a new job - double the number who did so in 2010 (Brimmer, 2012).

Suggestions for Social Media in Teaching

Space does not allow for a comprehensive list of the possible uses of social media in the classroom, so we will settle for sharing some of our favorites with you, in the hopes that these trigger additional creative ideas that meet your individual needs.

A Twitter account or hashtag (a keyword followed by the # sign) for each of your individual classes provides opportunities for discussion, virtual office hours, searching activities, and following experts whose work is relevant to your course material. You can avoid the need to make multiple logins by installing a Twitter widget, a small free-standing application providing direct access to your account, within your classroom management system (Blackboard, Moodle, etc.). YouTube videos demonstrating the widget set-ups are available, making this quick and easy (e.g., Mendes, 2012). You might be thinking that your classroom management system already provides the ability to host discussions, but in our experience, these discussion boards are stilted and artificial. Within the Twitter domain, discussion can still be graded, but it sounds much more like the conversations we would hope to stimulate in our classrooms.

Incorporating gamification, or the use of game design techniques to stimulate non-game behavior like participation in discussion, can further improve engagement (Patrizi, 2012). We usually assign course credit for participation, but this process can be more engaging if we provide achievement "badges" for reading certain levels of activity, leaderboards that allow students to see where their participation ranks relative to their classmates, and exchange systems, where points can be traded in for items of value (being excused from a quiz).

Students enjoy searching for the best online videos or infographics to illustrate class topics, or better still, they can be encouraged to make their own. Evaluating the accuracy of online videos and infographics can form the basis of a valuable critical thinking exercise, and constructing videos or infographics requires a strong grasp of the background literature and concepts. In our experience, even complex concepts that students often find "boring" can become crystal clear and memorable. A case in point is the viral video showing a student conditioning his roommate to flinch in response to a buzzer followed by being shot with a nerf ball ("Classical Conditioning at BGSU," 2008). Needless to say, such activities can also incorporate useful discussions about research ethics. Infographics, such as those produced by the Pew Research Center ("Infographics," 2012), require students to engage in more sophisticated levels of Bloom's taxonomy, including the construction and composition of visual representations of experimental data.

Quora ("About Quora," 2012), a question-and-answer site curated by a community of users, provides excellent opportunities for critical thinking and information competence. Quora provides opportunities for students to evaluate the credibility of the person answering the question, as well as the validity and accuracy of the arguments. Discussion of the effectiveness of an answer can incorporate research on persuasion, including the Elaboration Likelihood Model (Petty & Cacioppo, 1986).

As with any pedagogical strategy, using social media for effective teaching begins with a clear assessment of your goals. What exactly do you expect students to gain from your social media activities? Spending sufficient time on this important first step can help you avoid a multitude of disappointments.

Suggestions for Social Media in Research

Particularly for social psychologists, social media represent a wealth of opportunities for investigating the behavior of large numbers of people from all over the world in real time. The bonus, of course, is that much of this research can be done for free, and there are no ethical concerns about using publicly posted information.

Social media tracking sites like Social Mention (2012) and Topsy (2012) allow you to follow topics and easily engage in the same types of traditional content analyses that have been used for decades in research involving traditional media. Social Mention is particularly user-friendly, as it allows you to download your data from the website in ready-to-analyze .cvs format, compatible with Excel and SPSS. Social Mention also provides some interesting summaries of its own, such as the strength, sentiment, passion, and reach of each topic. According to the Social Mention website, "strength" refers to the likelihood that your topic is being discussed in social media, and is computed as a simple percentage of the topic's mentions during the last 24 hours out of the total possible mentions. "Sentiment" compares the use of "negative" and "positive" words in the context of your topic. "Passion" refers to the likelihood that people will repeatedly discuss your topic. A high score will occur when the same people talk about the topic multiple times, and a low score indicates that people might mention the topic a single time. "Reach" is computed by dividing the number of unique authors mentioning the topic divided by the total number of mentions. For example, a quick search of "autism spectrum disorder" demonstrated a strength of 11 percent, a 12:1 positive to negative sentiment, passion of 27% and reach of 33%. For purposes of comparison, a search of "Obamacare" returned 28% strength, 3:1 positive to negative sentiment, passion of 19% and reach of 38%. Are these measures valid and reliable? What can they tell us about these topics? Only further research will be able to answer these questions.

As was the case when brain imaging technologies first became available, we do not want to be so dazzled by our toolkit that we forget to pose substantive research questions. Social media data, however, provide remarkable opportunities for people who are able to frame those questions. Special outlets, such as the new APA journal *Psychology of Popular Media Culture, Cyberpsychology,* and the online *Media Psychology Review* actively seek research regarding social media.

Best Practices

So now you're convinced that you would like to jump in and try using social media. Where do you start? Based on our own experiences, we suggest that you start small by beginning with a single activity as opposed to trying to do many things at once. We strongly recommend that you spend the time to become familiar with the platform you intend to use before assigning an activity to your students. If you want to use Twitter for class discussions, for

example, sign up for a personal Twitter account (a separate one from your class account) and practice using it. Spend time watching how other academics use Twitter so you don't have to reinvent the wheel. Present your activities to students as a work in progress, solicit their feedback, and consider assigning your first activities as extra credit to reduce pressure on yourself and on students. If an activity doesn't work well for you and your students, try something else the next time. Eventually, you should be able to identify a set of activities that meets your course objectives.

In the excitement of setting up your new social media activities, don't lose sight of some good basic practices that apply regardless of the nature of the assignment. Make your expectations crystal clear in your syllabus, and this should include some very pointed wording about maintaining civility and professionalism online. Consult with your campus Disabilities Resource and IT departments to make sure that your assignment is completely accessible, both financially and for students with disabilities.

Conclusion

Because you have read through our article so far, we're hoping that at least one or more of the ideas we've presented here have resonated with you, and that you're a step closer to taking the plunge and trying out some of these ideas (or new ones that have just come to mind) in your own teaching and research. If you do decide to move forward, we would love to hear from you and compare notes. You can find us on Facebook, Twitter (@kfreberg and @lfreberg), LinkedIn, Google+, Pinterest, and by the time this article goes to publication, perhaps some new platform we haven't heard of yet.

References

About Quora (2012). Retrieved from http://www.quora.com/about

Brimmer, K. (2012). Clinicians turn to social media to find jobs. Retrieved from http://www.healthcareitnews.com/news/clinicians-turn-social-media-find-jobs

Classical conditioning at BGSU (2008). Retrieved from http://www.youtube.com/watch?v=Eo7jcI8fAuI

Creevy, D. (2006). "A person like me" now most credible spokesperson for companies. Retrieved from http://www.edelman.com/news/ShowOne.asp?ID=102.

Freberg, K. (2012). Intention to comply with crisis messages communicated via social media. *Public Relations Review, 38*(3), 416-421. doi: 10.1016/j.pubrev.2012.01.008

James, W. (1899). *Talks to teachers on psychology: And to students on some of life's ideals.* Boston, MA: Longmans and Co.

Mendes, M. (2012). Integrating web widgets into Moodle. Retrieved from http://www.youtube.com/watch?v=X2JIABSg0u0

Patrizi, S. (2012). Why every publisher needs an engagement server. Retrieved from http://blogs.imediaconnection.com/blog/2012/06/05/why-every-publisher-needs-an-engagement-server/

Petty, R. E., & Cacioppo, J. T. (1986) *Communication and persuasion: Central and peripheral routes to attitude change,* New York: Springer-Verlag.

Pew Internet (2012). Infographics. Retrieved from http://pewinternet.org/Data-Tools/Get-the-Latest-Statistics/Infographics.aspx
Social Mention (2012). Retrieved from http://www.socialmention.com
Topsy (2012). Retrieved from http://www.topsy.com

Chapter 6

Thinking about Thinking: Using Metacognitive Strategies in Introductory Psychology Courses

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Research suggests students learn best when they are actively engaged in their learning environments. This is not earth-shattering news to most psychology faculty, and consequently many of us find ourselves designing class meetings to be as dynamic and engaging as possible so that our students "get" whatever "it" is that we're trying to teach. However, despite many instructors' best efforts to produce in-class experiences filled with engaging and purposeful classroom activities, traditional assessment tools (e.g., multiple choice and short answer exams) common to introductory-level psychology courses often suggest students simply "don't get it." This essay will highlight how psychology instructors can use assignments based on metacognitive principles to maximize the likelihood of our students "getting it" the next time.

Just as many of our introductory psychology students might be new to college, we faculty may also be "new" to our roles. When we initially began discussing the ideas for the research that stimulated this essay, we were each new to our institution. And as newbies planning our respective introductory psychology courses, we found ourselves struggling with whether or not we were presenting "enough" of the material; consequently, like all instructors, we had to consider the tradeoff between the pressure to "cover the content" and our desire (and responsibility?) to teach students how to be successful in our courses.

Flavell (1976) defines metacognition as "one's knowledge concerning one's own cognitive processes or anything related to them" (p. 232). Metacognition can also be thought of as thinking about thinking. One particularly concise, yet illustrative definition of metacognition asks two simple questions: (1) What am I doing? and (2) Why am I doing it? (Kohutek, 2012).

When students arrive in introductory psychology courses, faculty have an opportunity (and we would argue, the responsibility) to provide a supportive environment that promotes both high achievement and successful adjustment to college. The first exam in a course provides an early opportunity for students to have a positive, successful experience (APA, 1993). More recent research indicates that students' performance on initial course exams is strongly predictive of overall performance in the course (Toncar & Anderson, 2010). Thus, there is a certain power of the first test. To this end, then, it is in our students' best interests that instructors begin their courses, particularly introductory courses, by teaching metacognitive skills such as specific study strategies (Commander & Valeri-Gold, 2001).

Metacognition is at the center of many models (e.g., Peirce, 2003) that outline how students can adopt specific study strategies which will help them reach their goals for our

courses. The processes of self-assessment, monitoring, reflection, and self-awareness are at the heart of metacognition. Throughout the process of asking the two key questions noted above, students will monitor their actions which will allow them to self-assess how they are progressing toward their goals. In light of this self-assessment, they will be able to regulate their behaviors in order to make it more likely that they will achieve their goals.

As instructors, let us ask ourselves "What am I doing" and "Why am I doing it?" Although the two of us each spent a significant amount of time preparing our lectures and designing engaging classroom activities, it turned out that neither of us were likely doing very much to help our students perform well on our exams. Maybe we incorrectly assumed students had taken multiple choice exams before and that they knew how to study. In reality, we found that our students did not perform very well on our exams during that first semester. So during the course of that first semester, we came to realize that each of us believed that we had a responsibility to not only teach the content but also to prepare our students to be successful in their college careers. The questions then became "What can I do" and "Why should I do it?"

We wondered whether implementing specific assignments emphasizing development of students' metacognitive abilities would be associated with improved exam performance within our introductory psychology courses. We reasoned that if we could just "do something" to help students perform better on the first exam, they would have an early positive experience in our courses which could also reinforce productive strategies they could use later in the course and in their other courses. Fortunately, that first semester of simply teaching content provided the basis for a quasi-experimental research design, with that initial cohort of students serving as our "controls."

Students in the subsequent semester completed the same course requirements as those in the initial semester, as well as two specific metacognitive assignments. The first assignment asked students to read the brief "Six Hour D" article (Dewey, 1997), which (intelligently and humorously) discusses the concepts of metacognition and self-awareness. In short, Dewey uses the concept of a Six Hour D (as in "I studied for six hours and can't believe I still got a D!") in order to get students to think about their own study habits. After reading the article, each student wrote a brief response paper (1) summarizing the article, (2) assessing their current study habits, and (3) reflecting on possible changes in their study habits. This assignment was to be completed within the first two weeks of the semester.

The assignment clearly resonated with the students, with one student writing "I am one of the students [who] has received the six-hour D." Another student commented "After reading this article I have seen that my studying techniques aren't working and why they aren't working." Still another student picked up on the reciprocal nature between studying, performance, and self-efficacy, noting that "students who challenge themselves will succeed on their tests…the student will become self-reliant when studying and it builds the student's self-esteem."

In addition to the Six-hour D assignment, three other review activities were included in an effort to promote metacognitive awareness: a short Test Preparation Quiz, end of the chapter practice tests, and knowledge survey completion activities; each review activity was completed approximately one week prior to the first exam. With respect to metacognition, the goal of each activity was to promote self-awareness by having students ask themselves "Am I

ready for this exam," "What do I already know," and "What do I need to work on before the real test?"

A knowledge survey is a questionnaire that includes items covering the full content of a course. Knowledge surveys promote metacognition as each student is asked to evaluate how well he or she understands the course information mentioned in each question. Thus, students answer how well they think they understand the content rather than answering questions directly about the content. Both practice tests and knowledge surveys appeared to be beneficial, however, knowledge surveys appeared to be more beneficial than the textbook practice tests. Students were also more likely to use the knowledge surveys as review activities than the textbook practice tests. Many students greatly appreciated the focus and organization of the knowledge survey, and comments such as "the knowledge surveys made it much easier to organize the information" may reflect why students were more likely to complete the knowledge surveys than the practice tests as an out of class review activity.

Students in subsequent semesters who completed one or more of these metacognitive assignments (i.e., the 6-hour D assignment, the Test Preparation Quiz, or the Knowledge Survey review activities) scored significantly higher on the first exam than did students in the initial cohort which did not include these activities. Clearly, these metacognitive assignments helped students perform better on their first exams, providing an opportunity for a positive experience early in the course.

In light of these findings, we found ourselves asking one another (and our colleagues) how faculty could use purposeful metacognitive assignments in other contexts. We also wondered if there were additional aspects of higher education that might be improved by explicitly teaching metacognitive awareness. Recently we have begun working with our colleagues from academic advising to use metacognitive principles during the advising process (Mitchell, Kleinman, & Daniel, 2012). Ultimately, we hope students would be able to transfer these metacognitive questions of "What am I doing?" and "Why am I doing it?" to a number of situations both inside and outside of the university context.

Clearly, not all of our students will adopt these metacognitive strategies, but those who do are likely to be more successful. As one student noted, "it is obvious why I have bad habits: procrastination and distraction…I'd love to say 'I'll never get on Facebook while studying' but that would be unrealistic considering that I've been on it the whole time I was writing this paper. Still, the 'six hour D' paper has been pretty insightful and encouraged me to be more productive." In a context where we're trying to help students be successful in our courses and prepare them for the world beyond, we'll take that!

References

American Psychological Association (1993). *Learner-Centered Psychological Principles: Guidelines for School Redesign and Reform.* Washington, D.C.: American Psychological Association.

Commander, N. E., & Valeri-Gold, M. (2001). The learning portfolio: A valuable tool for increasing metacognitive awareness. *The Learning Assistance Review 6*, 5-18.

Dewey, R. (1997, February 12). The "6 hour D" and how to avoid it. Retrieved from http://www.psywww.com/discuss/chap00/6hourd.htm

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), *The nature of intelligence* (pp.231-236). Hillsdale, NJ: Erlbaum.

Kohutek, K. (2012, February). Executive functioning skills training: A vital dimension in pre-school and primary grade instruction. Paper presented at the American Association of Behavioral and Social Sciences, Las Vegas, NV, USA.

Mitchell, H. H., Kleinman, K. & Daniel, R. (2012, March). Advising syllabi and curriculum planners: Using metacognitive tools for student success. Paper presented at Association of American Colleges and Universities: Student Success conference, Seattle, WA, USA.

Peirce, W. (2003). *Metacognition: Study strategies, monitoring, and motivation.* Retrieved from http://academic.pgcc.edu/~wpeirce/MCCCTR/metacognition.htm

Toncar, M. F., & Anderson, C.E. (2010, February). The predictive power of the first exam. Paper presented at the 17th Annual Conference, American Society of Business and Behavioral Sciences, Las Vegas, NV, USA. Retrieved from http://asbbs.org/files/2010/ASBBS2010v1/PDF/T/Toncar.pdf

Chapter 7

Principles of Good Coaching: Implications for Psychology Instructors' Skill Development

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Instructors face many challenges in developing their skills (Hamre & Oyler, 2004). New teachers are often given information about issues such as syllabus construction (Wimer, 2006). Yet, they report that they don't receive sufficient guidance in other skills, such as classroom management or student engagement (Davis & Huss, 2002). Similarly, experienced faculty might not receive ongoing training to build their teaching repertoire or adjust to changing academic conditions (e.g., Dunn, 2010; Marin, 2011). If instructors are left to their own initiative to address their teaching needs, they would likely benefit from being open to new approaches and experiences (Pan, 2009; Wong, 2007). For example, it might be helpful to glean teaching practices or principles from other professions. This essay focuses on our exploration of lessons that can be drawn from the literature on coaching.

We're aware that some aspects of coaching are unique to sports or inappropriate for instructors. For example, some coaches have autocratic styles (Loughead & Hardy, 2005) that can be ineffective when working with students. Indeed, psychology teachers have been advised to avoid uncivil communication with students (Price, 2010). We also recognize that some coaches are weak leaders, poor communicators, or make decisions that are counter to athletes' best interests (Kassing & Pappas, 2007; Omli & LaVoi, 2012). Similar to ineffectual advisors or faculty (Rogers & Resi-Bergan, 2010), these coaches would not be good role models for teachers.

Cordón (2010) noted that some individuals gain fame as pop psychologists. These people might be well-known to the general public, but may have little knowledge about psychology. Similarly, some coaches gain fame in a variety of ways (e.g., for their onscreen personalities), but fame might not be revealing of coaching effectiveness. Therefore we did not focus on media information about or by coaches (e.g., self-help books).

Rather, we focused on the empirical literature (e.g., journal articles) on the coaching profession. Good athletic coaching principles can be relevant to developing leadership, group management, and motivational skills (Chen, 2010). Such skills can be utilized in other environments, such as the psychology classroom. Similar to the best practices emphasis in teaching (Buehl & Fives, 2011), studies have been conducted to identify the best practices in effective coaching. This research has included case studies of premier coaches (Bloom, Crumpton & Anderson, 1999) as well as qualitative and quantitative studies of coach-athlete

interactions (Jowett & Chaundy, 2004; Loughead & Hardy, 2005). It is possible to extrapolate principles from coaching to inform teaching techniques (Horton & Young, 2010). Based on our review of the literature, we identified five coaching principles (practice, adaptability, observation, reflection, praise). For each principle, we offer some potential links and implications for the teaching of psychology.

Coaching Principles

Practice

Good coaching focuses on repeated practice (Kassing & Pappas, 2007). Coaches want athletes to practice repeatedly until techniques and decision-making processes become habitual. Most athletes lack the natural ability to be successful without routine training and rehearsal (McCombs & Palmer, 2008). So, it is ineffective for players to make their first attempts 'on the field'.

The issue of practice might seem obvious, and psychology teachers could immediately identify ways in which they encourage students to practice skills (e.g., homework assignments, practice quizzes). However, we suggest that instructors might consider how often they practice their teaching skills. Do first-time teachers rehearse their lectures before entering the classroom? Do experienced faculty 'run through' new teaching techniques before attempting them with students? Even if instructors are using brief teaching activities (Marin, 2011), it can be helpful to rehearse techniques with peers. Psychology instructors use repeated practice to improve other skills such as writing manuscripts (Jakobsen & Lee, 2011). So, it might be possible to engage in similar routines to improve various teaching skills. Indeed, experienced colleagues have reported that new skills get easier over time with repeated effort (Dunn, 2010).

Adaptability

Good coaching focuses on adaptive team management skills, so that coaches can alter their game plans in response to various opponents (Kassing & Pappas, 2007) and changing conditions (e.g., weather, travel, schedules). Coaches need to tailor their instructional and communicative approaches to various athletes (Smith & Ogle, 2006). They know that the same approach will not work equally well with every player. Coaches also want players to have varied techniques at their disposal when they face new competitors (Bloom, et al., 1999).

Adaptability can be relevant for psychology instructors as well. For example, teachers might consider whether the techniques that they use in some courses (e.g., Infant Development) are as effective in other courses (e.g., Research Methods). Instructors with diverse teaching techniques can determine how each technique fits with their goals and objectives for a particular course. In addition, experienced faculty advise colleagues to adapt their teaching for the 21st century classroom environment (Brakke & Beins, 2010; Price, 2010). Teachers with diverse course skills might also have a competitive advantage in the psychology job market (Irons & Buskist, 2008)

Observation

Effective coaching focuses on observation (Irwin, Hanton & Kerwin, 2004). It is well-known that coaches observe players during practices and competitions, or through the use of game tapes (Jowett & Chaundy, 2004). However, they also watch recordings of their own

performances (Irwin, et al., 2004) and observe other good coaches (e.g., Reade, Rodgers & Spriggs, 2008) so that they can identify problems with their own techniques and seek alternatives.

Victor Benassi, a prominent leader in the training of psychology teachers, has noted the importance of observation during the training process (Wimer, 2006). Although observation and feedback might be common to some training programs (Fitzpatrick & Busby, 2006; Thompson & Cooner, 2001), instructors can lose this degree of mentorship when they are employed as full-time instructors (Norrell & Ingoldsby, 1991). Yet, teachers can benefit from observation throughout their careers. Buskist (2002) identified the key qualities and practices of young scholars who had won psychology teaching awards. The awardees reported that they actively sought opportunities to observe highly-skilled instructors. They didn't necessarily mimic the skilled colleagues, but rather tried to identify techniques that they could fit to their own style, students and class topics. Experienced teachers have reported that they have viewed other faculty as well (e.g., Miller, 2010). Some might argue that teachers are constantly observed by their own students. However, there are power differentials between instructors and students which might prohibit students from giving honest feedback. Similar differentials exist in coach-athlete relationships (Schroeder, 2009; Smith & Ogle, 2006), so good coaches don't limit themselves to athletes' feedback. Similarly, psychology teachers might benefit from the addition of peers' observation and feedback. Some colleagues have recommended that instructors engage in collaborative team teaching (Lester & Evans, 2008), which could provide plenty of opportunities for peer observation.

Reflection

Good coaching focuses on self-reflection (Irwin, et al., 2004). In some ways, both teaching and coaching are solitary professions (McCombs & Palmer, 2008; Wimer, 2006). The bulk of the work is only seen by the recipients (athletes, students) and receives relatively little supervision from other colleagues. Under these conditions, coaches are encouraged to consider the ways in which they can improve athlete and team performance (Jowett & Chaundy, 2004). In addition, good coaches evaluate strengths and weaknesses of their own skills (Knowles, Tyler, Gilbourne & Eubank, 2006)

Similar to practice, it is common for teachers to encourage students to engage in reflection (e.g., Mio & Barker-Hackett, 2003). However, instructors might consider how frequently they reflect upon their own teaching skills or experiences with students (Allen & Farnsworth, 1993; Rogers & Reis-Bergan, 2010). They can evaluate their experience with a specific classroom activity (e.g., Marin, 2011) or with multiple classes over the years (Miller, 2010). The insights gleaned from reflection can lead to new skills or experiences (Dunn, 2010; Wong, 2007). Similar to other tasks (Jakobsen & Lee, 2011), teachers might have to schedule time for reflection.

Praise

Effective coaching includes praise and positive-reinforcement (Kassing & Pappas, 2007). Although there are stereotypical images of coaches berating athletes, this is not the only form of communication. Rather, coaches recognize that athletes need guidance to know what they are doing well and how to replicate good performance in the future (Smith & Ogle, 2006). In

addition, praise helps build endurance and commitment (McCombs & Palmer, 2008) to overcome difficult experiences (e.g., long practices, losses).

Instructors can use praise to guide students' growth in a variety of ways. Similar to any other skill development process, it can be helpful to 'catch' students doing something well (e.g., solving a problem, comprehending a concept accurately). Teachers' recognition of students' abilities can foster students' desire to learn (Miller, 2010). Praising students is consistent with the recommendations for civil interactions (e.g., Price, 2010), and students who receive praise are more satisfied with their courses (Malouff, Hall, Schutte & Rooke, 2010). Similarly, psychology teachers can receive acclaim from their colleagues. This collegial praise is expressed in a variety of ways, including teaching awards (Buskist, 2002).

Conclusion

Eminent scholars in psychology teaching have suggested that university programs need to improve instructor training (Wimer, 2006), and improvements can be adapted from professions such as coaching. Based on the coaching literature, we identified five principles which we saw as relevant to the teaching of psychology. Similar to any other teaching element (e.g., Albers, 2003), instructors will likely vary in the extent to which they use the principles.

Just as coaching principles can be used on and off the field (Smith & Ogle, 2006), teaching principles can be used inside or outside the classroom. So, instructors might be mindful of the principles when working with individual students, small groups and whole classes (Allen & Farnsworth, 1993; Asay & Curry, 2003; Rogers & Reis-Bergan, 2010). Instructors might underestimate the potential impact of good teaching on students, but the impact can last for years after a course (Miller, 2010). Thus, instructors would be wise to utilize resources (including principles from other disciplines) to enhance the educational experience for themselves and their students.

References

Albers, C. (2003). Using the syllabus to document the scholarship of teaching. *Teaching Sociology, 31*, 60-72.

Allen, K.R., & Farnsworth, E.B. (1993). Reflexivity in teaching about families. *Family Relations, 42*, 351-356.

Asay, S.M, & Curry, B.M. (2003). Implementing and assessing a critical thinking problem solving project. *Journal of Teaching in Marriage and Family, 3*, 375-398.

Bloom, G.A., Crumpton, R., & Anderson, J.E. (1999). A systematic observation study of the teaching behaviors of an expert basketball coach. *The Sport Psychologist, 13*, 157-170.

Brakke, K., & Beins, B. (2010). A blueprint for the future: From Puget Sound to your campus. *Essays from E-xcellence in Teaching, 10*, 15-19.

Buehl, M.M., & Fives, H. (2011). Best practices in educational psychology: Using evolving concept maps as instructional and assessment tools. *Teaching Educational Psychology, 7*, 62-87.

Buskist, W. (2002). Effective teaching: Perspectives and insights from Division Two's 2- and 4-year awardees. *Teaching of Psychology, 29*, 188-193.

Chen, C.C. (2010). Leadership and teamwork paradigms: Two models for baseball coaches. *Social Behavior and Personality, 38*, 1367-1376.

Cordón, L.A. (2010). The vacuity of positive thinking: A century of pop psychology. *Essays from E-xcellence in Teaching, 10*, 37-40.

Davis, S.F., & Huss, M.T. (2002). Training graduate teaching assistants. In S.F. Davis & W. Buskist (Eds.). *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer* (pp. 141–150). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Dunn, D.S. (2010). On blogging about teaching psychology. *Essays from E-xcellence in Teaching, 10*, 45-47.

Fitzpatrick, J. & Busby, D. (2006). Mentorship for HDFS graduate instructors: A model for "teaching the teachers". *Journal of Teaching in Marriage and Family: Innovations in Family Science Education, 6,* 54-80.

Hamre, B., & Oyler, C. (2004). Preparing teachers for inclusive classrooms: Learning from a collaborative inquiry group. *Journal of Teacher Education, 55*, 154-163.

Horton, S., & Young, B. (2010). Pedagogical self-improvement methods: Lessons from a master coach extrapolated to developing educators. *PHENex Journal, 2,* 1-12.

Irons, J.G., & Buskist, W. (2008). Preparing the new professoriate: What courses should they be ready to teach? *Teaching of Psychology, 35*, 201-204.

Irwin, G., Hanton, S., & Kerwin, D.G. (2004). Reflective practice and the origins of elite coaching knowledge. *Reflective Practice, 5*, 425-442.

Jakobsen, K.V., & Lee, M.R. (2011). Faculty writing lockdowns. *Essays from E-xcellence in Teaching, 11*, 26-29.

Jowett, S., & Chaundy, V. (2004). An investigation into the impact of coach leadership and coach-athlete relationship on group cohesion. *Group Dynamics: Theory, Research and Practice, 8*, 302-311.

Kassing, J.W., & Pappas, M.E. (2007). "Champions are built in the Off Season": An exploration of high school coaches' memorable messages. *Human Communication, 10*, 537-546.

Knowles, Z., Tyler, G., Gilbourne, D., & Eubank, M. (2006). Reflecting on reflection: Exploring the practice of sports coaching graduates. *Reflective Practice, 7*, 163-179.

Lester, J.N., & Evans, K.R. (2008). Instructors' experiences of collaboratively teaching: Building something bigger. *International Journal of Teaching and Learning in Higher Education, 20*, 373-382.

Loughead, T.M., & Hardy, J. (2005). An examination of coach and peer leader behaviors in sport. *Psychology of Sport and Exercise, 6*, 303-312.

Malouff, J.M., Hall, L., Schutte, N.S., & Rooke, S.E. (2010). Use of motivational teaching techniques and psychology student satisfaction. *Psychology Learning and Teaching, 9*, 39-44.

Marin, A.J. (2011). Micro-activities in the classroom: When good teaching comes in small packages. *Essays from E-xcellence in Teaching, 11*, 3-7.

McCombs, J., & Palmer, C. (2008). Win or lose, what counts as success in coaching? – Analyzing the opinions and aspirations of gymnastics coaches. *Journal of Qualitative Research in Sports Studies, 2*, 115-130.

Miller, R.L. (2010). Reflections on a lifetime of teaching and learning. *Essays from E-xcellence in Teaching, 10*, 6-9.

Mio, J.S., & Barker-Hackett, L. (2003). Reaction papers and journal writing as techniques for assessing resistance in multicultural courses. *Journal of Multicultural Counseling & Development, 31*, 12-19.

Norrell, J.E., & Ingoldsby, B. (1991). Surviving academic isolation: Strategies for success. *Family Relations, 40*, 345-347.

Omli, J., & LaVoi, N.M. (2012). Emotional experiences of youth sport parents I: Anger. *Journal of Applied Sport Psychology, 24*, 10-25.

Pan, D. (2009). What scholarship of teaching? Why bother? *International Journal of Teaching and Learning, 3*, 1-6.

Price, C. (2010). Incivility, inattention, and multitasking! Oh my! Creating effective learning environments for millennial learners. *Essays from E-xcellence in Teaching, 10*, 10-14.

Reade, I., Rodgers, W., & Spriggs, K. (2008). New ideas for high performance coaches: A case study of knowledge transfer in sport science. *International Journal of Sports Science & Coaching, 3*, 335-354.

Rogers, D.T., & Reis-Bergan, M.J. (2010). Advising dilemmas: Difficult messages and strategies for delivering them. *Essays from E-xcellence in Teaching, 10*, 32-36.

Schroeder, B.J. (2009). Power imbalances in college athletics and an exploited standard: Is Title IX dead? *Valparaiso University Law Review, 43*, 1483-1534.

Smith, P.M., & Ogle, J.P. (2006). Interactions among high school cross-country runners and coaches: Creating a cultural context for athletes' embodied experiences. *Family and Consumer Sciences Research Journal, 34*, 276-207.

Stober, D.R. (2008). Making it stick: Coaching as a tool for organizational change. *Coaching: An International Journal of Theory, Research and Practice, 1*, 71-80.

Thompson, S., & Cooner, D.D. (2001). Grand rounds: Not just for doctors. *Action in Teacher Education, 23*, 84-88.

Wimer, D.J. (2006). Raising the bar for the training of college teachers: An interview with Victor Benassi. *Teaching of Psychology, 33*, 148-152.

Wong, P. (2007). Six multicultural service-learning lessons I learned in the wake of Hurricane Katrina. *Multicultural Education, 15,* 52-54.

Chapter 8

Improving Teaching and Learning in Synchronous Live Video Streamed Courses

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From the 1970s with the use of television in the classroom, to video teleconferencing in the 1980s, to the computer technologies of today, advances in information technology have always impacted how students learn and how instructors teach. As each new wave of advancements in information technology have emerged, they have ultimately been integrated into the classroom (Green, 2000), culminating in a paradigm shift in the methods utilized by institutions of higher learning to deliver courses. Distance education (DE) is no exception; indeed, findings from the U.S. National Center for Education Statistics (1997) reported that in the U.S. from 1987 through 1988, 33% of all 2-year and 4-year institutions of higher learning reported offering a distance education (DE) course. However, by 1999-2000, the percent of 2-year and 4-year institutions of higher learning that reported offering DE courses in the U.S. had risen to 44% (National Center for Education Statistics, 2002). In its most recent report, the U.S. National Center for Education Statistics (2008) stated that in 2006-2007 the percent of institutions offering DE courses in the U.S. increased to 66%. It appears that DE courses have become a major component of instructional delivery at institutions of higher learning in the United States. Given the increased popularity of DE courses, we discuss methods to improve teaching and learning in such courses in order that faculty interested in teaching DE courses might adopt our recommendations to facilitate an optimal teaching and learning experience.

What is Distance Education?

Carnes, Awang and Marlow (2003) defined DE as "education or training courses delivered to remote (off-campus) sites via audio, video (live or prerecorded), or computer technologies, including both synchronous (i.e., simultaneous) and asynchronous (i.e., not simultaneous) instruction" (p. 162). Carnes et al.'s definition implies that DE subsumes many related concepts including blended or hybrid learning, distance learning, distributed learning, e-learning, and online learning (Abdous, 2009). Despite such definitional ambiguity, a growing number of institutions of higher learning are rapidly increasing their course offerings via DE such that it has become a basic part of most students' learning experience. For example, at our campus, undergraduate students can expect to take at least one online or one online blended (hybrid) course, and they can expect up to five courses in their major to be delivered via synchronous, live video streamed (SLVS) instruction from another campus in our university system. At our campus, at least one faculty member within the administration of justice, business, communication, French, IST, and psychology departments, can expect to teach one or

more SLVS or online blended (hybrid) course to another campus in our university system. Given the rapidly increasing number of SLVS courses being delivered from and received at our campus, faculty who have taught online/online blended (hybrid) and SLVS courses have been meeting to discuss the advantages, disadvantages and best practices for delivering SLVS courses.

What is SLVS Instruction?

Perhaps the easiest way to define SLVS is to identify similarities between it and traditional classroom instruction. Each provides instruction in a physical classroom during a regularly scheduled class period rather than self-paced instruction online in cyberspace. Although SLVS instruction is conducted in real-time in a physical classroom, the course lecture is simultaneously delivered to the remote location via high-definition video conferencing technology.

What are Some Advantages of SLVS Courses in Comparison with Online Courses?

Because students are meeting as a class at each site, a cohort is created. Having other students physically present for instruction helps build rapport among students at each site. In addition, creating cross-campus student project teams can build esprit de corps among students at each site. Although student project teams can be created in online courses, our experience is that the teams are more cohesive and effective when students have the opportunity to see and talk with each other.

Another advantage of SLVS instruction is that the technology allows for live questions from students and real-time answers from instructors. Similarly, SLVS instruction offers the opportunity to develop synchronous class discussion among faculty and students. Although chat rooms can serve the same function for online courses, in our opinion, such chats seem more stilted and less robust in comparison.

What are Some Disadvantages of SLVS Courses Compared to Online Courses?

Although SLVS courses can be delivered anywhere (assuming the remote site has the ability to receive the broadcast), we have found students enrolled in such courses are more satisfied with the course and instructor if the faculty member visits the remote site a few times throughout the semester. (It should be noted that travel time to our sister campuses is no more than one hour and 15 minutes and that travel may not be feasible in other cases.) Even though students at the remote site prefer visits from faculty, faculty may be less than enthusiastic about such trips as it takes time away from other duties. Thus, one disadvantage of SLVS courses compared to online courses is that travel maybe required in order to increase student satisfaction with the course and the instructor.

Another disadvantage of SLVS courses, compared to online courses, is that students have less flexibility in working at their own pace to complete assignments over the course of the semester. Relatedly, there are cross-campus scheduling and administrative issues for SLVS courses (e.g., classrooms and video/audio equipment are required and need to be scheduled).

Finally, compared to online courses, SLVS courses involve more complex and newer technology and thus, they are more vulnerable to technological glitches related to bandwidth, and video/audio equipment that is required for SLVS courses.

What are Campus and Administrative Best Practices for SLVS Courses?

Students should be given training necessary to prepare themselves for SLVS technology and the classroom environment that is unique to SLVS courses. For example, students could take a "prerequisite" 1-credit course that acquaints them with this method of course delivery. Alternatively, students might participate in a workshop that introduces them to the skills they need to be successful in this type of course. We are currently exploring these options at our university.

Further, faculty members should be given the resources to prepare for SLVS technology and its impact on the classroom environment. This method of course delivery can be very time intensive because faculty will need to: 1) learn how to use the technology; 2) adjust how they teach with the technology; 3) develop course materials specific to this method; 4) deal with the challenges of grading and returning papers and exams to different locations; and 5) make time to "connect" with all of the students in the course. Given the time and effort needed to prepare an SLVS course, faculty members should not be asked to use this technology the first time they teach a particular course. Although unlikely due to budget constraints, we recommend that faculty who are interested in adopting the new technology be given release time to develop new SLVS courses. Additionally, providing release time may encourage reluctant faculty to embrace the technology.

Because the instructor is not physically present at the remote site, an on-site facilitator should be present. The facilitator should be able to solve technical problems and have the authority to conduct classroom management if disruptions should occur. The facilitator may have to exert authority in the case of a classroom disruption; therefore the facilitator cannot be a student peer (e.g., a student enrolled in the class, or a work-study student).

Campus administrators and faculty at all locations should agree upon one set of common practices for managing: 1) class cancellations and delays due to weather or other reasons; 2) tutoring; 3) final exam schedules so there are no conflicts in days and times a final is scheduled; and 4) classroom and test-taking accommodations for students with disabilities. The agreement forged among campus administrators and faculty should be strictly enforced.

What are Faculty Best Practices for SLVS Courses?

Communication is extremely important in an SLVS course. Communications from students should be responded to within 24-hours. Students should be required to contact the instructor at least once during the semester so that course progress can be reviewed, and to air any challenges or issues with the technology which may arise in order that solutions can be developed.

In the first class meeting, instructors should assure students that there are plans in place if technical glitches occur. Faculty should refer students to the syllabus where these plans are

clearly outlined (e.g., if the technology fails, remain in the classroom until communication is re-established; the facilitator will call the faculty member for additional instructions).

Devoting a major portion of the first class meeting to assisting students in becoming familiar with the technology can help address problems before they occur. Students can introduce themselves (e.g., provide their name, major, and why they are taking the course) or students can pair up and introduce each other. This will help instructors learn students' names and help students become more comfortable with the technology.

Over the course of the semester, the instructor should take additional steps to involve students at the remote site. For example, toward the end of each class, faculty should ask for feedback from all locations. For example, students could be asked to comment on one concept or idea that they learned and one concept or idea that they are still uncertain about. The "muddy" concept or idea can be used to begin the next class. Before exams, a review class also could be scheduled to resolve questions about difficult concepts and ideas.

Conclusions

In this essay, we have attempted to identify advantages and disadvantages of SLVS instruction (compared to online courses) and to provide best practices in conducting an SLVS course. We encourage instructors who are planning or who are already conducting such courses to compare and contrast their practices with those we have presented to ensure an optimal teaching and learning experience.

References

Abdous, M. (2009). E-learning quality assurance: A process-oriented lifecycle model. *Quality Assurance in Education*, *17*, 281-295. doi: 10.1108/09684880910970678

Carnes, L. W., Awang, F., & Marlow, J. (2003). Can instructors ensure the integrity and quality of online courses? *Delta Pi Epsilon Journal*, *43*, 162-172.

Green, K. C. (2000). *Technology and instruction: Compelling, competing, and complementary visions for the instruction role of technology in higher education*. Retrieved from http://www.league.org/cit2000/files/Green%20-%20Tech%20%20Instruction.PDF

National Center for Education Statistics. (1997). *Distance education in higher education institutions*. Retrieved from http://nces.ed.gov/pubs98/98062.pdf

National Center for Education Statistics. (2002). *A profile of participation in distance education: 199-2000*. Retrieved from http://nces.ed.gov/pubs2003/2003154.pdf

National Center for Education Statistics. (2008). *Distance education at degree-granting postsecondary institutions: 2006-2007*. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009044

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Chapter 9

Toward a More Accurate and Sensitive Psychology Class: SES as Culture

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Having taught for a number of years, I have learned that much of what I "knew to be true" isn't necessarily true. It turns out, and should be to no one's surprise, that much of what "the research shows" includes biases, inaccuracies, and general insensitivities. More often than we would care to believe (and the main thesis of this essay), claims that we have a representative corpus of data reflecting a valid depiction of normal human behavior are not just insensitive; they are incorrect. For example, we "know" that an infant who is securely attached to his or her parent is much better adjusted and enjoys a far healthier state of well-being than that of an insecure-resistantly attached infant. It is a generally accepted conclusion that securely attached infants enjoy more positive long term social and emotional outcomes (Ainsworth, Blehar, Waters, & Wall, 1978). Even the phrase "a secure child" evokes a sense of a superior emotional state when compared to an "insecure" or a "resistant child." However, infant behaviors that generate an evaluation of *insecure-resistant* are likely to be considered culturally appropriate and desirable in a Japanese family, while those that result in a *secure* classification are less likely to receive the same level of cultural approval (see Moliter & Hsu, 2011, for these findings and a general review of cross cultural considerations in child development).

Imbedded in this example are at least two types of biases concerning what we thought was established "truth" regarding human behavior. One bias is illustrated by the obvious cultural insensitivity in the assumption that what is normal in our culture must, therefore, be normal everywhere (a variation of this insensitivity is, while recognizing there are differences, holding to the belief that ours version is "better"). Fortunately, an increasing awareness of the value of cross cultural psychology suggests that this bias is becoming less of an issue than it once was (see Keith, 2011, for an excellent presentation of the reasons and justifications for the infusion of cross cultural awareness in all aspects of the psychology curriculum).

The second bias concerns scientific validity. Selecting participant or behavioral samples from a biased, inadequate, or uncontrolled pool, of course, will not generate valid data. I am confident that we all attempt to raise our students' appreciation of the scientific compared to the anecdotal. Thus, when a student challenges an evidence based statement (e.g., sugar does not actually cause a hyperactive state in children; Wolraich, Wilson, & White, 1995) with "proof" from his or her own experience ("that's not true because my children…" or "…my siblings…," or "…when I babysit…"), I assume we all gently attempt to point out the dangers of confirmation bias and the relative advantages of "evidence" gathered with vs. without scientific controls. Yet, when we fail to consider other populations and other "normals," we are guilty of a similar bias.

A seldom recognized source of cultural complexity and sampling insufficiency concerns the role of SES on behavior. Making it difficult to understand this impact is the nature of social class itself and the relative contributions and intersections of poverty, race, ethnicity, gender, age, sexual orientation, and (dis)ability. Our understanding and awareness of the influence of SES on the entire spectrum of human psychology is still in its very early stages. One encouraging development is the recognition of poverty and SES as another source of cultural influence (La Roche, 2012). For discussions of the relevance of SES on psychological health, practice, development, and education, see Saegert, Adler, Bullock, Cauce, Liu, and Wyche (2007), and APA's *Report of the task force on resources for the inclusion of social class in the psychology curriculum* (2008).

As an example of a generally accepted "truth" that becomes very complicated when "non-standard" ethnic and SES participants are included in a sample, consider behaviors associated with authoritarian parenting and the generally expected negative outcomes linked to it. "There are always alternatives to corporal punishment. " "Time-out, removal or reduced access to toys, computers, phones, friends, etc., are far superior to spankings." I've made these claims; I believed these claims. And, I'm in good company. It seems that virtually all introductory psychology textbooks, developmental textbooks, even advanced textbooks on abnormal psychology and learning and memory enumerate the myriad of reasons why punishment is an ineffective parental technique, is associated with negative outcomes, and is less likely to generate well-adjusted children who become successful adults (Parke & Buriel, 2006). Reality is more complex and nuanced than typically recognized and complications arise when diverse populations are included. Thus, though SES and authoritarian parenting are correlated (Hoff, Laursen & Tardif, 2002), it does not necessarily follow that the expected negative outcomes will occur. For example, the harmful outcomes usually associated with physical punishment seem not to hold for African American families (Harrison-Hale, McLoyd, & Smedley, 2004). Likewise, firm demands for obedience and respect (behaviors also associated with authoritarian parenting), when found in Latino families, do not tend to create a punitive and suppressive atmosphere but rather are associated with positive outcomes and family stability (Dixon, Graber, & Brooks-Gunn, 2008). Of course, the reality that ethnicity, education, health, nutrition and a multitude of other factors correlate with SES complicate our ability to draw causal conclusions; indeed, these correlations complicate many claims of universal truths.

Findings such as those enumerated above are, of course, neither recommendations for, nor a justification of, the use of physical punishment or oppressive parenting (and certainly not for extremes of either, for which the evidence is clear that the consequences are strongly negative; Larzalerle & Kuhn, 2005). Rather, I'm encouraging us to admit that reality is a bit more complicated when an inclusive spectrum of the human population is considered, and that many of our cherished beliefs may require a bit of open-minded re-assessment. So, when students observe that their parents spanked them, and "they still turned out fine" (ok, full disclosure - I confess I am always tempted to challenge that conclusion!), it is still appropriate to discuss the use of anecdotes vs. scientific evidence. Yet, at the same time we should not be so quick to point out that the research findings are actually definitive on the subject.

Though it may be less likely in a college class, for those of us who occasionally (or exclusively) teach in high schools it is virtually guaranteed that some of the members of our classes come from poverty. And, of course, all classrooms, university and high school alike, are

diverse ethnically, racially, culturally, by gender, ability, sexual orientation, etc . Reporting "truths" whose evidence is primarily based on populations not representative of such students will often be in error, and always will be insensitive as well. We should strive to be better. One step in that direction would be reviewing web sites that condense and present useful information on such topics is likely to be very useful. One example is APA's Public Interest Directorate site (http://www.apa.org/pi/index.aspx). There one can find numerous reports from various task forces that address findings that address issues such as those discussed in this essay. More importantly, simply fostering an attitude that what we "know" is temporary and recognizing that all of science is "in progress" will go a long way in increasing sensitivity and accuracy.

References

Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978*). Patterns of attachment: A psychological study of the strange situation.* Hillsdale, N.J., Lawrence Erlbaum.

Dixon, S.V., Graber, J.A., & Brooks-Gunn, J. (2008). The roles of respect for parental authority and parenting practices in parent-child conflict among African American, Latino, and European-American families. *Journal of Family Psychology, 22,* 1-10.

Harrison-Hale, A.O., McLoyd, V.C., & Smedley, B. (2004). Racial and ethnic status: Risk and protective processes among African-American families. In K.I. Maton, C.J. Schellenbach, B.J. Leadbetter, A.L. Solarz (Eds.), *Investing in children, families, and communities: Strengths-based research and policy* (pp. 269-283), Washington, D.C.: American Psychological Association.

Hoff, E., Laursen, B., & Tardif, T. (2002). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting, Volume 2: Biology and ecology of parenting* (2nd ed.) (pp. 231-252), Mahwah, NJ: Erlbaum.

Keith, K.D. (Ed.) (2011). *Cross-cultural psychology: Contemporary themes and perspectives.* Malden, MA: Wiley.

La Roche, M.J. (2012). *Cultural psychotherapy: Theory, methods, and practice.* Los Angeles: Sage.

Larzalere, R.E., & Kuhn, B.R. (2005). Comparing child outcomes of physical punishment and alternative disciplinary tactics: A meta-analysis. *Clinical Child and Family Psychology Review, 8,* 1-37.

Moliter, A., & Hsu, H.C. (2011). Child development across cultures. In K. Keith (Ed.), *Cross-cultural psychology: Contemporary themes and perspectives* (pp.75-109). Malden, MA: Wiley.

Parke, R.D., & Buriel, R. (2006). Socialization in the family: Ethnic and ecological perspectives. In W. Damon, R. M. Lerner, & N. Eisenberg (Eds.) *Handbook of child psychology, Vol. 3: Social, emotional, and personality development* (6th ed.) (pp. 429-504). New York: Wiley.

Report of the task force on resources for the inclusion of social class in the psychology curriculum. (2008). Washington, D.C.: American Psychological Association. http://www.apa.org/pi/ses/resources/publications/social-class-curricula.pdf

Saegert, S.C., Adler, N.E., Bullock, H.E., Cauce, A.M., Liu, W.M., & Wyche, K.F. (2007). *Report of the APA task force on socioeconomic status*. Washington, D.C.: American Psychological Association. http://www.apa.org/pi/ses/resources/publications/task-force-2006.pdf

Wolraich, M. L., Wilson, D.B., & White, J.W. (1995). The effects of sugar on behavior or cognition in children: A meta-analysis. *Journal of the American Medical Association, 274,* 1617-1621.

Chapter 10

Developmental Appropriate Practice in College Instruction: Lessons from Emerging Adulthood

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There is widespread acceptance in primary and secondary levels of education of the need for developmentally appropriate teaching. It is for this reason that student teachers are generally required to take some courses in child and adolescent development as part of their initial teacher education. The argument seems logical – how can you teach children and adolescents if you do not understand their development? One might well ask the same question of college instruction. How can we adequately teach college students if we do not understand their stage of development? For the purposes of the discussion here, I will focus on traditional college students who are typically somewhere between the ages of 18 and 22 years.

The Concept of Emerging Adulthood

While there is a growing psychological literature on learning in higher education, less has been written about teaching students in a way that is appropriate to their stage of development. Arnett's (2004) concept of *emerging adulthood* provides a thought-provoking framework for the latter. Arnett argued that the years between the late teens and early twenties constitute a separate stage of development. It is not appropriate, Arnett argued, to consider people at this stage as adolescents, nor is it appropriate to think of them as adults. According to Arnett, adulthood implies a greater sense of certainty about oneself and one's life, which was not evident in his discussions with young people in the phase of emerging adulthood who often described themselves as in-between adolescence and adulthood. Arnett (2004, p.8) identifies the features of emerging adulthood as follows:

1. It is the age of identity explorations, of trying out various possibilities, especially in love and work.
2. It is the age of instability.
3. It is the most self-focused age of life.
4. It is the age of feeling in-between, in transition, neither adolescent nor adult.
5. It is the age of possibilities, when hopes flourish, when people have an unparalleled opportunity to transform their lives.

Potential Impact of Emerging Adulthood on Student Behavior

Each one of the features proposed by Arnett has potential implications for the way that we teach and interact with our students. Emerging adulthood has been identified as a time of

identity exploration. We can therefore expect our college students to be immersed in the task of trying to figure out what they want from life. At this point in their lives emerging adults are also trying to figure out their relationships with others, a factor which can impact every aspect of their lives. Stressors on students come from their lives both inside and outside the classroom, and the support that they have been given as adolescents impacts their ability to cope with the transition to adulthood (Dumas, Tieu & Thanh-Thanh Pratt, 2009). Emerging adults experience a great deal of instability. This is a time in their lives where living arrangements, for example, can change frequently. Developmental instability has been associated with lower self-esteem and depression (Luyckx, De Witte & Gersens, 2011). Acknowledging this level of instability may help to bridge the generation gap, whereby, professors feel that students exhibit a flightiness which professors find hard to understand.

Arnett's third feature could be the most important. He argues that emerging adulthood is the most self-focused phase of life. He supports his contention by pointing out that it is at this stage that the individual is typically no longer living at home and so is not answerable to parents in the same way as adolescents. Neither is he or she at school where teachers are checking on progress constantly. In this way, interaction with professors is very different from interacting with fellow high school students. Professors often comment on how freshman students in particular need to be taught the etiquette of college classrooms and the need for students to learn to manage their own learning. If we look at our students through the lens of emerging adulthood, we can see such learning as part of the growth transition rather than as an indictment of the educational system, parenting, or the egocentrism of young people. In Konstram's (2007) study, for example, emerging adults explained that they needed to look out for themselves, given the uncertainty of the world they lived in. Consequently, we should not be surprised if they show a lack of awareness and sensitivity to others at times. Nonetheless, we should not assume homogeneity amongst this cohort. Padilla-Walker, McNamara Barry, Carroll, Madsen and Nelson (2007) found a relationship between experiencing going through a phase of exploration of identity and the development of prosocial behaviors. We can also see that the transition to making decisions for oneself is a challenging one for most students and is one for which some students will not be prepared.

Feeling in-between two stages of life is a striking feature of emerging adulthood and speaks perhaps most strongly to the emotional state of our students. Arnett noted that many of his interviewees did not yet describe themselves as adults. Is it surprising then, that individuals who do not quite see themselves as up to the task of taking responsibility for themselves and their decisions are inclined to miss deadlines, ask for extensions and feel aggrieved if they do not get them? One of the hardest lessons that students need to learn is what 'fairness' actually means and that they have to take responsibility for the consequences of their decisions. Again, this will be a task for which some students are better prepared than others.

Finally, Arnett talks about emerging adulthood as the age of possibilities. Padilla-Walker et al. (2007) note that emerging adulthood is an age of possibilities for both risky and prosocial behaviors. To me, this is one of the most exciting elements of working with individuals at this age. It is this feature of emerging adulthood which makes working at the college level an energizing experience. I feel there is a danger, however, of concentrating too much on what students can become and not enough on who they are right now. With that in mind, it is

notable that Arnett discusses emerging adulthood as being culturally specific, a view that is supported by other studies (Seiter and Nelson, 2011). Not everyone from late teens to twenties experiences this 'in-between' phase. As college campuses become more diverse, how will instructors and fellow students interact with freshman who have had family and other responsibilities leading them into adulthood at an earlier age? Indeed, how will those students react to the college experience? While the literature on mature students may focus on students who have these responsibilities by virtue of their age, we should be aware also of younger students who have matured beyond emerging adulthood because their life circumstances require them to take on more responsibility.

Some Possible Implications for College Instruction

This discussion of emerging adulthood leads to the development of some tentative ideas regarding its application as a framework at the college level:

- Emerging adulthood is a time of identity exploration and college professors have a role to play in scaffolding students' explorations of their professional and personal identity. For example, by setting achievable goals for students, professors can provide the opportunity for the development of agency and mastery.
- As we explore with them the psychology of human behavior we may have teachable moments where we ask our students to reflect on the meaning of what they are learning for their own behavior and the behavior of others.
- Not all students are the same and they come to college with different histories of supports and resilience characteristics. This is not surprising to anyone and yet as professors, we are often guilty of thinking of students as a homogenous group. We need to make an effort to connect with our students as individuals.
- Emerging adults need the assistance of mature adults who are 'complex carriers of knowledge' in order to develop their thinking (Labouvie-Vief, 2006) and so we should always be aiming to scaffold their sense-making.
- Students experience instability that may make it difficult for them to organize their lives. Their professors have a role to play in helping them to develop a structure.
- We can expect that our students will be self-focused so teaching that connects with their experience is likely to be more successful.
- The feeling of being in-between stages could generate issues with stability of self, anxiety and depression. Again, a scaffolded approach that introduces students to increased responsibility while being respectful of their developmental stage is important.
- Emerging adulthood can be positive or risky. The stage has an inherent flexibility which means that we should always be open to the fact that students who may be engaged in negative behavior can change and take a more positive path.

Researchers investigating effective teaching at the college level have investigated appropriate practice in terms of teaching and learning. While the concept of emerging adulthood has been supported by some researchers (Buhl & Lantz, 2007) and questioned by others (Hendry & Kloep, 2010) it is a framework for understanding our students which is worthy of further investigation.

References

Arnett, J. Jensen (2004). *Emerging Adulthood : The Winding Road from the Late Teens Through the Twenties*. Cary, NC, USA: Oxford University Press.

Buhl, H. M. & Lanz, M. (2007). Emerging adulthood in Europe: common traits and variability across five European countries. *Journal of Adolescent Research, 22*, 439-443. doi: 10.1177/0743558407306345

Dumas, T. M., Lawford, H., Tieu, T., & Pratt, M. W. (2009). Positive parenting in adolescence and its relation to low point narration and identity status in emerging adulthood: A longitudinal analysis.; *Developmental Psychology*, *45*, 1531-1544.

Hendry, L. B. & Kloep, M. (2010). How universal is emerging adulthood? An empirical example. *Journal of Youth Studies, 13*, 169-179. doi: 10.1080/13676260903295067

Konstram, V. (2007). *Emerging and young adulthood: Multiple perspectives, diverse narratives*. Boston, MA: Springer.

Labouvie-Vief, G. (2006). Emerging structures of adult thought. In J. J. Arnett & J. L. Tanner (Eds), *Emerging adults in America: Coming of age in the 21st century* (pp59-84). Washington, D.C.: American Psychological Association.

Padilla-Walker, L. M., Barry, C. M., Carroll, J.S., Madsen, S. D. & Nelson, L. J. (2007). Looking on the bright side: The role of identity status and gender on positive orientations during emerging adulthood. *Journal of Adolescence, 31*, 451-467.

Seiter, L. N. & Nelson, L. J. (2011). An examination of emerging adulthood in college students and nonstudents in India. *Journal of Adolescent Research*, *26*, 506-536. doi: 10.1177/0743558410391262.

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