

Are They Ready Yet? Epistemological Development and Critical Thinking

Laird Edman
Northwestern College

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in January 2006.)

I’m willing to wager my oft-squeezed, brain-shaped stress ball that you too have experienced the following frustration: grading essay exams that indicate students were indeed in class but seemingly heard something you know you didn’t say. Or perhaps you have found in your course evaluations some students who praised you and others who berated you for the very same teaching approach. Within the same course, I have read comments from students who proclaimed the course changed their lives next to comments from other students who complained that the course was a complete waste of time, with little learnable content. What is going on here? Why do some students “get it” and some not? It is a matter of intelligence? Of prior preparation? Of teaching and learning style? Of critical thinking ability?

My goal in the classroom is to teach my students how to think like psychologists rather than simply to memorize facts about psychology. Because this is my goal (and I would suggest it should be the primary goal of all undergraduate psychology courses), I try to teach students to think critically about psychological issues. There are numerous excellent resources on how to teach critical thinking (e.g., Bean, 1996; Brown & Keeley, 2004; Halpern, 1998). The best of these resources focus not only on a set of useful skills (e.g., analysis and interpretation of information), but also on the dispositions students need to use those skills. We need to teach students to understand and appreciate the value of careful, systematic critical thinking. This is perhaps our greatest challenge as teachers—to help our students value learning, value thinking, and understand the need for engaging in critical thinking. How do we do this?

I have observed repeatedly that material presented is not synonymous with material taught. A truism of educational theory states that the most important factor determining what students learn is what they already know. Cognitive research has confirmed this through studies on reasoning and decision making, priming, memory functioning, expectancy effects, and observer biases. Numerous factors affect what students learn in our classes, but our students’ cognitive and epistemological development is perhaps the chief issue. How do they think? What do they think knowledge is? How do they think knowledge is gained?

Students arrive in our classrooms with at least a dozen years of educational experience under their belts. This experience carries with it not only a great deal of information and conceptual understandings and misunderstandings, but also a host of educational expectations, strategies, and epistemological assumptions. These ways of thinking and “doing school” play an important part in students’ ability to understand what we mean when we ask them to analyze, synthesize, and evaluate material. Students’ approaches to learning are deeply influenced by issues of cognitive development, which we ignore at our peril—or at least at our frustration. One reason some students “just don’t get it,” and don’t understand why they aren’t “getting it” is the

disconnection between the epistemological sophistication we assume they have and their epistemological reality. They think knowledge and learning is one thing; we think it is another.

Several developmental schemes concerning student growth in epistemological sophistication have been proposed (Baxter Magolda, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Kitchener, 1994; Kuhn, 1999; Perry 1970; for reviews, see Hofer & Pintrich, 1997, 2002). Although William Perry's (1970) model is the "granddaddy" of these schemes, the one that is the most carefully delineated and has the best empirical verification is King and Kitchener's (1994) Reflective Judgment Model. Each of these models, however, shares the same basic framework for understanding how students' views of knowledge change. This change influences students' ability to engage in critical reflection and to understand what we mean when we ask them to analyze, synthesize, and evaluate material, and to think like psychologists.

These developmental frameworks posit that people view the world from several different positions or perspectives. (Although some of these theories use the term "stage," they do not assert the inevitable and invariant sequencing that stage theories tend to assume.) The number of perspectives suggested by each of these theories varies: Perry's (1970) theory contained four stages, with nine total positions within the stages; King and Kitchener (1994) proposed seven stages; and Baxter Magolda (1992) and Kuhn (1998) each proposed four stages. However, all of these theories progress in roughly the same manner. People in the early positions tend to see "truth" as dualistic, monolithic, and presented by authority figures, who tell us the right and wrong answers. Those in the middle positions tend to see truth as completely relative, see all positions as equally valid, and interpret academics as a game. Those in the later positions understand that the process of inquiry is fallible and the justification of one's beliefs must be based upon rational processes that use evidence and rules of inquiry appropriate for the issue at hand; they realize knowledge statements must be evaluated as more or less approximations of the truth, open to the scrutiny of other rational people.

College seniors tend to be farther along the epistemological sophistication continuum than first-year students, and graduate students tend to be farther along than college seniors (King & Kitchener, 1994). The danger for undergraduate faculty is to assume that university students are automatically well along this developmental continuum, or even that students who get good grades are further along than their lower-GPA counterparts. The fact is, many "good" students have high GPAs, not because they are more sophisticated thinkers, but because they are better stenographers than their counterparts.

Students who are in the first stages—called "dualists" (Perry, 1970) or "pre-reflective thinkers" (King & Kitchener, 1994)—look to professors to impart truth to them and become frustrated when professors seem to focus on ambiguities, methodological issues, and questions. These students ask, "Is this going to be on the test?" because they assume their job is to memorize material for tests. Learning is memorizing, and knowledge consists of facts. The idea that there is a "way of thinking" to master is mystifying to such students, as is the need for critical thinking at all. These students tend to ask, after a professor has explored several different methodologies or interpretive possibilities of an issue, "But which one is the right one?" Unfortunately, too many professors oblige them with a "right" answer, or even worse, never discuss the questions and ambiguities of the discipline in the first place. Such teaching seems to forget that every

declarative sentence in psychology is the answer to a question someone once asked. Teaching students to think like psychologists then means teaching them to ask questions, and such an approach is essential to helping pre-reflective thinkers develop their epistemological sophistication. They won't like it, though.

Students in the middle stages of epistemological development are called “multiplicists” or “relativists” (Perry, 1970), and “quasi-reflective thinkers” (King & Kitchener, 1994). These students will, with a knowing wink, proclaim the equality of all positions and ideas. They end their declarative statements with “That’s just my opinion,” and refute any attempts at evaluation of ideas with “That’s just your opinion.” For these students, opinions are neither good nor bad, better nor worse—they just are. A professor’s call for evidence and rational justification is somewhat mysterious to them. These students think that to get a good grade, one must learn the professor’s opinion and parrot it back (which is correct far too often). The middle stages involve transitions from absolutist to relativistic to more advanced positions. Students in these stages may assume that a science like psychology should have indubitable “facts” presented by authorities, but “fuzzy” disciplines like literature are simply a game of opinions; or that the more “scientific” parts of psychology (e.g., cognitive neuroscience) have facts, but areas such as personality and clinical psychology are . . . well, fuzzy opinion. This misunderstanding of the need for evidence and criterion-based judgment is, unfortunately, reinforced by too many psychology teachers.

The final stages of epistemological development are those in which students understand that assertions are judgments that must be evaluated according to criteria of argument and evidence. These students understand the contextual nature of knowledge, the limitations of methods of generating knowledge, and the need to accept and work within those limitations. They understand that science is a process in which even well established theories are open to interrogation and revision in the light of new evidence. Perry (1970) called this final stage commitment within relativism; King and Kitchener (1994) called it reflective thinking.

Research on epistemological development (Schommer, 1994) indicates that development through these stages is not monolithic or generalizable across all parts of a student’s life. Some students will understand the need for evidence as established by the discipline in question, but only in some disciplines or in some situations. Some students will be able to use good thinking skills in history but not in biology, in anthropology but not in literature, in philosophy but not in psychology. They may be able to engage in reflective judgment in the classroom, but not in the dorm, in trying to decide on a major, but not in deciding whom to marry.

There is good and bad news for faculty: Education helps, but growth is very slow. Research on King and Kitchener’s (1994) seven-stage Reflective Judgment model indicates that high school freshmen typically engage in pre-reflective thinking; college freshmen are transitioning into quasi-reflective thinking; and college seniors are more advanced but still engage in quasi-reflective thinking. Advanced graduate students are just beginning the transition to reflective thinking (King & Kitchener, 1994). This may explain some of our frustration in trying to teach students to be better thinkers. On average, students move about one stage every 6 years.

How can we help? Although the purpose of this essay is primarily to present stages of epistemological development, I strongly recommend a couple of important pedagogical approaches. First, make sure the criteria for good and bad thinking are clearly presented in class. When assigning papers or projects, give the students examples of good, mediocre, and downright awful thinking to help them understand what you expect from them. Second, focus on meta-cognitive thinking. Regularly ask students, “How do you know that?” when they answer questions in class, and “How did so-and-so know that?” when you present theories or conclusions of research. Get them used to thinking about how they, or anyone, know what they know. Finally, model good thinking. They too often never actually see us think; they only see the products of our thinking. Students need to see a psychologist thinking in order to learn how to think like a psychologist.

It is essential for faculty to understand that research on epistemological development tends to show that students are often unable to understand or even correctly hear presentations or arguments that call for them to use a level of thinking more than a few “steps” beyond their current level. Thus, when students seem not to have heard the salient points of a class discussion or presentation, it may not be an issue of attention or intelligence, but rather an issue of development. Any competent pedagogy must take into account the developmental position and path of the students in the classroom, the fits and starts and regressions of students along that path, and the often painfully slow progress of students developing competence in good thinking. Fortunately, most experienced master teachers understand this. It is a part of good teaching to know where your students are, to meet them there, and then to guide them further along the road. It usually does no good to stand at your destination and call for students to join you there. Unless they are almost there already, they won’t be able to hear you.

References

- Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students’ intellectual development*. San Francisco: Jossey-Bass.
- Bean, J. (1996). *Engaging ideas: The professor’s guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco: Jossey-Bass.
- Brown, M. N., & Keeley, S. (2004). *Asking the right questions* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Halpern, D. F. (1998). Teaching critical thinking for transfer across domains. *American Psychologist*, 53, 449-455.
- Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research*, 67, 88-140.
- Hofer, B. K., & Pintrich, P. R. (Eds.). (2002). *Personal epistemology: The psychology of beliefs about knowledge and knowing*. Mahwah, NJ: Erlbaum.

King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment*. San Francisco: Jossey-Bass.

Kuhn, D. (1999). A developmental model of critical thinking. *Educational Researcher*, 28, 16-26, 46.

Perry, W. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart.

Schommer, M. (1994). Synthesizing epistemological belief research: Tentative understandings and provocative conclusions. *Educational Psychology Review*, 6, 293-319.

sporadic attendance, and incomplete assignments concern us academically. His disheveled appearance, glazed eyes, alcohol breath, and gruff demeanor concern us clinically. But Danny opts not to approach us for assistance; instead, caring professors make several attempts to reach out to him, even “chase” him. And even when he does episodically respond to our requests for a meeting, we feel awkward and uncertain of how to proceed. We worry that we may say the wrong thing to him; we want to help him yet not give him more opportunities than other students. On the one hand, we are vulnerable to the nagging thought that we are not doing enough for Danny; on the other hand, we worry that we are not holding him accountable as a responsible adult. We worry about our ethical, legal, and educational responsibilities to Danny.

In this article, we share our collective experiences as university professors and clinical psychologists in responding to distressed college students who appear in—and frequently disappear from—our classes. We begin by outlining the biopsychosocial challenges of the college years and then touch on the democratization of college and the increasing prevalence of mental and behavioral disorders on campus. We conclude with six concrete suggestions for professors grappling with the Dannys among college students.

Biopsychosocial Challenges

The college years pose significant challenges for adjustment. Students typically experience increased freedom and release from close parental supervision. The transition to college presents a series of stressful life events involved in moving away from home and adjusting to a new environment, managing the financial burden of books and living expenses, and establishing new relationships. Apart from these challenges, late adolescence brings a heightened risk of developing mental and behavioral disorders, such as major depressive disorder, anxiety disorders, and substance abuse.

Normal developmental processes interact with etiological risk factors during the college years. From a biopsychosocial perspective (Halgin & Whitbourne, 2007), the biological risks include changes associated with the end of puberty, poor sleep and health habits that tend to develop in college, and genetic vulnerabilities. The psychological processes involve, *inter alia*, the search for identity, changes in cognitive abilities, and the vicissitudes of emotional experience that occur in late adolescence. Socially, entering college students face the pressure to find social groups, the need to identify careers, and conflicts with family, particularly among first-generation college students. In addition, the college culture, with its emphasis on alcohol and socializing, often interferes with students’ ability to maintain a focus on academics.

Psychology courses provide a unique opportunity to intervene in a positive direction. At the same time, professors must be prepared to handle the personal conflicts that these courses often stimulate.

Democratization of College

Danny and other distressed students are increasingly common on campus. Proportionally more students with major mental disorders are attending college. Longitudinal studies of the presenting problems of university counseling centers reveal a rising proportion of severe and

chronic disorders (Collins & Mowbray, 2005). Despite their methodological problems, these studies indicated that the clientele of college counseling centers are becoming similar to the clientele of general mental health centers (Benton, Robertson, Tseng, Newton, & Benton, 2003). It is not unusual to have several students in a classroom suffering from major depressive disorder, obsessive-compulsive disorder, schizophrenia, bipolar disorder, or like Danny, a probable substance abuse disorder. Of course, this is on top of the proliferating number of students entering college with diagnosed learning disabilities (Vogel, Leonard, & Scales, 1998).

The escalating prevalence of students in our classrooms with serious mental and behavioral disorders probably stems from a confluence of factors: effective psychotherapy and pharmacotherapy; more accurate detection and early diagnosis; easing of restrictive admission practices; legislation (e.g., Americans with Disabilities Act [ADA]); and the rise of nontraditional students. The net consequence of this “democratization” of college is that the college population looks increasingly like the general population, at least with respect to the incidence of mental and addictive disorders.

Young adulthood is associated with the highest rates of major depressive disorder, with approximately 6.4% of the population at risk for developing the disorder (Hasin, Goodwin, Stinson, & Grant, 2005). College is also associated with heightened use of substances; for example, 7.2% of young adults are estimated to be dependent on alcohol (U.S. Department of Health and Human Services, 2005).

Distressed students are drawn to psychology courses. Approximately 20% of students will present to classroom with a diagnosable mental disorder at present or in the past. Nearly all students will have first-hand experience with family members struggling with mental disorders. Students are hungry for diagnostic and treatment information about themselves, their families, and their friends. Many of these same students will present to classes in crisis, acutely suffering from their disorders, and they expect their psychology professors to provide expert, case-specific advice.

Recommended Responses

1. Consult. Ideally, consultations will occur before student crises manifest. For example, professors might invite university colleagues to department meetings to discuss suggestions for working with students in crisis. But consultation occurs during the semester as well. Sources of consultation include: (a) psychologists at the counseling center, who can provide information on local resources and referral procedures; (b) deans and academic administrators, who can provide information on university procedures and policies; (c) a disability officer or ADA coordinator, who can offer legal and procedural advice; and (d) campus police or law enforcement (after notifying the appropriate academic administrator) if the student behavior is threatening or intimidating (e.g., making threats, stalking professors).
2. Refer. Immediate indications for referral include when a student’s problems exceed a professor’s skills and when the potential client represents a multiple relationship or conflict of interest. Consider referring distressed students to multiple resources, including: mental health assessment and treatment; academic assistance (e.g., tutoring, study skills, writing centers); legal

and logistical support, especially from a disability office; and self-help resources and groups (see Norcross et al., 2003).

The literature suggests specific steps in making successful referrals (O’Leary & Norcross, 2002). First, establish a referral network of mental health and social service centers, beginning with the institution’s counseling center. The greater the network, the more accurate and tailored the referral can be. Second, time the referral carefully. Referring the student too early may communicate the wrong message and may be viewed as an insult (e.g., “I’m no mental case”); referring the student too late lets the crisis deteriorate. Third, explain the purpose and value of the referral in a neutral, consultative tone, clarifying the rationale, potential benefits, and expertise of the clinician or clinic. Fourth, provide several names or locations, if available. Fifth, assist the student in making the appointment. Professors can increase the probability of a successful connection by providing names and phone numbers and possibly making the appointment for the student. However, a word of caution: Making the appointment might be the most effective way of ensuring adherence, but it poses the risk of dominating the process and casting the student in a submissive role. Finally, make a good match. Referring a student generically to a large university counseling center is quite different than referring a student specifically to two psychologists or addiction specialists whom you know personally.

3. Maintain boundaries. Establish compassionate boundaries between the frame of education and the frame of treatment. This is especially difficult for psychology professors with knowledge and expertise in clinical matters. They are tempted to intervene softly and implicitly in a clinical manner, but be aware of and avoid the temptation to blur the roles of educator and clinician (American Psychological Association, 2002).

4. Provide consistent flexibility. If a student’s crisis continues for more than 2 weeks, request that the student produce formal documentation from the appropriate university office. As a matter of law and university policy, a professor’s academic accommodations for a student’s (documented) mental/behavioral disorder are typically the same as for a physical disorder. Treat a mental disorder the same as a physical disorder, no more or less. The disability or equity officer on campus can recommend specific accommodations.

We strive to accommodate students in crisis and offer flexibility to those in acute distress. At the same time, flexibility should not regress into enabling or collusion. Avoid side deals or special considerations that are not accorded to other students. A question that often centers or balances us is: Can I comfortably explain my flexibility in this case to other students in the class and to my academic colleagues?

5. Address behavior. Express concern for the student’s well-being but simultaneously focus on the student’s academic behaviors and performance in your course. Your primary responsibility as an educator is to foster learning, not to render clinical services. When speaking to students, stick to observable, documentable behaviors (as we tried to do in presenting the case of Danny).

Avoid offering diagnoses, questioning the validity of diagnoses, or suggesting alternative treatments (e.g., “Are you sure you are ADHD?”, “My depressed Aunt really improved on Effexor. Have you tried it?”). Refrain, too, from specific questions about the student’s

involvement in treatment as a matter of student privacy and maintaining boundaries. Do not pry unless the information is required for course-related purposes.

6. Follow-up. Offer empathy throughout the process, especially after an immediate crisis when the student's support from the natural environment tends to dissipate, and provide follow-up regarding academic work. We prefer brief, discreet emails or a private moment of "How's it going?" With Danny, we followed with several emails, brief private conversations in class, and an office appointment.

Establish clear expectations about revised deadlines, grading policies, incomplete grades, and the like. Do not leave unfinished course requirements to chance. If in doubt, construct explicit agreements or written mini-contracts that detail the remaining assignments and their deadlines. The student and professor sign and retain a copy for their records.

In the End

Feel with the heart of a humanist and think with the mind of a university lawyer. In responding to students in distress, we aim to protect both students and professors. Both are vulnerable, both deserve empathy, both require collegial assistance.

In closing, remember that psychology courses provide a unique opportunity to intervene with students in a positive manner to foster their development. Sometimes the most important lessons we teach have little to do with course content. How we respond to distressed students is one of those lessons.

References

- American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57, 1060-1073.
- Benton, S. A., Robertson, J. M., Tseng, W. C., Newton, F. B., & Benton, S. L. (2003). Changes in counseling center client problems across 13 years. *Professional Psychology: Research and Practice*, 34, 66-72.
- Collins, M. E., & Mowbray, C. T. (2005). Higher education and psychiatric disabilities: National survey of campus disability services. *American Journal of Orthopsychiatry*, 75, 304-315.
- Halgin, R. P. & Whitbourne, S. K. (2007). *Abnormal psychology: Clinical perspectives on psychological disorders* (5th ed.). New York: McGraw-Hill.
- Hasin, D. S., Goodwin, R. D., Stinson, F. S., & Grant, B. F. (2005). Epidemiology of major depressive disorder: Results from the National Epidemiologic Survey on Alcoholism and Related Conditions. *Archives of General Psychiatry*, 62, 1097-1106.

- Norcross, J. C., Santrock, J. W., Campbell, L. F., Smith, T. P., Sommer, R., & Zuckerman, E. L. (2003). *Authoritative guide to self-help resources in mental health* (2nd ed.). New York: Guilford.
- O'Leary, B. J., & Norcross, J. C. (2002). Making successful referrals. In G. Koocher, J. C. Norcross, & S. S. Hill (Eds.), *Psychologists' desk reference* (pp. 524-527). New York: Oxford University Press.
- U.S. Department of Health and Human Services (2005). National Survey on Drug Use & Health. Retrieved September 22, 2005, from <http://www.drugabusestatistics.samhsa.gov/WebOnly.htm#NHSDAtabs>
- Vogel, L., Leonard, F., & Scales, W. R. (1998). The national learning disabilities postsecondary data bank: An overview. *Journal of Learning Disabilities, 31*, 234-237.

Learning through Professional Partnerships

Kenneth A. Weaver
Emporia State University

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in March 2006.)

If I knew then what I know now, what would I have done differently? I would have more proactively sought out partnerships to expand my perspective and increase the quality of my productivity. The purpose of this essay is to show that partnerships promote learning through exposure to different perspectives, the synthesis of which often results in new ideas and insights. Because outstanding teachers work diligently to learn, and because partnerships are potentially excellent opportunities to learn, quality teaching is enhanced through partnerships. Whether the partnership is defined as collaboration, collegiality, committee work, or something else, becoming partners means working in an environment that promotes the open exchange of ideas to achieve a common goal. Examples of productive professional partnerships abound. They can range from committees that meet infrequently, such as search committees, to lifelong partnerships, for example, Daniel Kahneman and Amos Tversky’s extensive collaboration on bounded rationality (e.g., Tversky & Kahneman, 1981). Kahneman captured this collaboration best in his 2002 Nobel Prize address, in which he paid homage to his deceased partner (see <http://nobelprize.org/economics/laureates/2002/kahneman-lecture.html>).

In June 1999, the National Forum on Psychology Partnerships (also referred to as the Psychology Partnerships Project or P3) convened for 5 days on the campus of James Madison University in Harrisonburg, Virginia. Participants included 6 current or recent graduate students, 5 teachers from predominantly graduate-level programs, 23 high school teachers, 19 community college teachers, 42 college/university teachers from predominantly undergraduate programs, and 4 psychologists from other professional settings. The forum’s purpose was to “bring psychology teachers from all academic levels together to discuss critical issues in education and to design projects that would facilitate the development of partnerships across academic levels to address those issues” (Society for the Teaching of Psychology, 1999). These invited participants from across the nation worked on one of nine issues: advising, assessment, curriculum, diversity, faculty development, partnerships, research, service learning, and technology.

Attending the forum was my first opportunity to collaborate with teachers from different levels of education. Listening and responding to different perspectives about assessment, the issue on which my group focused, was fascinating, informative, and useful. The assessment group generated and shaped a variety of ideas that I doubt members working individually would have produced. These ideas eventually resulted in the 2002 Best Practices in Assessment conference; an edited book based on the conference proceedings (Dunn, Mehrotra, & Halonen, 2004), which *Choice* magazine, a periodical of the American Library Association, selected as an Outstanding Academic Title for 2005; and the scientific rubric for learning, teaching, and assessing scientific inquiry in psychology (Halonen et al., 2003). In these cases, the whole was definitely greater than the sum of its parts.

In my home state of Kansas, partnerships were crucial to reinstating psychology as a separate endorsement area for high school teachers. From 1991 to 2001, the education community in Kansas debated how best to redefine the endorsement areas for teacher licensure. For most of those 10 years, the state department of education proposed that social studies subsume psychology, a change that would drastically reduce the preparation of high school psychology teachers. Initially, I contacted members of the Kansas State Board of Education (KSBE) and spoke at KSBE's monthly meetings, advocating removing psychology from social studies and making it a separate endorsement. My initial efforts were unsuccessful. However, upon returning from the national forum in 1999, I started partnering with high school psychology teachers, community college teachers, college/university teachers, members of the Kansas Psychological Association, and leaders of the American Psychological Association (APA) to promote the importance of psychology as a separate endorsement area. In conjunction with the newly-approved National Standards for the Teaching of High School Psychology, now titled the National Standards for High School Psychology Curricula (<http://www.apa.org/ed/natlstandards.html>), these partnering efforts ultimately produced success (Weaver, 2002). Within a year, psychology was removed from social studies and made its own endorsement area, and I gained valuable information from my partners and learned a valuable lesson on the efficacy of partnerships.

Partnering now infuses much of what I do. As department chair, I view my relationships with faculty as partnerships that help promote the professional development of students. My administrative philosophy is based on familiarity with faculty, students, issues internal and external to the department, and constituencies affecting the department. That familiarity results from collaborating on teaching, scholarship, service, curriculum, student organizations, assessment, and other activities.

The development of Kansas Teachers of Psychology in Secondary Schools (KTOPSS), now planning its twelfth annual workshop, is another example of a valued partnership. With high school teachers from across the state, I have worked on a variety of initiatives, including sponsoring the annual workshop, expanding the network of high school psychology teachers in the state, and promoting the professional identity of high school psychology teachers.

What initially prompted this essay was the following question: "If I knew then what I know now, what would I have done differently?" Given the importance of professional partnerships, how might a new faculty member develop partnerships? How might an experienced faculty member develop partnerships? Here are some tips, none of them novel, for fostering partnerships:

1. During meetings of any kind, have group members adopt rules that provide for the open exchange of ideas. Forming strong partnerships requires that the partners are comfortable expressing themselves.
2. Become a student organization advisor and develop partnerships with student leaders. Collaborating with student leaders promotes their student professional development, sustains the department's community, develops productive citizens, and produces loyal alumni.

3. Call local high school, community college, or college/university psychology teachers to establish connections. These partnerships embrace many aspects of the discipline, including research, teaching, recruitment, and retention.
4. Establish or participate in a focus group. Listening to other members' observations can inform one's understanding on a number of issues.
5. Become involved with a professional organization beyond just being a member. Such partnerships expand one's breadth of the discipline.
6. Become involved with the Society for the Teaching of Psychology (STP; Division 2 of APA); opportunities abound in this organization. Readers of this essay care for issues relevant to teaching. Involvement with STP connects one with others who share that priority.
7. Serve on the planning committee for a conference or convention (see Bailey, 2004). Melding committee members' ideas into a coherent framework is very satisfying.
8. Invite colleagues to lunch. Familiarity forms the basis of partnerships, and conversing during a meal is one way to "find common ground."
9. Seek out colleagues and students with whom you can collaborate on research. Research collaborations nurture the closeness on which strong partnerships are based.
10. Say "yes" when asked to become involved (but be sure you know what you are saying yes to). By definition, a partnership requires at least two people; saying "yes" puts people together.
11. Subscribe to a listserv or discussion list and become part of a virtual community of learners. This connection may seem a bit flimsy for a partnership, but I am a better teacher because of the ideas presented on the PsychTeacherTM discussion list.
12. Recognize that strong partnerships require members who can "agree to disagree." The bonds of a strong partnership are flexible, and disagreement is a natural consequence of sharing ideas.
13. Supervise field experiences. Partnering with students and field supervisors to provide optimal practicum or internship experiences requires triangulating three different sets of priorities.
14. Use the Student Input Team process as a formative evaluation in your courses (see <http://www.emporia.edu/psyspe/SIT.htm> for procedures). Engaging one's students in discussing one's course produces a better course.
15. Team-teach a course. If one learns the material best by teaching, such learning is magnified when collaborating with other faculty.

Conclusion

It is not a given that any group is, or will become, a partnership. Although my view on partnerships is expansive, a quality partnership promotes learning through exposure to different perspectives, the synthesis of which results in new ideas and insights. Allowing different perspectives to emerge requires openness and tolerance. My involvement in partnerships has been both professionally and personally maturing and rewarding.

References

- Bailey, S. A. (2004). Planning a regional conference for teachers of psychology. In B. K. Saville, T. E. Zinn, & V. W. Hevern, (Eds.), *Essays from e-xcellence in teaching, 2004* (chap. 9). Retrieved February 13, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-09.html>
- Dunn, D. S., Mehrotra, C. M., & Halonen, J. S. (Eds.). (2004). *Measuring up: Educational assessment challenges and practices in psychology*. Washington, DC: American Psychological Association.
- Halonen, J., Bosack, T., Clay, S., McCarthy, M., Dunn, D. S., Hill, G. W., et al. (2003). A rubric for learning, teaching, and assessing scientific inquiry in psychology. *Teaching of Psychology, 30*, 196-208.
- Society for the Teaching of Psychology. (1999, Fall). The National Forum on Psychology Partnerships. Newsletter of the Society for the Teaching of Psychology.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science, 211*, 453-458.
- Weaver, K. A. (2002). The value of national standards. *American Psychologist, 57*, 450-451.

When Generations Collide in the Classroom

Ellen Pastorino

Valencia Community College

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher™ Electronic Discussion List* in April 2006.)

“Students today are so different from when I was in college.” Have you ever made this comment to someone or had this thought? Students today *are* different. They are different in terms of gender, race, ethnicity, age, learning styles, languages, preparedness for college work, and college experience. Yet often overlooked are the diverse values, attitudes, and beliefs we develop as a part of our generation. Such generational influences establish different motivation levels, work ethics, and worldviews that impact teaching and learning. Understanding generational differences, therefore, may enhance one’s impact and effectiveness in the classroom.

For the first time in history, four different generations may be present in our classrooms, especially when you include faculty. In 2000 and 2001, Lancaster and Stillman (2002) conducted a survey of over 400 respondents representing all parts of the country and different ethnic groups. They found that the values, attitudes, and beliefs of people from different generations were related to their attitudes toward work and careers. Though Lancaster and Stillman’s research was intended to answer questions relevant to the generational puzzle in business and industry, such information can help educators glean how such attitudes may impact teaching and learning in the classroom.

Before reading on, take a minute and identify the generation of which you are a part. If you were born between 1900 and 1945, you are considered a *Traditionalist* and a member of the generation Tom Brokaw (1998) wrote about in his best-selling book, *The Greatest Generation*. You are considered a *Baby Boomer* if you were born between 1946 and 1964. *Generation Xers* were born between 1965 and 1980, and *Millennials*, also referred to as the Echo Boom, Generation Y, or the myspace.com generation, represent those people born between 1981 and 1999.

Now reflect for a moment on your history: the people, places, and events that helped shape your attitudes and values. Consider the music, media, fads, and technology you have experienced. What might this say about you? Lancaster and Stillman (2002) outlined the following conditions that make each generation unique. They are not exhaustive descriptions, but rather give a taste of the varying forces that have shaped each generation.

Traditionalists

As a Traditionalist, you may recall Joe McCarthy, Dr. Spock, Alfred Hitchcock, Ella Fitzgerald, Dwight D. Eisenhower, Charles Lindbergh, John Wayne, Bob Hope, and Betty Crocker. Do you remember Pearl Harbor, Korea, the Bay of Pigs, Victory gardens, and bomb shelters? Did you

listen to big band, jazz, or sing-a-long with Mitch? Do you remember listening to the radio, playing 78 or 33 LPs on the record player, or getting your first television set?

Because this generation lived through two World Wars, the Great Depression, and the New Deal, they learned to do without, as resources were scarce when they were young. They had simple toys as children and saw the advent of black and white television. These experiences helped shape Traditionalists into loyal and patriotic individuals who have faith in institutions. They believe in following the “chain of command” and value the opportunity to learn and grow. The G.I. Bill gave many of these individuals the chance to earn a college education. Traditionalists trust the authority of their professors and the college institution. They often are model students who are grateful for the chance to gain knowledge and realize new skills. Professors from this generation may expect their students to show an appreciation toward learning and not question how things are done in their classrooms. They may expect students to be grateful for, and happy about, the chance to earn an education.

Baby Boomers

Baby Boomers may recall Martin Luther King, Jr., Richard Nixon, John F. Kennedy, Beaver Cleaver, Rosa Parks, the Manson family, the Osmond family, Gloria Steinem, Janis Joplin, Captain Kangaroo, Captain Kirk, the Beatles, Muhammad Ali, Malcolm X, Elvis Presley, and Fidel Castro. They likely remember Watergate, the Hanoi Hilton, Kent State, bell bottom pants, tube tops, mood rings, POW bracelets, their first trip to McDonalds, and the drug culture. They listened to folk music and rock-and-roll on 45 rpm records and 8-track tapes.

As you can see, Baby Boomers experienced a very different world than Traditionalists. They lived through the Vietnam War, the Civil Rights movement, the women’s movement, the OPEC oil embargo, the Cold War, Woodstock, the recession, and the divorce courtroom. They had sit-ins, love-ins, and Laugh-In. Such events shaped Baby Boomers into optimistic idealists, who pushed for change. They question authority and follow more of a “change of command” mentality. Because of their sheer numbers (80 million), they are competitive and live to work. They view hard work and effort as the paths to achievement, and believe nothing will be handed to them unless they work for it. As students, they competed for admission into college and worked hard to succeed in school. They may believe that colleges should change to reflect the needs and desires of their students. Professors of the Baby Boomer generation may expect their students to work hard and prioritize education. Their attitude may be that students should want to succeed academically. These professors may conclude that students are lazy when they do not spend a lot of time studying, learning, and making college the main focus of their lives.

Generation Xers

As a Generation Xer, you may recall the Brat Pack, Bill Clinton, Bill Gates, the Ayatollah Khomeini, Ted Bundy, Al Bundy, Clarence Thomas, supermodels, O.J. Simpson, Mr. Rogers, Madonna, Jim and Tammy Faye Baker, Donna Rice and Gary Hart, and Michael Jackson. You likely remember disco, Atari, Somalia, Chernobyl, the Challenger explosion, Betamax and VCRs, the Alaskan oil spill, the TailHook scandal, microwaves, Desert Storm, CDs, MTV, “no new taxes,” and “Mr.Gorbachev, tear down that wall.”

Generation Xers more than any other generation witnessed the breakdown of every major societal institution and the beginnings of the technological revolution. They experienced Watergate and the Iran arms scandal, and saw religious, military, and political figures stumble. Even Supreme Court justices were called into question when Anita Hill testified at Clarence Thomas' nomination hearing. The dynamics of family life changed as the divorce rate tripled, producing a large number of single moms and latchkey teens. AIDS awareness began, and the Berlin Wall came down, ending the Cold War. The breakdown in these institutions shaped Generation Xers into skeptical and distrustful individuals. They have more faith in themselves and prefer to "self-command." They are resourceful, independent, and work to live. As students, they may prefer to work on their own or shape their own learning. They may play devil's advocate, questioning authority and institutional policies. Professors from this generation may expect students to learn independently and always question the material and their professors. They may feel uncomfortable planning group work and activities, and expect students to be comfortable using the tools of technology.

Millennials

Millennials comprise the majority of today's college students. Their values, attitudes, and beliefs have been shaped most dramatically by technology, which gives them instant access to pop culture and the material world. Their childhoods included such events as Columbine, day care, the Oklahoma City bombings, and, most recently, the terrorist attacks on September 11th. They grew up with Chelsea Clinton, Tinky Winky, Ricky Martin, Barney, Britney Spears, the Backstreet Boys, Buffy the Vampire Slayer, Sammy Sosa, and Saddam Hussein. They listen to hip-hop, rap, R & B, and rock on their mp3 players; have readily available illegal drugs; and can travel to any location via the Internet. They have cell phones, computers, virtual malls, and Instant Messaging. Such conditions have fostered a generation that is realistic, capable of multi-tasking, flexible, and appreciative of diversity. They want tasks to be fun and prefer to "collaborate" rather than command.

Generational Differences and Teaching

Understanding generational differences can impact both your teaching and your students' learning. To use this knowledge effectively, you must first examine your attitudes toward your students. For example, a Traditionalist might believe that students should be more appreciative of their educational opportunities, whereas a Baby Boomer might believe that students simply don't put in enough effort and want everything handed to them on a silver platter. Do you believe that today's students do not have the attention span that students in previous years did? Although this is possible, it is also possible that today's students are just great at multi-tasking and dividing their attention. Do you feel that today's students exhibit an air of entitlement? Well, given that Millennials are as big a generation as the Baby Boomers, this might actually turn out to be reality. There are not enough Generation Xers to take the place of Baby Boomers, because Generation Xers are only half the size of the Baby Boom generation. As a result, many Millennials will be given not only more opportunities, but more opportunities at a younger age than previous generations.

Because the majority of college instructors are not a part of the Millennial generation, they may find it difficult to relate to many of their students. How then can we more effectively teach this generation? First, consider the learning environments that you offer to your students. Because of their upbringings, Millennials will be better served by flexible learning environments. We have already seen this occur on college campuses across the United States. Many courses now emphasize service learning, and many are delivered via hybrid or online classes. In addition, learning communities are also becoming more popular. Students also want to have fun in the classroom. They want to understand how course material relates to their lives, and they want to participate in the learning process. Hence, student-led discussions, video snippets, portfolios, peer-reviewed writing, active learning demonstrations, and other activities appeal to Millennials. Technology is not our foe but rather a great tool that can be used to enhance education for Millennial students. Course management systems (e.g., WebCT, Blackboard), e-mail, discussion boards, PowerPoint slides, student response systems, and computer-based games and tutorials all appeal to the Millennial's savvy technological skills. Yet such tools require us to be trained in and use this technology.

Although we typically have fewer students from other generations in our classes, teaching diverse generations can be a challenging balancing act. For example, whereas Millennial and Generation X students tend to be comfortable with the use of technology, Traditionalist and Baby Boomer students may initially be intimidated by it. They need time, structure, and hands-on learning to alleviate their "computer anxiety." However, they also typically have a strong desire and motivation to learn these skills. On the flip side, Millennial students, being younger, have fewer life experiences to relate to psychology. Older students will have many life experiences to share with younger students. Traditionalist students in particular may feel very comfortable working in groups with Millennial students where they can in effect become authority figures. Whereas Millennial students value collaboration and group work, Generation Xers prefer to work independently. Hence, making assignments flexible so that students can work independently or in groups will appeal to all generations.

Take it from a skeptical Generation Xer—there are many ways we can reach and educate students from diverse generations. Being flexible and providing a variety of assignments and activities are key factors for success. I may not be teaching the same way I did 10 or 15 years ago, but then again, my students are not the same. Each generation has positive attributes that make our classes more diverse. The wide array of experiences that professors and students from different generations bring to the classroom allows them to learn from one another. This in turn fosters tolerance and acceptance, and enhances professional growth and development.

References

Brokaw, T. (1998). *The greatest generation*. New York: Random House.

Lancaster, L. C., & Stillman, D. (2002). *When generations collide: Who they are. Why they clash. How to solve the generational puzzle at work*. New York: Harper Business.

Why It's Important to Export Our Field—and How We Can Do It Effectively

Robert A. Baron

Rensselaer Polytechnic Institute

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in February 2006.)

In 1974, a series of events happened that changed the course of my career—and life. At the time, I was a newly minted associate professor enjoying the pleasures of tenure. Overall, I felt very good about my career and saw it developing along strictly traditional lines. Then, without warning, a major storm broke around my head: I received a “Golden Fleece” award from Senator William Proxmire. These awards were given by the Senator to the biggest wasters of taxpayers money, and I received one for my research on the effects of heat on aggression (the so-called “long, hot summer” effect)—research that was supported by a National Science Foundation (NSF) grant. In fact, in making his “award,” the Senator ignored most of our careful, systematic laboratory research on this topic and focused, instead, on a single field study we had conducted—one in which we observed traffic to find out whether motorists honked their horns more often on hot, steamy days. (They did.) The Senator claimed that we had spent all of the funds in our grant on this project, when, in fact, it was a study we actually conducted without cost. But he didn’t seem to know—or care! The Dean of my college phoned and urged me to ignore the award, but I simply could not do that. So, I talked to reporters and explained to them the purpose of our research and how we actually spent our funds. Blessings on the press! Many reporters accepted my comments and joined in strong condemnation of Senator Proxmire. In fact, even the highly respected *Washington Post* published an editorial severely criticizing Proxmire’s tactics. Needless to say, people at NSF were pleased—in fact, they invited me to become a Program Director there.

When I arrived in Washington, DC, about 2 years later, all was fine. But then, Ronald Reagan defeated Jimmy Carter for the Presidency, and within a few months, my program (social and developmental psychology) experienced a 75% cut in budget. Many of my colleagues believed this drastic cut occurred because members of the Reagan administration were “anti-science.” After meeting several representatives who came to NSF to peruse our files, though, I had a very different impression. In my view, they cut the budget for my division and program not because they were anti-science, but because they truly did not understand the nature of psychology. They did not know it was largely scientific in orientation and adopted research methods similar to those used in other fields. At that point, I realized this distressing outcome was, to some extent, our fault! Perhaps we had not, as a field, been doing a very good job of communicating the true nature and immense value of psychology to our students and, therefore, to society as a whole.

Those thoughts, which recurred over and over during my time at NSF, strongly shaped my thinking about what we, as teachers of psychology, should be doing in our courses. Specifically, I asked myself this question: “Can’t I focus a bit more on explaining the value of psychology to students—and therefore, winning friends for our field?” This idea was stimulated, in part, by the fact that most students in my courses were not psychology majors. These students took

psychology courses not because they were required to do so, but because they were interested in them. In fact, for some, especially the engineering students, our courses were among the few electives they could take outside their major field. I found myself wondering, didn't we owe them more than simply an interesting course reflecting our own interests and expertise? Shouldn't we also be communicating as clearly as possible the value of psychology?

These thoughts produced major shifts in my own teaching and research; ultimately, they led me into a career path in which I have been, to some extent, an "exporter" of our field. I have frequently attempted to communicate not only psychology's content but also its essential value to people who are not going to become psychologists. As a result, I have taught students in every conceivable field, from undergraduate engineering and nursing students, to MBA, finance, and philosophy graduate students. In teaching these students, I have tried my best to be a true "exporter" of psychology—to illustrate the intrinsic value of our field and the many ways in which it can be put to excellent use by people who are not psychologists. Let me now explain why, in my view, this is an important goal.

Why We Should All Be "Exporters" of Psychology

In my view, there are two key reasons why we should want to export psychology. First, I believe it is the right thing to do. Psychology is scientific in orientation and approach, but it has always been an applied field as well. In other words, psychologists have always sought knowledge of human behavior to contribute in positive ways to human welfare. To the extent that is true, we have an obligation to communicate the value of psychology to our students and help them understand the many ways they can benefit from it.

There is a second compelling reason for exporting psychology: to gain the friends and supporters we need to guarantee the continued progress and advancement of psychology. If my 2 years at NSF taught me anything, it is this: We cannot take such support for granted! Each year, millions of young people take courses in psychology. Do they leave these experiences as "believers" in our field? Many do—of that I am sure. But many others, my own teaching experience tells me, are not convinced. These "doubters," or "skeptics," do not really believe we can use scientific methods to understand such topics as love, memory, the cognitive abilities of children, the effects of stress on health, the nature of psychological disturbances, and so on. Rather, they doubt the long-term value of our research. It is imperative that we reach these skeptics and convince them. If we do not, they will be the people who, in the future, vote against government support for psychological research, resist having psychology included in the curricula of their local schools, and seek to limit the rights of psychologists within the health care system. Can we afford to have such adversaries? Again, my experience at NSF tells me we cannot and we should adjust our teaching to reach out actively to these people and convince them of the essential value of our field.

How Can We "Export" Psychology Effectively? Some Techniques That Work

Again, I can almost hear your comments: "OK . . . so it's important to export psychology. But how exactly can we do this? What teaching methods or techniques work?" Obviously, there are

no simple answers, but here are two techniques that have worked for me. I hope you, too, find them useful.

Bring in Guest Lecturers from Other Fields and from Outside the University

I often invite individuals from other fields to my classes to discuss the ways they use psychology in their work. This provides students with vivid examples of how psychology is an invaluable tool, one used by people in many walks of life. Over the years, I have had guest lecturers from such fields as medicine, accounting, business, law, engineering, and marketing. Most are not professors; rather, they are practitioners of various occupations and professions who take time from their busy schedules to address my students. What do they talk about? Topics of interest to them and about which they know a great deal. But in my invitation, I always try to make it clear that my primary goal is illustrating to my students how important knowledge of human behavior is. The results are often outstanding, to say the least. Here are a few concrete examples.

Recently, I had a stock broker visit class. No, he didn't talk about the economics of the stock market or about financial rules and regulations, nor did he offer advice on how to make quick profits. Rather, he discussed the role of emotions in investment decisions. His main point was that emotions often influence people to take actions that, from a business point of view, are not rational. As he explained, one reason why people make common investment errors, such as rushing to buy when markets are high or selling when markets are low, is that they let their emotions rule their decisions. As psychologists, we know that affective reactions exert a powerful influence on many aspects of cognition, and although I often discuss this topic in my classes, most students do not appreciate how strong or general such effects can be. As my guest speaker described these examples from his own experience, I could virtually "see" many students—including the hardcore skeptics—moving toward the following conclusion: "Gee, there really is something to this behavioral stuff after all."

Here is another example. I have been fortunate to team-teach a course with Nobel-prize winning physicist Ivar Giaever. The course focuses on innovation and creativity, and my role is to describe the psychological aspects of these topics. As a world-renowned scientist, Ivar talks about creativity in science and how it has re-shaped our world. As you might guess, when Professor Giaever is present, attendance approaches 100%, and the students convey their tremendous respect for him throughout the session. Working with Professor Giaever has been a pleasure for me in many ways, but perhaps the best part is when he says something like this to the class: "Listen carefully to Professor Baron, because what he tells you is very important. Physics is central—it provides the keys to understanding the universe. But knowing about people—that may be even more important to you in the years ahead." Truly, I am flattered, and even more important, I realize once again that my faith in psychology is not misguided: It truly is valuable, and this fact is apparent to intelligent people even as far removed from our field as Nobel-prize winning physicists.

Few of us will be fortunate enough to have experiences such as this one. (I feel truly blessed!) But as I have suggested, there are many ways of demonstrating the value of our field to students. Guest lecturers do not have to be Nobel-prize winners to be effective. Rather, having people from other fields recognize the value of psychology—and use it in their own lives—is the key.

Use Short Cases and Exercises

I am not a fan of the “case method” of teaching. In fact, it goes against my own training in scientific psychology. Occasionally, however, I like to clip an interesting article from the newspaper and reproduce it for use as a short “case” (really, “example” or “illustration” is a better term). Here’s one example. Recently, I presented to my class an article on Victor Gonzalez, the founder of a new chain of pharmacies in Mexico. Mr. Gonzalez is unusual for a businessperson—he is highly extraverted, has a great sense of humor, and is something of a “maverick.” (His own family, a prominent one in Mexico, objects strongly to some of his tactics.) The point of the article, which students discuss in groups, is that the success of his new business is due, in part, to his personality. After reading this case, even the “doubters” from engineering or science begin to grasp the important role that individual difference variables play in a wide range of settings.

Here’s another example. When discussing basic principles of motivation, I often use an article that compares two farms in Russia. One operated as a collective farm, in which the people who worked the land were employees; the other was privately owned by farmers who owned the land and equipment. Guess which farm showed higher productivity? The fact that the privately-owned farm showed 5 times the output of the collective one provides a vivid illustration of a basic motivational principle: the importance of establishing close links between effort and outcomes. After reading this case, even skeptics sit up and listen more carefully.

I could readily provide other examples, but I am sure the main point is already clear: Short cases that illustrate the application of psychology’s principles and findings in situations outside the laboratory or university can be very useful, and I recommend their use in your courses.

An Optimistic Conclusion—Of Course!

If we truly believe—as I think most of us do—that our field is not only fascinating but also tremendously valuable and useful, then our task is really a happy one. As teachers of psychology, we can help large numbers of people outside our field appreciate its value. By doing so, we contribute not only to their future happiness and success, but also to the future growth and development of psychology. Perhaps the famous missionary Mother Teresa put it best when she said: “We ourselves often feel that what we are doing is just a drop in the ocean. But if that drop was not in the ocean, the ocean itself would be less because of that missing drop.” I agree. Our individual contributions to the goal of “exporting” psychology may seem small, but together, they do make a difference. The benefits will be real for our students, for society, and for psychology itself.

Student-Teacher Relationships: Reflections from the Students' Perspective

Bridget S. Schultz and Kimberly A. Marchuk
James Madison University

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in June 2006.)

Shortly before students register for classes each semester, students and faculty are reminded of an emerging trend across college campuses: the growing use of the Web site www.ratemyprofessors.com. As readers of this essay may know, this Web site allows students to rate their teachers' easiness, clarity, and helpfulness. Based on a teacher's overall rating—which combines clarity and helpfulness but not easiness—he or she is assigned an icon that represents the “overall quality” of instruction. By looking to see if teachers have “happy,” “neutral,” or “unhappy” faces, students can quickly decide whose classes they should take. Students are also able to post anonymous comments about their teachers on the Web site. In general, the content and tone of the comments sometimes vary considerably for each teacher: Whereas some messages describe a teacher's personality (e.g., “She's really cool and friendly”), others focus on a teacher's particular instructional style (e.g., “He's a good teacher, invites questions, and then insults you for 20 minutes”). Finally, other comments focus on specific classroom behaviors—characteristics such as helpfulness, fairness, approachability, and humor that likely influence the type of “face” a teacher receives. In short, this Web site allows students to inform others—albeit implicitly—what makes someone a master teacher. Because many college teachers also peruse this Web site, an interesting question arises: Do students and faculty agree on what makes someone a master teacher?

Generally speaking, a master teacher is “an individual who is highly effective as a classroom teacher” (Schaeffer, Epting, Zinn, & Buskist, 2003, p. 134). Recent studies suggest that students and faculty agree on many of the criteria that define master teachers (Buskist, Sikorski, Buckley, & Saville, 2002; Schaeffer et al., 2003). However, the criteria on which students and professors disagree may provide interesting insight into the different motivations and perspectives of these two constituencies. In this essay, we will discuss faculty and student perspectives on master teaching and then discuss some possible reasons why undergraduate students, such as us, and faculty disagree to some extent on which characteristics are most important.

Research on Master Teachers

Buskist et al. (2002) observed that although there were differences between student and faculty perceptions of what constitutes a master teacher, these two groups agreed to a large extent. Specifically, Buskist et al. found that students and faculty at a large state university agreed on 6 of the top 10 characteristics that defined master teachers. In a subsequent study, Schaeffer et al. (2003) found similar results at a small community college, suggesting that student and faculty perceptions of master teachers are relatively stable across settings. However, in both studies, there were interesting discrepancies between faculty and students in what they ranked as the most and least important characteristics of master teachers.

Faculty and Student Discrepancies

The differences between students and faculty on the characteristics they ranked as most important reflect an emphasis on different aspects of teaching. Whereas students tended to emphasize characteristics that focus on student-teacher relationships (e.g., the teacher cares for students and is understanding), faculty stressed more technical aspects of teaching (e.g., the teacher focuses on developing critical thinking skills and presents current information). For example, Buskist et al. (2002) found that students ranked “happy/positive/humorous” as the seventh most important characteristic; in contrast, faculty rated it twenty-seventh. Similarly, whereas faculty ranked “promoting critical thinking” and “preparing” in their top 10, students did not rank these characteristics highly (see also Schaeffer et al., 2003).

Although the respective rankings of important teacher characteristics by students and teachers were not diametrically opposed, one question that emerges from an analysis of these rankings is: Why do students (more so than teachers) find student-teacher relationships to be so important? We believe there are important reasons for this discrepancy, and we hope to convince you that developing relationships with your students can have a beneficial effect on their motivation and desire to learn.

The Importance of Student-Teacher Relationships

The atmosphere established in a classroom can strongly impact a student’s willingness to learn. Imagine this scenario: On the first day of class, still frightened by the novelty that often comes with a new course, a student finally musters up the courage to ask his teacher a question, which is followed by this response: “Well, it looks like someone was not listening and might not be able to handle the requirements of this course.” (Although this response might seem harsh, it actually happened in one of our classes.) Even though our imaginary teacher likely did not make this comment maliciously, the comment may have had a lasting—and negative—impact on his students. Our imaginary student (and possibly other students in the course) may avoid future contact with the teacher and may feel less hopeful of achieving his goals in the class. And most certainly he will feel uncomfortable asking his teacher another question. Without developing a comfortable relationship with his teacher, our student may lose interest in a subject that may have otherwise been very stimulating.

The preceding example illustrates the most important reason why student-teacher relationships are vital: These relationships may set the stage for increased student learning. For students, positive interactions with teachers are especially important. Students feel more comfortable asking questions in class and approaching the teacher outside of class, which might inspire them to set more challenging academic goals. With a positive student-teacher relationship in tow, students may be more likely to take chances and address their difficulties directly, not fearing embarrassment. Most likely, comfort with a teacher may lead to improved learning and the development of critical thinking skills—outcomes that most faculty view as important (Buskist et al., 2002). Conversely, if a student is afraid to participate in class, the odds of her learning new information are greatly reduced.

Positive student-teacher relationships can also increase students' initiative for taking advantage of the myriad opportunities college presents. To get the most out of college, students know they need to take advantage of opportunities designed to complement the traditional academic experience. Such opportunities include taking part in independent research and completing community service, among others. For example, in one of our classes, we were required to participate in a service learning project. At the end of the class, our teacher offered us opportunities to continue with our volunteer work. Because of the relationship we had with our teacher, each of us wanted to continue providing service to our community. Without this relationship, the idea of volunteering for no course credit would probably not have crossed our minds. Furthermore, teachers with whom students have established relationships may be more familiar with their students' interests and alert them to opportunities that might be of interest—for example, having the opportunity to write this essay! Conversely, without good student-teacher relationships, students might not know about these opportunities or, even if students are aware of them, may not seek them out as often. In sum, positive relationships with teachers may open the door to more enriching experiences and, as a result, increase students' self-efficacy.

Another reason why strong student-teacher relationships are vital is because these relationships can positively influence students' work ethic. We have found that there seems to be a positive relation between the amount of rapport a student has with a teacher and his or her willingness to work hard for that teacher. When students respect their teachers and have positive relationships with them, they also trust that the hard work they do will pay off. Each of us has taken many courses that required copious amounts of work. In those courses where we had positive relationships with our teachers, we were more likely to view the large amount of work as beneficial to our intellectual growth and not just "busy" work. For example, one course, in which we had a great relationship with our teacher, required nightly readings, a lengthy term paper, and frequent essay examinations. We felt, however, that the teacher would only require assignments that promoted our learning. In contrast, in classes where such a relationship was lacking, under-the-breath comments and complaints often followed what seemed to be redundant, pointless work. In reality, the amount and type of work in those classes was no different; the perception of why we completed so much work, however, was.

Also, when students establish good relationships with their teachers, they do not want to disappoint the teachers. Teachers who establish rapport with their students know their students and the capabilities their students possess, never allowing them to settle for doing less than their very best work. Just as there is often a fear of disappointing one's parents, so too is there a fear of disappointing a most respected teacher. Finally, students work harder in courses where they have good relationships with their teachers because they are more confident in their own abilities. When teachers expect exceptional performances from their students, students are more likely to strive for excellence. Upon entering college, most students feel unsure of their abilities. Over time, and as students become more familiar with college, their confidence grows, and this increased confidence is certainly aided by positive student-teacher relationships. Personally, we would not have enrolled in challenging classes, become involved in community service, and felt a sense of accomplishment if it were not for the support of our teachers. In essence, then, any confidence gained in the classroom is less likely to transfer to new situations if teachers do not establish good relationships with their students.

A final reason that student-teacher relationships are important to students is that students need mentors. Before leaving high school, parents, teachers, advisors, and elders often warn high school seniors about the harsh realities of entering the “real world.” In college, teachers become our mentors, sometimes “serving” for 4 or more years. In that time, students learn from their teachers not only course material but also life lessons learned outside the lecture hall. And although the college student in each of us knows that we should pursue the vast opportunities college offers, the high school senior in each of us still needs some guidance—and for that, we look to our teachers. Most likely, we will seek out guidance, and, thus, knowledge, from teachers who have made it a priority to develop a relationship with us.

Conclusion

College is not just about memorizing important dates or the criteria for a mental disorder. Nor is it about merely learning to survive in the “real world.” Instead, college is about learning to thrive. This “gateway to the world” is about becoming engaged, taking risks, getting involved, and establishing a work ethic; it is a place to learn about the etiquette of interaction with professionals and how to conduct ourselves not as young adults, but as adults, period. We no longer have the strict guidelines and stringent rules that high school had so neatly constructed for us. As we make the transition from high school to college, we ask that our teachers not give us every answer, but rather help us learn on our own. Our time in college is short, filled with papers, tests, projects, and speeches, some of which we will probably forget. Long after the content of our classes has faded from memory, the relationships we established with teachers will continue to impact our professional relationships as well as our confidence in our own abilities to succeed.

References

- Buskist, W., Sikorski, J., Buckley, T., & Saville, B. (2002). Elements of master teaching. In S. F. Davis & W. Buskist (Eds.), *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer* (pp. 27-39). Mahwah, NJ: Erlbaum.
- Schaefer, G., Epting, K., Zinn, T., & Buskist, W. (2003). Student and faculty perceptions of effective teaching: A successful replication. *Teaching of Psychology, 30*, 133-136.

Team Teaching: Benefits, Challenges, and Considerations

Janie H. Wilson

Georgia Southern University

Stephen H. Hobbs

Augusta State University

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in July 2006.)

Team teaching entails two or more instructors working together to teach their students. Through the years, this type of teaching has been called by many names, including cooperative teaching, collaborative teaching, coordinated teaching, and simply co-teaching; however, the most cited term continues to be team teaching. Regardless of the term used, team teaching can range from teachers independently completing certain tasks for a course to collaborating completely throughout an entire course. The process might involve two or more teachers with similar or diverse backgrounds, teaching across more than one discipline, and targeting any grade level. Below, we will discuss some of these variations, together with common benefits of, and potential challenges to, team teaching. The information we provide is based on readings in this area, many of which we have provided in the Suggested Readings section below; interviews with colleagues; survey input from team teachers; and our own team-teaching experiences.

When team teaching, instructors may simply choose to split a course, with little more planning than determining which instructor will deliver which specific lectures. This approach to team teaching might involve a single classroom coordinator who schedules speakers, an arrangement often found in cross-disciplinary core courses. In a variation on this format, all instructors are present for each class, but each delivers his or her lectures independently. A third, and more demanding, method of team teaching involves instructors attending all class meetings and contributing to lectures each day. In this format, instructors’ presentations are highly integrated. Finally, an unusual arrangement involves having students enroll in two courses that are linked in some way. For example, students at Augusta State University can enroll simultaneously in a first-year orientation course and a section of introductory psychology. In this “tandem” arrangement, the first-year orientation instructor attends the psychology course “as a student” and helps other students focus on important information, take useful notes, use the textbook effectively, and even prepare for (and take!) exams. As these approaches should indicate, possibilities for team teaching are many and varied.

Eisen (2000) provided a useful analogy by examining team teaching under a family-systems model. According to Eisen, the “village” exemplifies teachers and students working together as a team in the classroom, rather than two or more teachers working together. The “extended family” represents teachers who share ideas informally and support each other. “Cohabitants” are teachers who might combine their classes to hear a speaker or watch a video, and they would be willing to cover a class for each other, if needed. “Joint custody” refers to two teachers sharing a course, but lectures are still highly individualized. A “committed marriage” requires choosing a partner and working together to provide a course that truly integrates the two teaching

personalities. Finally, a “blind date” occurs when an administrator brings two teachers together for a course. Eisen suggested that blind dates might lead to marriage or just a one-night stand.

Perhaps the ultimate in team teaching was best captured by Buckley (2000), who wrote: “Team teaching involves a group of instructors working purposefully, regularly, and cooperatively to help a group of students learn. As a team, the teachers work together in setting goals for the course, designing a syllabus, preparing individual lesson plans, actually teaching the students together, and evaluating the results” (p. 4).

Eisen’s (2000) committed marriage and Buckley’s (2000) idealized team teaching illustrate a synergistic relationship between teachers who want to create a unique teaching and learning experience. Those of us interested in team teaching aspire to become better teachers by working with our colleagues in this type of close relationship. However, certain administrative concerns must be addressed before team teaching can be realized. For example, how will students complete course evaluations for multiple teachers, how will team teaching be counted in the teaching load, and how will it be valued in annual evaluations?

More pragmatically, using two instructors to teach a single course may reduce the number of instructors available to teach other courses. Often, team teachers choose to bear this cost themselves by agreeing to a course overload or by agreeing to teach a double-sized course. However, some administrators actively support team teaching by employing relatively inexpensive adjunct instructors to cover the team teacher’s vacated section.

Indeed, administrative endorsement for team teaching can be quite strong, especially when it supports institutional goals (e.g., interdisciplinary instruction). Further, the uniqueness of a team-taught course may actually attract high student enrollments. Other administrators have touted team teaching as a means of facilitating faculty development by broadening faculty expertise and perspective, re-energizing an established instructor, mentoring a less experienced teacher, transitioning an administrator back into the classroom, or easing an instructor into a new course preparation. The popularity of team teaching is testimony to the fact that perceived administrative obstacles are not insurmountable.

Challenges and Benefits for Students

After the course has been scheduled, challenges and benefits for both students and teachers must be considered. Students are likely to have a larger workload with more than one teacher. Even if this is not the case, students may perceive that they have more work, and they will often say so on course evaluations! Students may also be uncertain of who is in charge of the course, particularly if team teaching includes an equal partnership between teachers. For example, students may not know with whom they should talk about grades or a missed test. In addition, students must adapt to different teaching styles within one course. Finally, the classroom environment could suffer if teachers have conflicts with one another or if they talk only with one another rather than with their students. In addition, unless they are careful, two teachers can dominate class discussion and rarely allow student input.

Conversely, students can benefit greatly from team teaching. First, students have the chance to learn from more than one expert, especially if the instructors have different specialty areas. Instructors can debate with each other in class to help students consider different points of view and to encourage critical thinking. Students might also enjoy the change of pace that comes when different instructors lecture. Finally, having more than one instructor in the classroom may lead to increased student-instructor rapport.

Challenges and Benefits for Teachers

Teachers also face challenges when team teaching. Most types of team teaching require more time and energy than teaching alone, at least in the early stages of a team relationship. Teachers might get credit for only one-half of a course or alternate full credit for the course each term. Some team teachers report that students complain to them about the other teacher or attempt to play one teacher against the other. Finally, when teachers share a course, a loss of autonomy is very likely and, unfortunately, one teacher may feel like (or even be treated like) the lesser member of a team.

As long as each teacher is valued, the benefits of team teaching are many. First, working with a colleague may make teaching more fun and can provide a fresh perspective on how class is going. Having another teacher in the classroom can also make it easier to answer students' questions. Additionally, team teachers often share the responsibility of grading, either separating the work or grading the same work and comparing their assessments. Teachers who support each other can also form a united front to diffuse potential student problems. As an added benefit, team-taught courses make it easy to maintain continuity in a class when one member of the team has an emergency or professional meeting and must miss class. Importantly, team teachers often report that the experience helped to revitalize their love of teaching. A final, more self-serving benefit of team teaching is the opportunity to have peer review of teaching from a colleague that might be used for tenure, promotion, or awards.

Considerations When Team-Teaching

To maximize the team-teaching experience, instructors need to consider several issues. First, choose a psychologically healthy partner; a problematic colleague will not make a good partner. Second, discuss course management, including the amount of class structure each instructor prefers; how to handle student requests for exceptions; whether interruptions by one member of the team are acceptable, or perhaps even encouraged, during a lecture by the other member; what kinds of tests will be used; how student papers (if assigned) will be handled; and who will maintain course records. Third, get to know each other, listen, and compromise. Be prepared to meet regularly beyond initial course planning. Fourth, agree to a trial run of one or two semesters. If a long-term commitment is made immediately, "breaking up" will be difficult if the relationship does not work.

Other aspects of team teaching are based on personal preference. Instructors must decide if a team will consist of equal partners or a senior faculty member mentoring newer faculty or graduate students. The team arrangement could involve only two instructors or an entire teaching team. If all instructors attend class each day, one instructor might lecture while the others watch,

or each might remain active by helping students individually, presenting demonstrations, serving as a student role model (being attentive, taking notes, asking good questions, etc.), or providing an additional resource for student questions.

Regardless of the team structure and dynamics, instructors should like and respect each other, and they ideally should share the same work ethic. Instructors should focus on their strengths, such as their subject areas of expertise, classroom skills, and housekeeping skills. Throughout the term, team members should have frequent, open discussions and maintain planning periods. And even as team teaching sweeps us away to the nirvana of teaching, we should not forget about our primary goal: student learning.

We close with some representative and slightly paraphrased comments from experienced team teachers.

On interdisciplinary team-taught courses:

- I can now better help my students relate our psychology content to what they're learning in other courses.
- Nature is not organized like a college curriculum, and interdisciplinary/team teaching helps students come to appreciate this.
- I have a new appreciation for the similarities and differences in approaches to knowledge found in other disciplines...and the instructors from the other disciplines now understand psychology better, too!

On student audience:

- Team teaching generally works best with upper-level, graduate, and honors students.

On the increased work load:

- Team teaching works best when both instructors carry more than 50% of the load.
- It was much more work, but well worth the effort.

On the other hand:

- My stress was reduced because we were sharing the load, and I didn't have to make all the decisions.
- I had ready coverage when I needed to miss class.

On student evaluations:

- The students loved it, and it showed in the end-of-course evaluations.
- My ratings are a bit lower in my team-taught course than when I teach solo.

On the overall experience:

- Once is not enough. It gets easier and much better after the first time.
- It energized me, and that energy extended to my other classes, as well.
- This helped to make teaching fun again, both in and out of the classroom.

On students:

- They love the “he said, she said” exchanges.
- Students can find their best fit when given more than one instructor.
- Students get to witness scholarly debate...as opposed to what most politicians do.
- This experience facilitates critical thinking by students.
- I can’t prove it, but I’m convinced my students got a better course than I could have offered by myself.

References and Suggested Readings

- Bakken, L., & Clark, F. L. (1998). Many joys, some surprises, and a few worms. *College Teaching*, 46, 154-157.
- Brenan, C., & Witte, R. (2003). Team teaching in the secondary instrumental music classroom. *Music Educators Journal*, 89, 31-35.
- Buckley, F. J. (2000). *Team teaching: What, why, and how?* Thousand Oaks, CA: Sage.
- Eisen, M. J. (2000). The many faces of team teaching and learning: An overview. *New Directions for Adult and Continuing Education*, 87, 5-14.
- Flanagan, M. F., & Ralston, D. A. (1983). Intra-coordinated team teaching: Benefits for both students and instructors. *Teaching of Psychology*, 10, 116-117.
- George, M. A., & Davis-Wiley, P. (2000). Team teaching a graduate course. *College Teaching*, 48, 75-80.
- Hammer, E. Y., & Giordano, P. J. (2001). Dual-gender team-teaching human sexuality: Pedagogical and practical issues. *Teaching of Psychology*, 28, 132-133.
- Harris, C., & Harvey, A. N. C. (2000). Team teaching in adult higher education classrooms: Toward collaborative knowledge construction. *New Directions for Adult and Continuing Education*, 87, 25-32.
- Hourcade, J. J., & Bauwens, J. (2001). Cooperative teaching: The renewal of teachers. *The Clearing House*, 74, 242-247.

- Keith, K. (2006). Let the music begin: The music of team teaching. In W. Buskist & S. F. Davis (Eds.), *Handbook of the teaching of psychology* (pp. 59-64). Malden, MA: Blackwell.
- Letterman, M. R., & Dugan, K. B. (2001). Team teaching a cross-disciplinary honors course: Preparation and development. *College Teaching*, *52*, 77-79.
- Morlock, H. C., Gaeddert, W. P., McCormick, N. B., Merrens, M. R., Shaffer, L. C., & Zandi, T. (1988). A rotational format for team teaching introductory psychology. *Teaching of Psychology*, *15*, 144-145.
- Robinson, B., & Schaible, R. M. (1995). Collaborative teaching. *College Teaching*, *43*, 57-59.

Is There a Formula to Help Understand and Improve Student Motivation?

Kenneth E. Barron
James Madison University
Chris S. Hulleman
University of Wisconsin-Madison

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in August 2006.)

“Hey Prof, i didnt come 2 class last week. did i miss anything imp? any of it gonna b on the test? also, is lab runnin the whole time 2day, or we gettin out early?”

Email and other forms of electronic media have given us new ways to gain insight into the motivation of our students. Unfortunately, the additional “insight” that we may obtain can be discouraging. For example, perhaps you have been the recipient of an email like the one above, or maybe you have had colleagues share similar emails from their students. Or perhaps you have logged onto Web sites like www.ratemyprofessor.com and www.facebook.com. When perusing these sites, we are particularly struck by the number of students who recommend courses because attendance and doing the readings are not mandatory, the professor frequently cancels class or ends class early, or the course is easy (or at least easy enough to get a passing grade). For example:

“Definitely take this class. I never went to class or bought the book, and I got a B.”

“The easiest teacher! Always lets class out early and cancels class on Fridays a lot. TAKE HIM!”

“Easy class . . . all you have to do is print out PowerPoints and memorize them completely to get a good grade on tests . . . lectures are pretty boring he just reads off the slides but it’s tolerable overall”

As a result, many of us may question the motivation of our students and wonder if student motivation has declined in recent years. Indeed, longitudinal studies of academic motivation suggest that students become less interested in learning as they progress through school (Harter, 1981; Lepper, Corpus, & Iyengar, 2005). This decline in motivation raises an important question: Whose responsibility is it to motivate students? Is it the job of students to motivate themselves, or do instructors have some responsibility as well? Wlodkowski (1985) offered a strong position on the matter:

“I am convinced that one of the logical reasons why ineffective and unmotivated learning so frequently occurs is because of the lack of motivation planning on the part of many instructors . . . I contend that for an adult to learn and want to learn (motivated learning), motivation planning is necessary . . . Blaming the learners for being unresponsive to instruction that is actually poorly

designed or implemented in terms of its motivational influence is a common reaction among many instructors” (pp. 58-59).

Indeed, an appreciation of motivation theory, as well as an understanding of how to structure your class and assignments based on motivation theory, may go a long way toward eliminating (or at least limiting) student apathy. As psychologists, we would hope that knowledge of different psychological theories could be used to help improve classroom instruction. However, because of its complexity, motivation theory can be daunting—especially to those unfamiliar with its nuances. This point was nicely brought to light at a recent professional meeting on motivational research, entitled “What Should Pre-Service Teachers Know about Recent Theory and Research in Motivation?” After several scholars reviewed the dominant motivational theories, along with principles they hoped would be taught to aspiring teachers, the next speaker, author of a popular educational textbook, quickly captured everyone’s attention with her opening statement: “I’ve got to tell you, I hate writing the motivation chapter of my educational textbook. You’ve got 48 +/- 8 theories of motivation, and I don’t know what should be stressed and what shouldn’t to aspiring teachers.”

Although this statement somewhat exaggerates the multiplicity of motivation theories, the main point is certainly true. Numerous motivation theories have been proposed, and it can be difficult to sort through and make sense of the various constructs. The purpose of this essay is to simplify the complexity found in motivational research and to pose the following challenge: How does your teaching promote optimal motivation in your students?

Simplifying Motivational Theory

In general, motivation can be defined as what moves us into action. Despite the appearance of numerous motivational theories, an expectancy-value framework provides a parsimonious way of synthesizing a number of important conclusions from motivational research. This framework can be represented with a simple formula: $\text{motivation} = \text{expectancy} \times \text{value}$.

In other words, motivation is the product of two components. The first component, *expectancy*, represents the degree to which individuals believe they can complete a given task. The second component, *value*, represents the degree to which individuals are interested in, or at least see some purpose for, engaging in a task.

Although this formula is clearly linked to expectancy-value theories of motivation (e.g., Wigfield & Eccles, 2000), other major motivation theories can be viewed as contributing to the expectancy component (e.g., efficacy theory, locus of control theory) or the value component (e.g., goal theory, interest theories). Additionally, this formula implies that motivation is the product (rather than the sum) of these two components. Therefore, both components are necessary or overall motivation will be impaired. For example, even if students believe they can succeed at a task, they may remain unmotivated if they see little value or have little interest in engaging in the activity. Conversely, even if students see value in the activity, they may remain unmotivated if they believe they will be unsuccessful at the task.

Thus, knowledge of this motivational formula can be used to optimize student motivation by structuring our courses to allow students to achieve objectives with reasonable effort (i.e., promote an expectation that certain outcomes are achievable), while also trying to ensure that students see importance in what they are learning (i.e., promote a sense of value and interest in the material).

Promoting a sense of expectancy, however, doesn't come from simply offering an easy class. Instead, "authentic" expectancy means structuring classroom activities that are achievable but challenging (neither too easy nor too difficult), so students are able to progress and experience feelings of competence. In fact, motivation research has demonstrated that expectancy and value can be related, such that when students feel competent at an activity, they are more likely to value and enjoy doing it. Thus, the old adage "we like what we're good at" can be used in the classroom to maximize both expectancy and value, thus increasing motivation.

Promoting a sense of value means helping students find reason to engage in learning, ideally one that promotes intrinsic motivation. For example, motivation theorists have differentiated interest that is more trait-like (known as individual interest) from interest that is more state-like (known as situational interest). Although there is little we can do about students' individual interests before they enter our classrooms, we can shape students' situational interests once they arrive in our classrooms.

Situational interest contains two factors: catch and hold (Hidi & Harackiewicz, 2000). Catch factors grab students' attention and get them initially interested in learning. Examples of instructional practices that may catch students' interests include demonstrations, storytelling, video clips, or posing thought-provoking questions. Once students are "caught," hold factors maintain students' attention, because students find meaning and personal significance in the material. Examples of instructional practices that may hold students' interest include the use of real-world examples and getting students to relate material to their own lives, so they can apply and see value in what they are learning. If situational interest is sufficiently held and sustained over time, it can evolve into a more enduring, individual interest in that topic. Thus, as educators, we should take pause to consider how our instructional practices develop our students' interests.

Providing another model of how interest and motivation can vary and develop over time, Ryan and Deci (2000) proposed a motivational continuum. Anchoring one end of the continuum is *amotivation*, when students lack interest and motivation altogether and fail to see any value for engaging in an activity. Anchoring the other end of the continuum is *intrinsic motivation*, when students derive inherent enjoyment and pleasure from engaging in an activity and value the activity for its own sake. Falling between these anchors is *extrinsic motivation*, when interest is lacking but students are motivated to engage in the activity for some external reason.

Ryan and Deci (2000) suggested that an individual's motivation can shift up and down this motivational continuum based upon how well the situation meets a number of key human needs. According to their theory of self-determination, being able to make choices in a situation (autonomy), feeling capable of accomplishing key tasks (competence), and being able to interact with other people (relatedness) are the cornerstones to promoting intrinsic motivation in the classroom. Although extrinsic motivation via incentives (e.g., money, gold stars) can affect effort

and quantity of motivation, high quality engagement in the classroom is promoted by enabling students to become intrinsically motivated. Students who are intrinsically motivated are more creative, process the material at a deeper level, persist longer on activities, and are more interested in their schoolwork than students who are extrinsically motivated.

In sum, expectancy and value both help determine the quantity, as well as the quality, of motivation. By helping students create authentic expectancies and value the material, teachers can maximize students' motivation. In addition, by helping students meet their core needs of autonomy, competence, and relatedness, teachers can push motivation toward the intrinsic end of the continuum.

Applying Motivational Theory to Teaching

Now that we have offered a simple formula for understanding motivation and presented some of the key findings from motivation research, we would like you to consider your own teaching and how it promotes different motivational components. Overall, teachers spend most of their preparation time focusing on the subject matter they want students to learn (Brophy, 2004); what teachers tend to ignore are students' subjective experiences (their affect, motivation, and attitudes toward learning).

Below we provide a checklist of questions that can help you as you engage in "motivation planning." First, choose a particular topic or lecture that you teach, and consider how your approach promotes student motivation.

In general:

1. How are you promoting students' expectancies to succeed with the material?
2. How are you promoting students' value for the material?

And more specifically:

3. What things are you doing to "catch" student' interests?
4. What things are you doing to "hold" students' interests over time?
5. How are you promoting students' need for competence? And will you give all students an opportunity to be challenged and feel a sense of developing their competencies?
6. How are you promoting students' need for autonomy and chance to shape their educational experiences?
7. How are you promoting students' need for relatedness? Will you attempt to develop connections between you and your students, or among other students in the class?

For example, as part of the second author's dissertation, in which he attempted to promote value and hold for learning, undergraduate students in a psychology course were asked to relate the material to their lives by writing brief essays. This simple activity promoted more interest in psychology at the end of the semester and indirectly improved course grades.

Once you have run through the checklist for one topic or lecture, do the same exercise again but apply the questions to each of your lectures or activities. This will help you realize how you promote different motivational components over the course of the semester. Recognizing the role that teachers play in creating an optimal learning environment can go a long way in preventing the kind of email and student comments that we presented at the beginning of this article.

In conclusion, we hope that our essay helps you better understand your students' motivations. If you would like more extensive coverage on how to apply different motivational theories to improve your classroom teaching, we encourage you to peruse our References and Suggested Readings.

References and Suggested Readings

- Brophy, J. (2004). *Motivating students to learn* (2nd ed.). Mahwah, NJ: Erlbaum.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology, 17*, 300-312.
- Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research, 70*, 151-179.
- Lepper, M. R., Corpus J. H., & Iyengar, S. S. (2005). Intrinsic and extrinsic motivational orientations in the classroom: Age differences and academic correlates. *Journal of Educational Psychology, 97*, 184-196.
- Pintrich, P. R., & Schunk, D. (2002). *Motivation in education: Theory, research and applications* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.
- Stipek, D. (2002). *Motivation to learn: Integrating theory and practice* (4th ed.). Boston: Allyn and Bacon.
- Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25*, 68-81.
- Wlodkowski, R. J. (1985). *Enhancing adult motivation to learn*. San Francisco: Jossey-Bass.

Teaching Positive Psychology: An Engaging Experience

Shane J. Lopez
University of Kansas

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in September 2006.)

Little did I know that my first teaching experience would literally change my life. There I was, 22 years old, giving a coherent, yet lackluster presentation on positive affect to a group of advanced doctoral students. My mentor C. R. (Rick) Snyder said he thought I had the potential to connect with the audience and tell the story of psychological research. That feedback connected me to Rick for the next 15 years. During that time, he helped me discover positive psychology, and I became fairly adept at “giving it away.” With his many lessons in mind, I will share my thoughts about how teaching positive psychology can engage students and instructors alike. Along the way, I will describe 5 of my favorite strategies for bringing positive psychology to life.

Positive psychology, the rigorous study of what is right and positive about people and institutions, has drawn attention to existing psychological theories and research programs and has yielded many new findings and resources that have helped people lead better lives. Two major developments in positive psychology have attracted the public’s attention during this early part of the 21st century. First, the scholarship on psychological potentialities has led to the development of the Clifton StrengthsFinder (<http://www.strengthsfinder.com/>), which has been completed by over 2 million people worldwide; the Clifton Youth StrengthsExplorer (<http://www.strengthsexplorer.com/>), a recently launched tool for 10- to 14-year-olds; and the Values in Action Inventory of Strengths (available at <http://www.viastrengths.org/>). With the availability of these measures, programs designed to develop one’s strengths are becoming commonplace in schools, businesses, and places of worship. Second, we have learned more about how people respond to emotional experiences in productive ways. We now understand how to curb the effects of negative emotions and to make the most of positive emotions. Scholarly works (Snyder & Lopez, 2002; 2007) and mainstream coverage (Rath, 2006; Rath & Clifton, 2004; Seligman, 2002) tell a compelling story of the significance of focusing on the best in people. Indeed, positive psychology is a primary focus of scholars and practitioners in the ivory tower as well as on main streets across the country.

As teachers of positive psychology, our challenge is to demonstrate the relevance of what is discussed in the classroom and to enhance the rigor of what is shared in our broader community. By engaging our students and linking new positive psychology knowledge to what is already known about how we function, positive psychology teachers at all levels have an opportunity not only to educate in the short term but to enhance the quality of their students’ lives over time. The following strategies are time-tested and student approved; they are also a great deal of fun to implement (Lopez, 2006).

Discovering Personal Strengths

Students' fascination with individual differences goes well beyond a focus on human abnormalities. Indeed, students are easily engaged in an examination of human strengths. Jennifer Teramoto Pedrotti of California Polytechnic State University at San Luis Obispo has found this to be the case each time she has taught her undergraduate course in positive psychology:

“My favorite exercise is one where my students take a strengths measure and then share their results in class. I have them come up with ways they can enhance their strengths or just use them in their everyday lives. If students in the class know one another, they can add in their comments about each other or how they have seen each other use their strengths in the past. As an added piece, I sometimes ask students to go home and talk to someone they know well about these strengths and ask them for examples of how they (the other people) see the students use these strengths in their daily lives. This activity has worked the best in classes where students know each other to some extent. They are very caring toward, and offer many compliments to, one another, which builds a lot of positive affect too” (personal communication, May 15, 2006).

Knowledge of personal strengths becomes especially relevant for students seeking employment or preparing essays for graduate programs. Students who might otherwise struggle with question such as “What are your strengths?” and “What sets you apart from other applicants?” shine with their new found knowledge and language of potentialities.

Expressing Positive Moral Emotions and Documenting Effects

Positive moral emotions (e.g., awe, compassion, elevation, gratitude) have the capacity to change us physiologically and bring us closer to other people. Manifestations of these emotions are often organic in nature, but in some cases, we can conjure up feelings that open us up to transformative experiences. Ken Hart of the University of Windsor has found that a gratitude party—a party in which positive psychology students invite a person to whom they are grateful to a social gathering and then, in the company of their peers, engage in an outward expression of gratitude—can bring about positive effects for many.

“One student who expressed gratitude was a 65-year-old gentleman who had returned to school 9 years after his life was shattered to pieces by a near fatal car accident in which his wife suffered traumatic and irreversible injuries. I had him in an earlier class, and now he was in my senior seminar in positive psychology. Shortly after the student stood up to read from a prepared text, he really took me by total surprise when he announced that he wanted to express gratitude to me (Dr. Hart). I am getting a lump in my throat as I write about his words. The student spoke about how the positive psychology class had transformed and uplifted his life to such a high quality, and he disclosed what had happened to him and his wife all those years ago. He also discussed what his life used to be like and how it was like night and day. As I teared up, I had to turn my back to the class, cupping my face with my hands. I had such a swelling in my chest and lump in my throat. It was powerful and wonderful to feel this sense of gratitude. I felt grateful. I felt thankful. Of the many thousands of lectures I've given over the past 20 years, that class on the topic of gratitude will always be remembered” (personal communication, May 20, 2006).

Expressing positive moral emotions can be particularly moving experiences; the changes brought about by gratitude and compassion can be tracked by physiological and interpersonal metrics (Fredrickson, 2002; McCraty & Childre, 2004). Quantifying the psychological changes brought about by brief emotional inductions can help students realize the potential of focusing on the positive.

Putting Positive Psychology in Action

In some of my courses, I have struggled to demonstrate the real-world significance of psychological theories or the effects of particular interventions. In positive psychology courses, I have had much more success having students put knowledge into action. Perhaps my favorite assignments involve students transforming everyday experiences into meaningful moments of life. For example, I teach students a brief technique for capitalizing on positive events that others are experiencing. Specifically, I tell students to mirror another person's excitement and then ask the person two meaningful questions about the positive event. I encourage students to use the strategy later in the day. This immediate application helps bring to life some important findings associated with the psychology of close relationships (e.g., Reis & Gable, 2003). Without fail, a vast majority of students follow through on the assignment, and a good number return to class with stories of how they had more engaging and intimate conversations with their children, friends, partners, and parents.

Jeanne Magyar-Moe of the University of Wisconsin-Stevens Point also has enjoyed watching her students become more intimately knowledgeable of the role of positive psychology in daily life. Below I provide a brief description of her assignment along with some snapshots of the results.

"You will be required to come up with a group project to be conducted over the course of the semester in order to spread positive psychology to others outside the classroom. The goal of this assignment is to have fun applying positive psychology while working to generate positive emotions and happiness in the lives of others. All projects will need to be approved by the professor before being implemented."

"In one project, students took chocolates and hand written thank you cards to every custodian on our campus, and another group did this for all of the secretarial staff members."

"One student group went into a kindergarten classroom and taught the kids about character strengths by reading them stories and discussing the main character strengths of the people in the stories. After identifying at least one strength in each child, the group sent home information to the children's parents and asked if the parents had seen the strengths in their children."

"Students in one group went into a daycare setting just before Thanksgiving and taught about gratitude. They had the kids write gratitude letters to their parents to be read on Thanksgiving Day" (personal communication, May 15, 2006).

This type of exercise lends itself to critical analysis and to a group writing assignment that details how a particular theory predicted certain outcomes and how those outcomes could be enhanced

by minor changes in the exercise.

In addition to the preceding exercises, I have experimented with other activities to varying degrees of success. Next, I briefly describe two of these activities.

Exploring Positive Psychological Phenomena in Real Time

For this exercise, I construct questions and prompts (e.g., Who comes to mind when you think about a particular strength? Tell me about the last time you exhibited that strength.) related to a particular positive psychology construct or theory, and I invite a facilitator and 6 to 8 focus group participants to share their insights at the front of the classroom. Then the facilitator, using my questions and some queries from the student audience, guides the participants through a discussion of their views of a particular strength or emotional experience. Real time examination of issues often is accompanied by personal storytelling that seems to enhance students' understanding of the material.

Photographing the Positive

This exercise follows a detailed presentation and discussion of a positive psychological construct. Students are asked to use their personal cameras (or a disposable camera) to capture the positive. For example, following a discussion of hope theory, students were given a week to take pictures (or video) of hope in daily life. Students were asked to present the photos in a manner that told the story of hope and its associated outcomes. Submissions included photo collages, edited video, PowerPoint displays, and a song narrating the presentation of photos.

Conclusion

Teaching positive psychology courses and giving hundreds of lectures on hope has affected me profoundly. I believe that interacting with students around positive psychology topics provides opportunities to touch people; you may also find yourself transformed in positive ways. I am engaged in my teaching and research like never before, and I believe it is because I spend a great deal of my time focused on what is right with people and the world. I hope you, too, are able to experiment with teaching a positive psychology course and to weave in lectures and activities that focus on human strengths and positive emotions. I think you will find that material on positive psychology will engage your students—and you.

References

- Fredrickson, B. L. (2002). Positive emotions. In C. R. Snyder & S. J. Lopez (Eds.), *The handbook of positive psychology* (pp. 120-134). New York: Oxford University Press.
- Lopez, S. J. (2006, June). *Giving positive psychology away: Ten strategies that promote student engagement*. Invited address presented at the annual convention of the American Psychological Society, New York.

- McCraty, R., & Childre, D. (2004). The grateful heart: The psychophysiology of appreciation. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 230-255). New York: Oxford University Press.
- Rath, T. (2006). *Vital friends: The people you can't afford to live without*. New York: Gallup Press.
- Rath, T., & Clifton, D. O. (2004). *How full is your bucket?* New York: Gallup Press.
- Reis, H. T., & Gable, S. L. (2003). Toward a positive psychology of relationships. In C. L. Keyes & J. Haidt (Eds.), *Flourishing: The positive person and the good life* (pp. 129-159). Washington DC: American Psychological Association.
- Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.
- Snyder, C. R., & Lopez, S. J. (Eds.). (2002). *The handbook of positive psychology*. New York: Oxford University Press.
- Snyder, C. R., & Lopez, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.

Reciprocal Peer Tutoring: Learning Through Dyadic Teaching

Ronald E. Riggio

Claremont McKenna College

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in October 2006.)

As a graduate student, I learned that if you wanted to master a body of knowledge, such as an area of psychology about which you knew little, you should get yourself assigned as a teaching assistant in an introductory course on the subject. Nothing motivates you to learn more than wanting to avoid embarrassment when undergraduates consult you as an “expert,” or having to prepare solid exams to test them, or having to give a stellar lecture. This same principle is behind the incredible classroom learning technique developed by my friend and former colleague John Fantuzzo (now at the University of Pennsylvania). The technique is called Reciprocal Peer Tutoring (RPT), and it involves pairing students who alternate between the roles of tutor and student.

I have been using RPT regularly in my classes for about 20 years. We have conducted extensive research on its effectiveness and have compared it to other collaborative learning strategies. It is an amazingly simple and effective teaching tool that requires little effort on the instructor’s part. In addition, if presented correctly, students usually report positive learning experiences with RPT.

Why does RPT work? Research shows that peer tutoring benefits both the student being tutored and the tutor, although the tutor typically shows significantly greater cognitive gains (Annis, 1983; Bargh & Schul, 1980). Consequently, students quickly realize the benefits of serving as both tutor and student.

The Reciprocal Peer Tutoring Technique

Students are randomly paired at the beginning of the course and work together in these pairs throughout the term. The course is lecture-based and divided into several units (we typically include three to five units), each culminating with an exam. Typically a week or so before each unit exam, student pairs are required to meet outside of class and complete specific, structured assignments.

Each student must prepare a practice exam covering the unit material and administer it to his or her partner during the meeting. I give students specific instructions about the format of the practice exam, modeled on my own testing format. (I now use a mix of objective, multiple-choice and short-answer questions, along with a longer, integrative essay. However, when I taught sections of introductory classes with 100 or more students, I used all multiple-choice exams.) Students also prepare a sheet with the correct answers for each test item and a brief explanation of why the answer is correct, which is particularly important for multiple-choice

items. Finally, students bring to the meeting a list of study questions to discuss with their partners.

During the meeting, students, exchange and complete each other's exams, score the exams using the answer sheets, and then discuss the results. Finally, the students use their study questions to have a 1-hr study session to prepare for the real exam.

I have the students turn in all of their RPT materials, including completed practice tests, answer sheets, and study questions, on the day of the exam. I don't grade these but give students full credit if they have followed the assignment completely. The RPT assignments count 10 percent of their total grade. I also make comments on their materials and provide suggestions for improving the quality of the tests. And that's it.

Well, not quite. I have learned that you need to provide justifications for why you are using this technique, because students often initially think it is just "busy work." I provide students with my rationale for using RPT and tell them that we have conducted research on its effectiveness. I also tell them that it can be an "early warning system," letting them know if they don't understand certain material and, consequently, need to do more studying (I might even say, "If you do poorly on your partner's exam, you will most likely do worse on mine."). I also use it as an opportunity to teach them about the properties of good tests. As they become better test-makers, they are less likely to label my tests as "unfair" or "arbitrary."

Research on Reciprocal Peer Tutoring

In a series of investigations, we have found that RPT is effective in terms of cognitive gains. For example, in controlled experiments comparing students' performance following RPT with students who either worked alone on similar assignments, worked in unstructured study groups, or watched course-related films, RPT students scored an average of 83% on exams compared to an average of about 70% for the other conditions (Fantuzzo, Dimeff, & Fox, 1989; Fantuzzo, Riggio, Connelly, & Dimeff, 1989; Riggio, Fantuzzo, Connelly, & Dimeff, 1991).

One concern from a reviewer of our early research on RPT was that by using random assignment of partners, we might be doing some students a disservice. The concern was that an "A" student's course performance (and grade) might be dragged down by assignment to a "C" student partner. To test this concern, we paired high, medium, and low ability students (based on overall college GPA) in all combinations. Although a group consisting of two high ability students led to significantly greater cognitive gains, the cognitive gains of the remaining pairings (low-high, medium-medium, low-low) were all about the same. Importantly, all RPT pairings had higher cognitive gains than a control group (Riggio, Whatley, & Neale, 1994).

RPT not only enhances academic performance but has psychological benefits as well. Students in the preceding studies were administered various measures of psychological well-being (e.g., student anxiety, depression, distress), both at the beginning and end of the term. Students in the RPT condition showed significant improvement in well-being during the semester, whereas students in the other conditions showed either no change or, in some cases, increases in anxiety and depression. It should be noted that these results were obtained at a large, commuter state

university, with large class sizes, so the RPT condition allowed an opportunity for a meaningful peer social relationship that likely enhanced well-being.

Finally, students seem to enjoy RPT. For students, it has “face validity,” because they can see how it relates to test performance. Students have often commented to me, for example, that they or their partners created test questions that were almost identical to items on the actual exam. This, however, brings up the question of whether RPT is too “exam focused.” My suspicion is that RPT actually leads to a deeper understanding of the material, particularly because students have to provide detailed answers to their own test questions and justify their answers to their partners.

RPT as a Collaborative Learning Strategy

When we began using RPT, collaborative/cooperative learning strategies, including jigsaw groups and others, were all the rage. Although we argued that, by definition and by structure, RPT was a collaborative strategy, some purists did not agree with us. To test this notion, we conducted a study (which is not yet published) that randomly assigned students to (a) a traditional, cooperative learning group consisting of five members; (b) a group condition (our quasi-control condition) in which students could decide their own study techniques; or (c) an RPT group. We observed that students in each of the conditions performed about the same in terms of academic performance. Interestingly, students who were able to decide their own study techniques often resorted to some variation of a cooperative learning strategy on their own. We also subsequently compared our groups to a truer control group of students who had no study intervention. We found that students in all three conditions performed better than the control students.

Importantly, though, students in the RPT group were overwhelmingly more satisfied than students in the other two groups (students in the cooperative learning groups were the least satisfied). As a trained social psychologist, this comes as no surprise. When it comes to group dynamics, the dyad is the “perfect” group. With only two members, there is no opportunity for free-riding effects or for factions to develop. The reciprocal nature of assignments means that partners have to cooperate to complete them. Surprisingly, I have had few complaints about RPT partners. Conversely, I often get student complaints when I have students work in larger groups.

Some Additional Benefits

RPT is very simple to implement in almost any course, although it probably has its greatest benefits in large, lecture-based courses. It is extremely cost-effective and requires no additional resources and relatively little extra effort on the instructor’s part (although providing feedback on RPT materials, if you choose to do this, does take considerable time).

I have found additional positive side effects to RPT as well. For example, after implementing RPT, my student evaluations went up, particularly on those items that relate to caring about student learning and making efforts to see that students learn. Finally, I rarely have students

complain about needing class notes because they missed class. Instead, they rely on their RPT partner—their “study buddy”—to fill them in on things they missed.

Conclusion

Reciprocal Peer Tutoring is a proven and easy-to-implement teaching technique that enhances student learning and psychological well-being. When John Fantuzzo first approached me with the concept, I was a bit skeptical, but the data convinced me of its efficacy. Since that time, I have used it regularly and found it to be very effective. For those of you seeking a simple but effective way to enhance your lectures, I would strongly suggest that you give RPT a try.

References

- Annis, L. F. (1983). The processes and effects of peer tutoring. *Human Learning, 2*, 39-47.
- Bargh, J. A., & Schul, Y. (1980). On the cognitive benefits of teaching. *Journal of Educational Psychology, 72*, 593-604.
- Fantuzzo, J. W., Dimeff, L. A., & Fox, S. L. (1989). Reciprocal peer tutoring: A multimodal assessment of effectiveness with college students. *Teaching of Psychology, 16*, 133-135.
- Fantuzzo, J. W., Riggio, R. E., Connelly, S., & Dimeff, L. A. (1989). Effects of reciprocal peer tutoring on academic achievement and psychological adjustment: A component analysis. *Journal of Educational Psychology, 81*, 173-177.
- Riggio, R. E., Fantuzzo, J. W., Connelly, S., & Dimeff, L. A. (1991). Reciprocal peer tutoring: A classroom strategy for promoting academic and social integration in undergraduate students. *Journal of Social Behavior and Personality, 6*, 387-396.
- Riggio, R. E., Whatley, M. A., & Neale, P. (1994). Effects of student academic ability on cognitive gains using reciprocal peer tutoring. *Journal of Social Behavior and Personality, 9*, 529-542.

Education and Superstitious Practices

Larry A. Alferink
Illinois State University

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in November 2006.)

People believe many things that are not necessarily true; they may also engage in unusual rituals. We may call these false beliefs “myths” and these unusual rituals “superstitions.” In 1948, B.F. Skinner presented food to hungry pigeons every 15 seconds independent of their behavior. He found that each subject engaged in an idiosyncratic pattern of behavior, and he attributed the development of these idiosyncratic patterns to accidental reinforcement. The subjects tended to repeat whatever they did just prior to food delivery and behaved as if their behavior caused the food, even though it did not.

Teachers may also develop idiosyncratic patterns of behavior. One could imagine a teacher who received reinforcement for hopping around the classroom on one foot or jumping on a table during class. Although accidental reinforcement may explain idiosyncratic patterns of behavior (Vyse, 1997), most common human superstitions are culturally transmitted. We don’t carry a rabbit’s foot because we just happened to do so one day and accidentally experienced good luck. Instead, we may carry a rabbit’s foot because we were told that it would bring good luck; if people happen to notice, we may even receive social reinforcement. A similar process may be responsible for many of the superstitious behaviors frequently exhibited by teachers. Teacher preparation programs, in-service workshops, and other products marketed to teachers may promote a culture of practices that are not supported by evidence and may be superstitious. This essay examines a sample of such superstitious educational practices.

Self-Esteem

A prime example of a superstitious practice was initiated by a member of the California legislature who introduced a bill requiring that all schools use programs to increase self-esteem based on some evidence that self-esteem and academic achievement were correlated. As a result, there are now numerous books and programs to enhance self-esteem but no evidence that enhancing self-esteem improves academic performance. In fact, some evidence suggests that such programs do more harm than good (Baumeister, Campbell, Krueger, & Vohs, 2003).

Learning Styles

Students differ. Common is the belief that students learn best through different modalities and that it is best to teach to a student’s preferred modality. It is possible to develop measures to assess a student’s preferred style of learning, and various inventories that claim to do so exist (Dunn, 1987; Keefe, 1982). Some students are said to be visual learners who learn best if teachers write information on the board or use slides and other visual images in their teaching. Others are said to be auditory learners who learn best if they can listen to a complex subject

being explained. Many teacher preparation programs require prospective teachers to develop methods that teach to a variety of these learning styles in an attempt to maximize learning opportunities for each student. Such preparation may be important for the prospective teacher as many school districts may include questions about teaching to various learning styles as part of the interview process. Applicants for teaching positions who are not able to provide a satisfactory answer to such questions may not be hired. However, the question is not whether it is in the best interest of prospective teachers to learn to teach to learning styles, but whether teaching to learning styles is of benefit to students.

Whenever an assessment instrument is developed, we must be concerned with its psychometric properties. Unfortunately, learning style inventories are known to have problems with both reliability and validity (Kratzig & Arbuthnott, 2006). More critically, although it is easy to find studies suggesting that students differ in their preferred learning style, it is difficult to find studies showing that teaching to individual learning styles actually makes in difference in student learning outcomes. In fact, there is now evidence showing that teaching to learning styles is not an effective method (Kratzig & Arbuthnott, 2006). Unfortunately, the practice continues.

Discovery Learning

Discovery learning is a constructivist approach that argues that learning should be student-centered rather than teacher-centered. This approach assumes that students “discover” how the world works with little or no teacher guidance. Although the approach works for some students, a significant percentage of students do not discover effective solutions to problems. A recent study (Klahr & Nigam, 2004) compared discovery learning to direct instruction, a behaviorally-based method of instruction (see Binder & Watkins, 1990). With discovery learning, 15-23% of the students learned how to solve the problems, whereas direct instruction resulted in 69-77% of the children achieving mastery. Discovery learning clearly works for some students and may be appropriate in advanced classes where all students have the prerequisite knowledge and skills, but students without the necessary prerequisite knowledge and skills in beginning classes may be put at risk.

Brain-Based Learning

There have been tremendous advances in neuroscience in recent years. It is not surprising, therefore, that educators have paid attention to these advances and developed brain-based learning. Based on the work of Roger Sperry, Michael Gazzaniga, and others (e.g., Gazzaniga & Sperry, 1967), who studied patients with a severed corpus callosum, an interest in brain lateralization developed. The “left brain” is said to be the logical hemisphere, concerned with language, and left-brain individuals are said to be verbal, analytical, and good problem solvers. The “right brain” is said to be concerned with visual-spatial activities, and right-brain individuals are supposed to be good at art and mathematics. The rationale behind brain-based learning is that teachers should teach to each specific hemisphere. To teach to the left hemisphere, students should engage in speaking, reading, and writing. To teach the right hemisphere, students should engage in drawing and painting. Of course, the problem with this approach is that few students have had their corpus callosum severed. In addition, the hemispheres are not as rigid as this story

suggests, and whether a visual-spatial task involves the right or left hemisphere depends on details of the task (Bruer, 1999).

Research has also suggested that there are gender differences in brain lateralization. Boys are supposedly right-brain dominant, whereas girls are left-brain dominant. And because schools are purportedly left-brain institutions, favoring girls over boys, there is a gender gap in academic achievement. Because of these alleged brain differences between boys and girls, one school in Owensboro, Kentucky, even separated boys and girls into separate classrooms so that it would be possible to teach to these brain differences. For example, teachers might provide boys with activities that emphasized spatial tasks, a right-brain activity; girls, on the other hand, might be exposed to more reading and writing, left-brain activities. However, these gender differences are generally small and tend not to have broad practical importance. In addition, such differences reflect group differences, not individual variation. Thus, addressing brain differences simply by segregating boys and girls without direct measurement of such differences is likely to result in two classrooms that, although segregated by gender, in fact, have a mixture of right- and left-brain individuals.

Brain research also suggests age-related learning effects. It is known that the brains of young children are densely packed with synapses, which increase in numbers until about age 10 and then decline to adult levels by around age 15. In addition, there is some evidence indicating that the brains of young children use more glucose than adults, with glucose uptake levels following a similar time course as synaptic density. The evidence on synaptic density and glucose uptake supposedly indicates that a “critical period” for learning exists and that as a matter of public policy, resources should be shifted from funding high schools and universities to pre-school and elementary education, because that is when students learn most effectively. Unfortunately, there is no evidence linking either the number of synapses or glucose uptake to rate of learning; there is also no evidence that 5 year-olds are better at learning than 15 year-old students (Bruer, 1999).

Other Superstitious Practices

There are many other educational practices that are not supported by data, or in some cases, have been shown to be ineffective. I have provided a sample of such practices to illustrate how easy it is to jump to conclusions on the basis of limited data or flawed science. Readers will likely be familiar with other superstitious practices such as the use of facilitated communication with autistic children. Or perhaps you are familiar with the use of whole language or “balanced” programs for teaching reading. In fact, many of these reading programs do not contain the key features that science has shown are necessary to maximize learning. Readers may even be familiar with the controversy that is currently raging among constructivist mathematics educators and mathematicians using direct instruction, who argue that the lack of fluency in basic mathematics skills leaves students unprepared for algebra and higher mathematics. Maybe you even have your own set of favorite superstitious practices.

Is There an Alternative?

Perhaps superstitious practices exist because many teachers are unaware of, or do not believe there are, effective alternatives. On the contrary, several evidence-based practices do exist, both

for pre-college and college instruction. Both Direct Instruction and Precision Teaching (Binder & Watkins, 1990) have data supporting their use in pre-college instruction, and a number of studies have demonstrated the effectiveness of the Keller Plan (Keller, 1968), otherwise known as the Personalized System of Instruction. In addition, evidence supporting a new method known as Interteaching (Saville, Zinn, Neef, Van Norman, & Ferreri, 2006), which capitalizes on cooperative learning, is beginning to accumulate. Unfortunately, such practices are not as widespread as the evidence suggests they should be, perhaps because of institutional policies, reward structures, and the transmission of superstitious practices. For lack of space, I will not discuss these methods further. However, I would urge you to examine these evidence-based teaching methods.

Why Does It Matter?

Superstitious educational practices are less effective than those based on evidence obtained with sound methods. Although the examples cited above are derived from K-12 education, many are relevant on college campuses as well. If you have a teacher education program, do faculty require students to demonstrate that they can teach to learning styles? Are reading specialists taught to base reading instruction on sound science? If you have a teaching improvement program on campus, do topics such as teaching to learning styles occasionally appear as part of the programming? Do faculty on campus worry that giving students lower grades might negatively affect their self-esteem? Are educational practices based on data obtained with sound methods? Or are some based solely on anecdotal reports by a particular faculty member? Is discovery learning promoted in science education without respect to the context where it might be appropriate? Can you honestly say that all of your teaching practices are based on sound evidence? If the answer is no, do you have a plan to address this? Or will your students continue to enjoy watching you hop around on one foot?

References

- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness or healthier lifestyles? *Psychological Science in the Public Interest*, 4, 1-44.
- Binder, C., & Watkins, C. L. (1990). Precision teaching and direct instruction: Measurably superior instructional technology in schools. *Performance Improvement Quarterly*, 3, 74-96.
- Bruer, J. T. (1999). In search of . . . brain-based education. *Phi Delta Kappan*, 80, 246-257.
- Dunn, R. (1987). Research on instructional environments: Implications for student achievement and attitudes. *Professional School Psychology*, 2, 43-52.
- Gazzaniga, M. S., & Sperry, R. W. (1967). Language after section of the cerebral commissures. *Brain*, 90, 131-148.

- Keefe, J. W. (1982). Assessing student learning styles: An overview. In J. Keefe (Ed.), *Student learning styles and brain behavior* (pp. 43-53). Reston, VA: National Association of Secondary School Principals.
- Keller, F. S. (1968). Goodbye, teacher . . . *Journal of Applied Behavior Analysis, 1*, 79-89.
- Klahr, D., & Nigam, M. (2004). Equivalence of learning paths in early science instruction: Effects of direct instruction and discovery learning. *Psychological Science, 15*, 661-667.
- Kratzig, G. P., & Arbuthnott, K. D. (2006). Perceptual learning style and learning proficiency: A test of the hypothesis. *Journal of Educational Psychology, 98*, 238-246.
- Saville, B. K., Zinn, T. E., Neef, N. A., Van Norman, R., & Ferreri, S. J. (2006). A comparison of interteaching and lecture in the college classroom. *Journal of Applied Behavior Analysis, 39*, 49-61.
- Skinner, B. F. (1948). "Superstition" in the pigeon. *Journal of Experimental Psychology, 38*, 168-172.
- Vyse, S. A. (1997). *Believing in magic: The psychology of superstition*. New York: Oxford University Press.

***Editing E-xcellence in Teaching:
The Mishaps of Moving and Other Lessons Learned***

Bryan K. Saville and Tracy E. Zinn
James Madison University

(This essay originally appeared as the monthly “E-xcellence in Teaching” e-column on the *PsychTeacher*TM *Electronic Discussion List* in December 2006.)

My, how time flies! It doesn't seem like it's been 3 years since we began editing *E-xcellence in Teaching (EIT)*. However, upon reflection, quite a bit has changed during that time. When we began editing *EIT* in the summer of 2003, we were just finishing our first year as assistant professors in the Department of Psychology at Stephen F. Austin State University (SFA) in Nacogdoches, Texas. Although it had been nearly a year since we relocated to “Deep East” Texas, we were still reeling from a hectic move that was marred with more mishaps than either of us cares to remember (one of those mishaps involved an old moving van, a broken air conditioner, and a 12-hour drive in 100-degree heat). Moreover, we were still acclimating to the many demands that accompany a switch from advanced graduate student to greenhorn faculty member (Zinn, 2004). Fortunately, we had wonderful colleagues at SFA who helped make our transition a smooth one. However, another big change occurred unexpectedly in early 2004: We accepted faculty positions at James Madison University (JMU). So once again, we packed our belongings and headed north to JMU and the beautiful Blue Ridge Mountains of northern Virginia. Fortunately, we learned a lot from our first move, and this one had fewer calamities—only one car broke down on the way.

We are also more experienced teachers than we were 3 years ago. Since then, we have collectively taught over 1000 students in nearly 20 different courses. Although we've faced numerous challenges along the way (Saville, 2005), we've also gained greatly from our experiences. Overall, the past few years have been very busy for us; they have also been incredibly rewarding. In retrospect, we guess the old adage is true: Time flies when you're having fun.

During our tenure as editors of *EIT*, we have had the good fortune of editing an awe-inspiring collection of 40 essays. We have enjoyed reading cutting-edge essays on various aspects of the teaching of psychology, and each month, we can honestly say we have learned something new and valuable about effective teaching. Maybe even more importantly, we have had the opportunity to interact with some of the best psychology teachers around. If that isn't inspiring, we don't know what is. In our final installment as *EIT* editors, we thought we would share with you some of the most important lessons we have learned while editing this column. We hope these lessons might inspire you the same way the *EIT* essays have inspired us.

Don't Be Afraid to Try Something New

While re-examining *EIT* essays from the past few years, we noticed one inexorable fact: Effective teachers are not afraid to stick their necks out and try something new in their

classrooms. Whether it is the use of ConcepTests (Chew, 2005), Just-in-Time Teaching (Benedict & Apple, 2005), classroom debates (O’Kon & Sutz, 2005), writing assignments (Dunn, 2006), self-change projects (Slavich, 2006), Reciprocal Peer Tutoring (Riggio, 2006), or any other number of activities, effective teachers are willing to put their reputations on the line for the betterment of their students.

In fact, these inspirational essays were partly responsible for our decision to try interteaching in our classrooms. After reading Boyce and Hineline’s (2002) description of this new behavior-analytic teaching method, we thought, “Why not?” Not knowing exactly what to expect, we nervously described the method to our students, who looked at us with a sense of unease and uncertainty, to put it mildly. We even told them that if they didn’t like interteaching, we would change back to a standard lecture-based approach. Lo and behold, our students loved interteaching—and so did we. Since that time, we have incorporated interteaching into most of our classes. We even initiated a program of research in which we found interteaching to be more effective than more traditional methods of classroom instruction (Saville, Zinn, & Elliott, 2005; Saville, Zinn, Neef, Van Norman, & Ferreri, 2006). We are also in the midst of a series of studies designed to identify which components of interteaching make it an effective and enjoyable alternative to traditional teaching methods.

Granted, not everything you bring to the table is going to work effectively. We willingly admit that we have tried many things in our classes that flopped tremendously. However, as our teaching mentor Bill Buskist told us many times, “It’s not a matter of *if* you will make mistakes in the classroom; it’s a matter of *when*.” Nevertheless, one characteristic of master teachers is their willingness to experiment and try new things (Buskist, Sikorski, Buckley, & Saville, 2002). In fact, in a recent study, award-winning teachers reported experimenting with alternative methods as they became more experienced (Buskist, 2002). Moreover, great teachers persevere when they experience failure, trying again and again until they hit upon more effective ways to increase their students’ learning and enjoyment. So go ahead and try something new. It might just be the secret ingredient that turns an otherwise bland teaching dish into a tasty instructional recipe to enhance your students’ learning and boost your own teaching vitality.

Whenever Possible, Use Evidence-Based Methods

As psychologists, we know a lot about how people learn. Considerable evidence, for example, suggests that students learn best when they (a) are actively involved in the learning process (Mathie et al., 1993), (b) interact frequently with their teachers and classmates (Astin, 1993), (c) are tested frequently (Roediger & Karpicke, 2006), and (d) are required to think “deeply” about course material (Halpern & Hakel, 2003). Yet many of the practices that most teachers use in the classroom do not capitalize on what we know about human learning. As Halpern and Hakel (2003) stated:

“We have found precious little evidence that content experts in the learning sciences actually apply the principles they teach in their own classrooms. Like virtually all college faculty, they teach the way they were taught. But, ironically (and embarrassingly), it would be difficult to design an educational model that is more at odds with the findings of current research about human cognition than the one being used today at most colleges and universities” (pp. 37-38).

For most, “teaching” is synonymous with “lecture.” In fact, Benjamin (2002), who called lectures the “Velveeta of teaching methods” (p. 57), estimated that 80% of college teachers use lecture-based methods in their classrooms. Although there are numerous ways to make lectures more effective (see, e.g., McKeachie, 2002), myriad studies suggest that they are less effective than alternative methods, especially when it comes to long-term retention (e.g., Halpern & Hakel, 2003). Assuming that most teachers would like their students to retain some of the course material they encounter, maybe the use of lecture-based methods is not the best idea.

So what alternatives are there? Fortunately, for teachers wishing to try something new, there are several evidence-based methods that seem to enhance students’ learning. For example, Pear’s (2004) essay on Computer-Aided Personalized System of Instruction (CAPSI), Benedict and Apple’s (2005) discussion of Just-in-Time Teaching, and Riggio’s (2006) description of Reciprocal Peer Tutoring all provide interested readers with evidence-based alternatives that have been shown to be more effective than traditional methods (see also Alferink, 2006). Similarly, other resources (e.g., the journal *Teaching of Psychology*) are filled with useful discussions on evidence-based teaching practices.

Regardless of how you choose to structure your classes, we urge you to adopt evidence-based practices whenever possible. Although lecture has remained the method of choice for most college instructors, it often fails to capitalize on what we know about human learning. Instead, psychology teachers should apply what they know about psychology in their classrooms; in other words, they should “use psychology to teach psychology.”

Always Strive to Improve

It’s been inspiring to read how authors of the *EIT* essays continually strive to improve their craft. The desire to improve seems to be ubiquitous. For example, Wimer and Keeley (2005), two up-and-coming teachers, discussed their roles in the Graduate Student Teaching Association (GSTA), an organization designed to help graduate students become better teachers. Similarly, Baron (2006), whose distinguished career has taken several twists and turns, described ways he continually tries to improve his ability to “export our field.” Regardless of their level of experience, these teachers seem to embrace the notion of lifelong learning, always identifying ways to become better at what they do.

We feel fortunate to work in a field in which even exceptional teachers are inspired to venture into unknown territory, continuously searching for new gems of knowledge. This reminds us of the sage advice of Charles Brewer, who described how he regularly visits the classes of other well-respected teachers in order to learn from them (Saville, 2001). If someone as knowledgeable as Charles Brewer still feels he can fine-tune his teaching, then we should all heed this advice—even when we think we’re at the top of our game. As we read these essays, we can’t escape the feeling that there always seems to be room to improve. As Slavich (2006) reminded us, great teachers extend their expectations for what their students can accomplish. Great teachers also extend their expectations for what they can accomplish.

Fostering Relationships is Vital

While editing the *EIT* essays, another theme emerged time and again: the importance of fostering relationships. One important relationship is between teacher and student. Giordano (2005) discussed the significance of “critical moments,” or specific instances that impact how students view themselves and their futures. These moments are more frequent—and more frequently positive—when we have good relationships with our students. Other authors also touched on this theme. Burke (2006), for example, reminded us that humor can enhance these relationships, and Rasmussen (2005) advised us on how to “bridge the gap” between student and teacher. We also learned about the importance of developing relationships from Schultz and Marchuk (2006), two undergraduates who discussed their views on teacher-student rapport. Their essay reminded us how important it is to examine frequently our relationships with students, lest we forget what life is like on the other side of the lectern. In support of this idea, Benson, Cohen, and Buskist (2005) recently found that students reported they would be more likely to engage in pro-academic behaviors for courses in which their teachers had established good rapport with them.

Our professional relationships are also vital for a number of reasons. For example, they provide much needed support and rejuvenation as we traverse our sometimes unfettered, sometimes rocky, career paths. Weaver (2006), in his essay on professional partnerships, reminded us that, “Because outstanding teachers work diligently to learn, and because partnerships are potentially excellent opportunities to learn, quality teaching is enhanced through partnerships.” As we work on our day-to-day projects, preparing for the next class or meeting, we often feel like we’re on our own. But we’re not! Professional partnerships can work wonders for improving our teaching, generating new ideas, and initiating broader changes that have a positive impact on the teaching of psychology as a whole. Similarly, Wilson and Hobbs (2006) gave us pointers on one type of partnership, team-teaching, and reminded us that working alongside colleagues can be refreshing. In short, we learned we are not alone on our journey to become better teachers. As the old African proverb states, “It takes a village.”

Conclusion

Editing the *EIT* essays over the last 3 years has been truly inspiring and educational. Although we have discussed but a few of these essays, each was informative and motivating in its unique way. In that time, we have learned many lessons about effective teaching, a few of which we have discussed in the present essay. However, we also know we have a long way to go in our quest to be the most effective psychology teachers we can be. Thankfully, we know that future *EIT* essays, along with the wonderful psychology teachers we’ve met—and have yet to meet—will help us achieve that goal.

References

- Alferink, L. A. (2006). Education and superstitious practices. Retrieved December 3, 2006, from the PsychTeacher™ discussion list: <http://list.kennesaw.edu/archives/psychteacher.html>
- Astin, A. W. (1993). *What matters in college?: Four critical years revisited*. San Francisco: Jossey-Bass.

- Baron, R. A. (2006). Why it's important to export our field—and how we can do it effectively. Retrieved December 3, 2006, from the PsychTeacher™ discussion list:
<http://list.kennesaw.edu/archives/psychteacher.html>
- Benedict, J. O., & Apple, K. J. (2005). Just-in-time teaching: A web-based teaching approach. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 7). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-07.html>
- Benjamin, L. T., Jr. (2002). Lecturing. In S. F. Davis & W. Buskist (Eds.), *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer* (pp. 57-67). Mahwah, NJ: Erlbaum.
- Benson, T. A., Cohen, A. L., & Buskist, W. (2005). Rapport: Its relation to student attitudes and behaviors toward teachers and classes. *Teaching of Psychology, 32*, 236-238.
- Boyce, T. E., & Himeline, P.N. (2002). Interteaching: A strategy for enhancing the user-friendliness of behavioral arrangements in the college classroom. *The Behavior Analyst, 25*, 215-226.
- Burke, T. (2006). The real test: Making exams fun. In T. Zinn, B. K. Saville, & J. E. Williams (Eds.), *Essays from e-xcellence in teaching, 2005* (Chap. 8). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site:
<http://teachpsych.org/resources/e-books/eit2005/eit05-08.html>
- Buskist, W. (2002). Effective teaching: Perspectives and insights from Division Two's 2- and 4-year awardees. *Teaching of Psychology, 29*, 188-193.
- Buskist, W., Sikorski, J., Buckley, T., & Saville, B. K. (2002). Elements of master teaching. In S. F. Davis & W. Buskist (Eds.), *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer* (pp. 27-39). Mahwah, NJ: Erlbaum.
- Chew, S. L. (2005). Student misperceptions in the psychology classroom. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 7). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site:
<http://teachpsych.org/resources/e-books/eit2004/eit04-03.html>
- Dunn, D. S. (2006). Reflecting on teaching reading and writing in psychology. In T. Zinn, B. K. Saville, & J. E. Williams (Eds.), *Essays from e-xcellence in teaching, 2005* (Chap. 7). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site:
<http://teachpsych.org/resources/e-books/eit2005/eit05-07.html>

- Giordano, P. J. (2005). Teaching and learning when we least expect it: The role of critical moments in student development. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 4). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-04.html>
- Halpern, D. F., & Hakel, M. D. (2003). Applying the science of learning to the university and beyond. *Change, 35*(4), 36-42.
- Mathie, V. A., Beins, B., Benjamin, L. T., Jr., Ewing, M. M., Hall, C. C., Henderson, B., et al. (1993). Promoting active learning in psychology courses. In T. V. McGovern (Ed.), *Handbook for enhancing undergraduate education in psychology* (pp. 183-214). Washington, DC: American Psychological Association.
- McKeachie, W. J. (2002). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (11th ed.). Boston: Houghton Mifflin.
- O'Kon, J., & Sutz, R. (2005). Using in-class debates to teach gender issues in psychology. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 8). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-08.html>
- Pear, J. J. (2004). Enhanced feedback using computer-aided personalized system of instruction. In W. Buskist, V. W. Hevern, B. K. Saville, & T. Zinn, (Eds.), *Essays from e-xcellence in teaching, 2003* (Chap. 11). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2003/eit03-11.html>
- Rasmussen, E. B. (2005). The water is wide: Lessons on teaching from a popular novel. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 10). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-10.html>
- Riggio, R. E. (2006). Reciprocal peer tutoring: Learning through dyadic teaching. Retrieved December 3, 2006, from the PsychTeacher™ discussion list: <http://list.kennesaw.edu/archives/psychteacher.html>
- Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science, 17*, 249-255.
- Saville, B. K. (2001). Reminiscences, reasons, and recommendations: An interview with Charles L. Brewer. *Teaching of Psychology, 28*, 231-234.

- Saville, B. K. (2005). A dash of indolence, a pinch of serendipity: My personal recipe for a career in teaching. In T. A. Benson, C. Burke, A. Amstadter, R. Siney, V. Hevern, B. Beins, & W. Buskist, (Eds.), *Teaching psychology in autobiography: Perspectives from exemplary psychology teachers* (pp. 280-288). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/tia2005/html/41.saville.html>
- Saville, B. K., Zinn, T. E., & Elliott, M. P. (2005). Interteaching vs. traditional methods of instruction: A preliminary analysis. *Teaching of Psychology*, 32, 161-163.
- Saville, B. K., Zinn, T. E., Neef, N. A., Van Norman, R., & Ferreri, S. J. (2006). A comparison of interteaching and lecture in the college classroom. *Journal of Applied Behavior Analysis*, 39, 49-61.
- Schultz, B. S., & Marchuk, K. A. (2006). Student-teacher relationships: Reflections from the students' perspective. Retrieved December 3, 2006, from the PsychTeacher™ discussion list: <http://list.kennesaw.edu/archives/psychteacher.html>
- Slavich, G. (2006). Transformational teaching. In T. Zinn, B. K. Saville, & J. E. Williams (Eds.), *Essays from e-xcellence in teaching, 2005* (Chap. 11). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2005/eit05-11.html>
- Weaver, K. A. (2006). Learning through professional partnerships. Retrieved December 3, 2006, from the PsychTeacher™ discussion list: <http://list.kennesaw.edu/archives/psychteacher.html>
- Wilson, J. H., & Hobbes, S. H. (2006). Team teaching: Benefits, challenges, and considerations. Retrieved December 3, 2006, from the PsychTeacher™ discussion list: <http://list.kennesaw.edu/archives/psychteacher.html>
- Wimer, D. J., & Keeley, J. (2005). The Graduate Student Teaching Association. In B. K. Saville, T. E. Zinn, & V. W. Hevern (Eds.), *Essays from e-xcellence in teaching, 2004* (Chap. 11). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/eit2004/eit04-11.html>
- Zinn, T. E. (2004). Moving on: Making the transition from graduate student to faculty member. In W. Buskist, B. C. Beins, & V. W. Hevern (Eds.), *Preparing the new psychology professoriate: Helping graduate students become competent teachers* (pp. 157-161). Retrieved December 3, 2006, from the Society for the Teaching of Psychology Web site: <http://teachpsych.org/resources/e-books/pnpp/html/pnpp30.html>

Biographical Notes on Individual Contributors

Laird Edman (BA, MA, University of Notre Dame; PhD, University of Minnesota) started his academic career as an English literature professor at several small liberal arts colleges. Much to his wife's dismay, he decided more schooling sounded exciting and shifted his academic focus to psychology. After obtaining his PhD in learning and cognition at the University of Minnesota, he was Associate Director of Honors Programs at Iowa State University. He is now an associate professor of psychology and department chair at Northwestern College in Orange City, Iowa. His research interests include critical thinking assessment and pedagogy, epistemological development, honors education, and emotional intelligence. He has presented faculty development workshops and seminars on critical thinking pedagogy across the country.

John C. Norcross, PhD, is professor of psychology and distinguished university fellow at the University of Scranton, a clinical psychologist in part-time practice, and the 2005 recipient of the American Psychological Association Distinguished Contributions to Education and Training Award.

Susan Krauss Whitbourne, PhD, is professor of psychology and director of the Office of National Scholarship Advisement at the University of Massachusetts Amherst, and a recipient of the 2002 University Distinguished Teaching Award and the 2006 Master Mentor Award of Division 20 of the American Psychological Association.

Virginia Andreoli Mathie, PhD, is executive director of Psi Chi, The National Honor Society in Psychology; faculty emeritus at James Madison University; and the 2002 recipient of the American Psychological Association Distinguished Contributions to Applications of Psychology to Education and Training Award.

Ken Weaver is professor and chair of the Department of Psychology and Special Education at Emporia State University. He received his BS in biology and MEd in secondary science education from the University of South Carolina and his PhD in educational psychology from Columbia University. He was a Peace Corps Volunteer in the Philippines in rural public health for 2 years and taught seventh- and eighth-grade science for 5 years. Weaver is a Fellow of the American Psychological Association. He founded the Kansas High School Psychology Teachers Workshop, which celebrated its tenth anniversary in October 2005. In 2000, he received an APA Presidential Citation for outstanding leadership in support of teaching and learning, and in 2002, he received the Robert S. Daniel Teaching Excellence Award from the Society for the Teaching of Psychology (STP). He has served as president of the Southwestern Psychological Association and of the Council of Teachers of Undergraduate Psychology. He currently chairs the STP Fellows Committee. Weaver is the 2006 recipient of the Psi Chi/Florence L. Denmark National Advisor Award.

Ellen E. Pastorino (PhD, Florida State University, 1990) is a developmental psychologist who established her teaching career at Gainesville State College in Georgia. As a tenured professor, she created and developed the college's Teaching and Learning Center, working with faculty to promote student learning. For the past 9 years, she has been teaching at Valencia Community College in Orlando, Florida. There, too, she has worked with faculty in designing learning-

centered classroom practices. Dr. Pastorino has won numerous teaching awards including the University of Georgia Board of Regents Distinguished Professor Award, the National Institute for Staff and Organizational Development (NISOD) Excellence in Teaching Award, and Valencia's Teaching and Learning Excellence Award. Dr. Pastorino is co-author of *What is Psychology?*, an introductory psychology textbook published by Thomson Learning. She has published articles in the *Journal of Adolescent Research* and *Adolescence*, but her main passion has always been getting students excited about the field of psychology. Her current interests include assessment, inclusion, service learning, and reaching under-prepared students.

Robert A. Baron (PhD, Iowa, 1968) is the Wellington Professor of Management and Psychology at Rensselaer Polytechnic Institute, in Troy, New York. He has held faculty appointments at Purdue University, University of Minnesota, University of Texas, University of South Carolina, University of Washington, Princeton University, and Oxford University (Visiting Fellow, 1982). He served as a Program Director at the National Science Foundation (1979-1981), and was appointed as a Visiting Senior Research Fellow by the French Ministry of Research (2001-2002; Toulouse). He has been Department Chair (1987-1993) and Interim Dean (2001-2002) and is a Fellow of both the American Psychological Association and the Association for Psychological Science. Professor Baron has published extensively in leading journals and is the author or co-author of many books including *Social Psychology* (11th ed.), *Psychology: From Science to Practice*; *Behavior in Organizations* (9th ed.); and *Entrepreneurship: A Process Perspective* (2nd ed.). He holds three U.S. patents and was founder and President of Innovative Environmental Products, Inc. (1993-2000). His current research focuses primarily on social and cognitive factors in entrepreneurs' success.

Bridget Schultz recently received her Bachelor's degree in psychology from James Madison University in Harrisonburg, Virginia. In the fall of 2007, she will begin work on her Master's degree in social-organizational psychology at Teacher's College-Columbia University in New York City.

Kimberly Marchuk is a senior psychology major at James Madison University. She has been involved in independent research for the last 2 years and has been a teaching assistant for several undergraduate psychology courses. Kim is also a Psychology Peer Advisor and has served as a Peer Instructor for the Student Success program. She plans to attend graduate school in the fall of 2008 and hopes to study school psychology.

Janie Wilson began her adventure in teaching during graduate school and continued in a full-time teaching position at Columbia College before receiving her PhD in experimental psychology from the University of South Carolina in 1994. Since that time, she has been teaching and conducting research at Georgia Southern University. Her teaching includes courses in physiological psychology, large sections of introductory psychology, research methods, and statistics. She recently published a statistics textbook, *Essential Statistics*, with Prentice Hall. Teaching and research merged when she was awarded a National Science Foundation grant as principal investigator for a physiological teaching laboratory. She works with both undergraduates and graduate students on research projects involving social buffering of stress responses in rats and human adults and children. Dr. Wilson also conducts research on student evaluations of instructor immediacy and the instructor's ability to predict students' attitudes,

motivation, and grades. An admitted workaholic, she spends down-time with her husband and three children and practices Taekwondo.

Steve Hobbs is professor of psychology at Augusta State University, where he was the department chair for a dozen years. He has served as president of the Southeastern Psychological Association and has also headed the national Council of Undergraduate Psychology Programs. Next to family, teaching is Steve's first love, and he has been recognized with teaching awards at both departmental and university levels. Steve is an active researcher who has published in such areas as instructional methodology, neural bases of learning and memory, taste aversions, psychopharmacology, and biological rhythms.

Kenneth E. Barron is an associate professor at James Madison University. He received his BA in psychology from Bucknell University in 1990 and his PhD in social/personality psychology from the University of Wisconsin-Madison in 1999. In 2004, he received the Outstanding Junior Faculty Award for his college, and in 2006, he was nominated for his College's Distinguished Teacher Award. He regularly teaches coursework in research methods, statistics, motivation, and social psychology. He also coordinates a residential learning community program in psychology for incoming freshmen. His research focuses on motivation and achievement in academic, sport, and work settings, and has appeared in the *Journal of Personality and Social Psychology*, *Journal of Educational Psychology*, *Contemporary Educational Psychology*, *Educational and Psychological Measurement*, *Journal of Applied Sport Psychology*, and *Educational Psychologist*.

Chris S. Hulleman recently completed his PhD in social/personality psychology at the University of Wisconsin-Madison, and will begin an Institute for Education Sciences Postdoctoral Research Fellowship at Vanderbilt University in August, 2007. He received his BA in psychology from Central College in 1993 and his MA in social/personality psychology from the University of Wisconsin-Madison in 2002. In 2003, he received the College of Letters and Sciences' Teaching Fellow Award as one of the College's top teaching assistants. In 2004, he was named a Future Faculty Partner by the Teaching Academy. He has taught courses in statistics, introductory psychology, social psychology, and personality psychology. In 2005, he received a 2-year research fellowship from the Institute for Education Sciences. His research focuses on motivation and achievement in educational and athletic contexts. Before returning to graduate school, he spent time teaching high school science and psychology, as well as coaching football at the college level.

Shane J. Lopez is associate professor of counseling psychology at the University of Kansas, Lawrence, where he teaches courses in positive psychology, psychological assessment, and educational leadership. He also is a Gallup senior scientist, a role through which he consults primarily with The Gallup Education Division and Gallup University. He serves on the editorial board of the *Journal of Positive Psychology* and on the advisory board for *Ready, Set, Learn*, The Discovery Channel's preschool educational television programming. Through his current research programs, Lopez is examining the effectiveness of hope training programs in the schools (under the auspices of the Making Hope Happen Program), refining a model of psychological courage, and exploring the link between soft life skills and hard outcomes in education, work, health, and family functioning. His books include *The Handbook of Positive*

Psychology (Oxford); *Positive Psychological Assessment: A Handbook of Models and Measures* (American Psychological Association); and, most recently, *Positive Psychology: Scientific and Practical Explorations of Human Strengths* (Sage), all with C. R. Snyder. Lopez and his wife Allison live with their son Parrish in Lawrence, Kansas, where they attempt to live the good life every day.

Ronald E. Riggio is the Henry R. Kravis Professor of Leadership and Organizational Psychology and Director of the Kravis Leadership Institute at Claremont McKenna College. He is the author of over 100 books, book chapters, and research articles in the areas of leadership, assessment centers, organizational psychology, social psychology, and the teaching of psychology. His research has included published studies on the role of social skills and emotions in leadership potential and leadership success, the use of assessment center methodology for student outcome assessment, empathy, social intelligence, and charisma. He received the inaugural Western Psychological Association Outstanding Teaching Award in 1993. His most recent books are *The Practice of Leadership* (Jossey-Bass, 2007), *Applications of Nonverbal Behavior* (co-edited with Robert S. Feldman; Erlbaum, 2005), and *Transformational Leadership* (2nd ed.), co-authored with Bernard M. Bass (Erlbaum, 2006).

Larry Alferink served a combined total of 17 years as chair of the Psychology departments at Drake University and Illinois State University. Subsequently, he served as Acting Associate Dean of Graduate Studies, as Assistant to the Associate Vice-President for Undergraduate Studies, and as Interim Director of the University Honors Program at Illinois State University. Currently, he is a professor of psychology at Illinois State University in Normal, Illinois. Dr. Alferink is a fellow of Divisions 2 (Teaching of Psychology), 3 (Experimental) and 25 (Behavior Analysis) of the American Psychological Association. He currently serves as Past-President of Division 25 and represents the division on the APA Coalition for Psychology in the Schools and Education.

About the Editors

Bryan K. Saville is an assistant professor in the Department of Psychology at James Madison University (JMU) in Harrisonburg, Virginia, where he has been since the fall of 2004. Prior to joining the faculty at JMU, he was an assistant professor in the Department of Psychology at Stephen F. Austin State University in Nacogdoches, Texas. He earned a BA in psychology from the University of Minnesota, a MS in applied psychology from St. Cloud State University, and a PhD in experimental psychology from Auburn University. In 2002, he received the McKeachie Early Career Award from the Society for the Teaching of Psychology (Division 2 of APA). His primary research interests are in the teaching of psychology; the experimental analysis of social behavior; and the application of psychological principles to sport, health, and exercise.

Tracy E. Zinn earned her PhD in industrial/organizational psychology with a minor in experimental psychology from Auburn University in 2002. After graduating from Auburn, she accepted a tenure-track position in the Department of Psychology at Stephen F. Austin State University in Nacogdoches, Texas. In 2007, she received the Early Career Award from the Society for the Teaching of Psychology and the Junior Faculty Award for the College of Integrated Science and Technology at James Madison University (JMU). Currently, she is an assistant professor in the Department of Psychology at JMU where she teaches, among others, courses in statistics and research methods, performance management, and industrial/organizational psychology. In addition, she conducts research on effective teaching practices, and faculty and student perceptions of students as customers in higher education.

Steven A. Meyers is Professor of Psychology at Roosevelt University in Chicago, Illinois, where he also directs the Initiative for Child and Family Studies. He received an A.B. degree in psychology from Brown University, and earned M.A. and Ph.D. degrees in clinical psychology from Michigan State University. He holds a diplomate in clinical psychology from the American Board of Professional Psychology and is a licensed clinical psychologist. His teaching has been recognized through his receipt of Michigan State University's Excellence-in-Teaching Citation, the McKeachie Early Career Teaching Award from the Society for the Teaching of Psychology, and the Excellence in Teaching Award given by Roosevelt University. His research interests include effective college instruction, faculty development, and parent/child relations.

Jeffrey R. Stowell earned his BS and MS from Brigham Young University and his PhD in Psychobiology from The Ohio State University. He also did one year of postdoctoral research with Dr. Janice Kiecolt-Glaser at OSU on marital stress and wound healing. He currently is an Associate Professor of Psychology at Eastern Illinois University in Charleston, IL where he teaches courses in biological psychology, learning, introductory psychology, and controversial topics in psychology. In 2006, he received the Early Career Award from the Society for the Teaching of Psychology. His research interests include teaching psychology and stress-health connections, particularly in the context of test-anxiety.