I’ve been teaching evolutionary psychology for more than 15 years, and it is by far the most popular course I teach, as it is for many who teach evolutionary perspectives on human behavior. Judging from student evaluations and spontaneous feedback, I think there are several reasons for this. One is that it has real-world applicability; it deals with topics central to students’ lives, such as mate selection, conflict between the sexes, aggression, cooperation, parent-offspring relationships, and status hierarchies. Another is that evolutionary psychology provides a compelling “meta-theory,” a framework for understanding why all of the diverse topics within psychology truly belong within the covers of an introductory psychology text. Students spontaneously offer comments such as “I’ve taken half a dozen psychology courses, and this is the only one that puts it all in perspective” and “Evolutionary psychology should be the first course psychology majors should take.” I like to think that a third reason students love evolutionary psychology is that the leading textbook in the field, Evolutionary Psychology: The New Science of the Mind (Buss, 2011), now in its fourth edition, provides an engaging and accessible introduction to the discipline, an endeavor I have personally invested a considerable amount of pedagogic effort into.

**MAIN TENETS OF EVOLUTIONARY PSYCHOLOGY**

The fundamental basis of evolutionary psychology dates back to Darwin’s (1859) theory of natural selection, which contains three key components: Variation, inheritance, and differential reproductive success. Variation, or individual differences within a species, provides the raw materials on which selection operates. Only variations that are heritable, passed down reliably from parents to children, can evolve—that is change in frequency over generations. Natural selection is the
INSIDE

MILLENNIALS IN THE CLASSROOM: STUDENT-CENTERED RECOMMENDATIONS ........................................... 8
HIGH-IMPACT TEACHING PRACTICES FOR INTRODUCTORY PSYCHOLOGY ............................................. 12
UPDATE FROM THE APA CENTER FOR PSYCHOLOGY IN SCHOOLS ...................................................... 15
FUN QUICK IDEAS .......................................................................................... 16
RESOURCES FOR STUDENTS AND TEACHERS ............................................................. 16
SCIENTIFIC AND EDUCATIONAL LEADERS RESPOND TO APA REPORT .................................................. 18
MINORITIES UNDERREPRESENTED IN STEM ........................................................................... 20
COMMUNITY COLLEGE DAY AT NIH ........................................................................... 21

ANNOUNCEMENTS

TED TALKS ON PSYCHOLOGY ..................................................................................... 7
NEWS FROM PSI CHI .......................................................................................... 7
NEWS FROM THE SOCIETY FOR THE TEACHING OF PSYCHOLOGY ......................... 7
PT@CC SEeks NOMINEES FOR 2011 TEACHING RESOURCES AWARD ..................... 11
NEWS FROM PSI BETA .......................................................................................... 14
NEW TOPSS COMMITTEE OFFICERS ELECTED ...................................................... 17
MARK YOUR CALENDAR ...................................................................................... 17
2011 PT@CC STUDENT PRESENTATION CONTEST ................................................ 17
KUDOS! PT@CC ELECTION RESULTS .................................................................. 20
PARTICIPATE IN A PT@CC PSYCHAT .................................................................. 22
APA SUMMER SCIENCE FELLOWSHIP APPLICATIONS ........................................ 22
33RD ANNUAL NATIONAL INSTITUTE ON THE TEACHING OF PSYCHOLOGY ........................................... 23
RMPA CONVENTION SESSION ON TEACHING DEMONSTRATIONS ....................... 23
KUDOS! PSYCHOLOGY PROFESSORS HONORED .................................................. 23
COME TO THE 2011 APA CONVENTION ................................................................ 23

Psychology Teacher Network is published quarterly by the Education Directorate of the American Psychological Association (APA). Subscriptions are free to high school and community college teacher affiliates of APA and APA members.

ADDRESS EDITORIAL CORRESPONDENCE TO:

Psychology Teacher Network
APA Education Directorate
750 First Street, NE
Washington, DC 20002-4242
(202) 572-3013

Address inquiries regarding membership or affiliation to the APA Membership Office at the same address.

PTN design by Liz Woodcock, Graphic Designer, APA Editorial and Design Services

COEDITORS

Martha Boenau
mboenau@apa.org

Robin Hailstorks, PhD
rhailstorks@apa.org

Emily Leary
eleary@apa.org

CONTRIBUTING EDITORS

PT@CC
Lawrence Venuk, MS
lvenuk@nvcc.comment.edu

TOPSS
Steve Jones
ashejones@gmail.com
process by which heritable variants that have beneficial effects on survival and reproduction are passed on in greater numbers. The primary products of this selective process are adaptations—handed characteristics that reliably solve problems that contribute to survival or reproduction better than alternatives during the period of time during which they evolved. Examples of adaptations include fears of dangerous spiders, preferences for caloric rich food, and preferences for habitats containing resources and refuge.

Although evolutionary principles historically have been applied to anatomy and physiology, there is now widespread recognition that they provide powerful tools for explaining psychological, strategic, and behavioral adaptations. Just as physiological adaptations solve specific problems of survival and reproduction (e.g., the immune system is an evolved defense against disease), psychological adaptations, too, have evolved because they solved problems of survival (e.g., fear of heights) and reproduction (e.g., a preference for mates displaying cues to health and fertility). Psychological adaptations are information-processing circuits that take in delimited units of information and transform that information through cognitive procedures into functional output designed to solve a particular adaptive problem. Relatively uncontroversial psychological adaptations include evolved fears of snakes, heights, and strangers; preferences for cues to youth and health in mate selection; “adaptive memory” systems that have especially good recall of information relevant to survival (e.g., food, predators, shelter) and reproduction (e.g., mating); and adaptations for cooperation and reciprocal altruism (see Buss, 2011).

Although there exists legitimate scientific debate about the existence of relatively more domain-general adaptations such as fluid intelligence, evolutionary psychologists all share the view that many adaptations will be somewhat specialized. An adaptation that solves a problem of food selection, for example, will not be very good at solving the problem of mate selection or habitat selection. Because what qualifies as a successful solution differs across the many specific adaptive problems humans and their forebears had to solve, evolutionary psychologists believe that the mind contains a large number of specialized psychological adaptations (in addition to whatever more general psychological adaptations exist).

In summary, the main tenets of evolutionary psychology are these:

1. All manifest behavior is a function of psychological mechanisms, in conjunction with environmental and internal inputs to those mechanisms;

2. All psychological mechanisms owe their existence, at some basic level of description, to evolutionary processes (scientifically, no other known causal processes exist for creating complex organic mechanisms);

3. Natural selection and sexual selection (Darwin’s theories) are the most important evolutionary processes responsible for creating psychological adaptations (other evolutionary forces, such as genetic drift, are too weak to fashion adaptations);

4. Evolved psychological mechanisms can be described as information processing devices (input, decision rules or other transformation procedures, and outputs);

5. The output of psychological adaptations can be physiological activity, information that serves as input to other psychological mechanisms, or manifest behavior;

6. Psychological adaptations are housed in the brain; and

7. Psychological adaptations are functional, that is “designed” to solve statistically recurrent adaptive problems confronted by our ancestors over deep evolutionary time.

### COMMON MISUNDERSTANDINGS ABOUT EVOLUTIONARY PSYCHOLOGY

For many reasons, such as a lack of evolutionary courses in teaching curricula and erroneous depictions in the popular press, there are many misunderstandings about evolutionary psychology. I’ll describe a few of the more common ones (see Confer et al., 2010 for a more extended discussion of these).

**Misunderstanding #1:** Evolutionary hypotheses cannot be tested or empirically falsified. This misunderstanding is especially puzzling, since there is a tremendous body of published empirical work, now involving thousands of studies, that has tested evolutionary psychological hypotheses (Buss, 2011). Some have been confirmed, such as those involving “adaptive memory,” specialized fears, predictable gender differences in mate preferences, cheater detection adaptations in social exchange, adaptations entrained to the ovulation cycle, adaptations for aggression, and many others. Some have been disconfirmed by empirical studies, such as the kin altruism hypothesis about male homosexuality and the “competitively disadvantaged male” hypothesis about sexual coercion. Like all hypotheses within psychology, evolutionary psychological hypotheses differ in quality and precision. Well-formulated evolutionary hypotheses that generate specific predictions are eminently testable and capable of being refuted.

**Misunderstanding #2:** Human behavior is a product of learning, not evolution. This is a
misunderstanding because it creates the false dichotomy between “learning” and “evolution.” In fact, learning requires evolved learning mechanisms, and evolved learning mechanisms are turning out to be more specialized than earlier generations of psychologists anticipated. To provide a few concrete examples: (a) people learn to avoid eating foods that may contain toxins (food aversion learning); (b) people learn to avoid mating with their close genetic relatives (incest avoidance learning); (c) people learn from their local culture or subculture which actions lead to increases in status and reputation, in part through the attention structure—those high in status are those to whom the most people pay the most attention (learned prestige criteria). In short, “learning” and “evolutionary psychology” are not competing explanations; learning requires evolved learning adaptations, at least some of which are specialized for solving distinct adaptive problems.

Misunderstanding #3: If human behavior is a product of evolved psychological adaptations, it means we cannot change it. This misunderstanding stems from a failure to understand that evolutionary psychology provides a truly interactionist framework, with environmental input needed at each and every step in the causal chain. The environment over deep evolutionary time provides the selection pressures responsible for creating psychological adaptations. The environment during development is needed for psychological adaptations to “come on-line,” and different developmental environments can shunt individuals down different adaptive tracks (e.g., father absence while growing up tends to shunt individuals toward a short-term mating strategy, whereas growing up with an investing father tends to shunt individuals toward a long-term mating strategy). And immediate environmental input is required for the activation of psychological adaptations, just as repeated friction to the skin is needed for the activation of physiological callus-producing adaptations. Humans show such enormous flexibility precisely because of the large number of evolved psychological adaptations they possess. Change, where change is desired (e.g., reducing bullying or other forms of aggression in schools), requires a deep understanding of psychological adaptations and the inputs that trigger or suppress their activation (Confer et al., 2010).

TEACHING TOOLS FOR EVOLUTIONARY PSYCHOLOGY

Over the years, I’ve developed a set of teaching tools designed to draw students in and engage active thinking about pertinent topics. The full set of 17 teaching tools can be found on my website www.davidbuss.com. I’ll elaborate on a few of them here.

Teaching Tool #1: Convey to Students an Understanding of “Deep Time.” This is critical because all of the adaptive problems humans have evolved to solve occur in brief time periods—seconds (e.g., avoiding a bee sting), minutes (e.g., deciding what to eat), hours (e.g., attending a party), days (e.g., planning one’s work and exercise schedule), months (e.g., negotiating status hierarchies), and occasionally years (e.g., raising one’s children). Evolution, by contrast, is a glacially slow process that occurs in small increments over thousands and millions of years.

To convey a sense of deep time, I use two teaching tools. One is providing a table of “milestones in human evolutionary history,” including the first emergence of life on earth (3.7 billion years ago), the evolution of sexual reproduction (1.2 billion years ago), the first vertebrates (500 million years ago), the first placental mammals (114 million years ago), the first primates (85 million years), the first apes (35 million years), bipedal locomotion (4.4 million years), stone tools (2.5 million years), successive migrations out of Africa (from 1 million years ago to the most recent, roughly 50 thousand years ago), the extinction of our Neanderthal cousins (25 thousand years ago), and the subsequent colonization of the entire planet by modern humans (25 thousand years to the present).

A second teaching tool I use to convey deep time is to provide the spatial metaphor of a football field to stand for the evolution of life on earth. If life first evolved at one end of the football field and the present moment is at the other end, you have to travel a full 99 yards down the field before apes evolved. The genus Homo did not emerge until the last foot of the field. And truly modern humans, Homo sapiens (Cro-Magnons) did not colonize Europe until the last tenth of an inch! These tools help to give students a sense of awe about deep time.

Teaching Tool #5: Use Sexual Selection Theory to Explain the Logic of the Evolutionary Process. The three components of evolution by selection are variation (individual differences), inheritance, and differential reproductive success. Variation (originally caused by mutations) provides the raw materials on which selection operates. Only variants that are inherited, reliably transmitted from parents to offspring, can be selected. If you spray blue paint on the tail of a squirrel, the acquired blueness will not be transmitted to the squirrel’s offspring because it does not meet the criterion of inheritance. And differential reproductive success because of heritable variants is the “bottom line” of evolution by selection. This is where explaining sexual selection comes in handy.

Darwin originally focused on differential survival, and of course survival is necessary for reproduction. He was deeply troubled, however, by characteristics that could not be explained by so-called “survival selection.” The brilliant plumage of a peacock, for example, seemed downright damaging to survival. It’s like a neon sign to predators advertising fast food! Darwin once commented that, “The sight of a feather in a peacock’s tail, whenever troubles came when he hit upon the theory of sexual selection—the evolution of characteristics not because of the survival advantage, but rather because of the mating advantage those characteristics afforded organisms. The
gigantic antler rack of a male elk gives it an advantage in competing with rivals for mates (intrasexual competition, the first process of sexual selection). And the luminescence of the peacock gives it an advantage in being selected by females as a mate (intersexual selection, the second process of sexual selection). The theory of sexual selection brings home the point that differential reproductive success is the final arbiter of which characteristics evolve (i.e., increase in frequency over time) and which ones bite the evolutionary dust. An organism could survive for a hundred years, but if it fails to reproduce, its genes die with it.

**Teaching Tool #7: Hammer Home the Critical Distinction Between Proximate and Ultimate Causation.** Proximate causation deals with the immediate causes—the underlying mechanism and the stimuli or events that trigger its activation. Ultimate causation deals with the evolution of the mechanism and its adaptive function. If we ask “Why did Sally develop calluses on her hand?” the proximate cause involves a callus-producing physiological mechanism and the stimuli of repeated friction to her skin. The ultimate cause involves explaining why the callus-producing mechanism evolved, or its adaptive function—to protect the anatomical and physiological structures beneath the skin. If we ask, “Why did John get jealous?” a proximate explanation might invoke a stimulus (e.g., a “mate poacher” was flirting with his girlfriend) and the underlying psychological mechanism of sexual jealousy. An ultimate explanation would involve why humans have evolved the emotion of jealousy—the adaptive problem it evolved to solve—for example, to guard against threats to a valued romantic relationship. Proximate and ultimate causes are complementary, not competing, levels of explanation. Both are necessary for a complete explanation.

The distinction between proximate and ultimate explanations is critical to teach because students often think in proximate terms: Why did Marco eat the pizza? Answer: Because he was hungry and he smelled the aroma emanating from the pizza parlor. Why did Karin have sex? Answer: Because sex gives her pleasure. As scientists, we want to know the adaptive functions of hunger and sexual motivation to complement an understanding of the proximate causes. I sometimes use a true story to illustrate this distinction. In a class, after explaining the distinction between these two key modes of explanation, one student had difficulty understanding it. So I asked him: Why do you think men are taller, on average, than women? After thinking for a minute, he responded “Because they have longer bones”? In a proximate sense, he was right—men do have longer bones, and in some weak sense, this fact “explains” why men are taller than women. But most people feel that this explanation is incomplete. We want to know the evolutionary process by which men came to be taller, as well as the adaptive functions of greater male height—it was sexually selected because height historically gave males an advantage in intrasexual competition, or because women preferred to mate with taller men (the empirical evidence currently supports both modes of sexual selection as likely explanations for the gender difference in height).

**Teaching Tool #10: Bring in Animal Examples.** In teaching evolutionary psychology, I find that it helps to gain some distance from the human species. It is sometimes easier to see things in other species. As an example, many insect, mammalian, and primate species have evolved adaptations for “mate guarding.” Some male insects will maintain physical proximity to their mates, conceal them from other males, build a fence around them, take them away from locations containing rival males, emit scents that conceal the attractant signal of the female, and physically jostle other males away. After providing a few nonhuman examples of mate guarding, it is easier for students to see similar strategies in humans. Drawing parallels helps students to see the similarities as well as the differences. Indeed, studies of human mate guarding have identified some 19 tactics, ranging from vigilance to violence, many of which have direct analogs in other species (Buss, 1988; Kaighobadi et al., 2010). It is important to emphasize that these parallels do not imply that humans are just like other species. Each species is unique, and humans might be “uniquely unique” in qualities such as our ability to communicate through language or our deep capacity for culture. So although most sexually reproducing species exhibit some form of mate guarding, only humans do it through cultural inventions such as burkas, check-up phone calls, and monitoring of a mate’s e-mail.

**Teaching Tool #12: Use Thought Experiments.** I use these in practically every lecture. To help students understand the logic of inclusive fitness theory, for example, I have them do what I call the “mission impossible” exercise: “Imagine that you are a gene residing within a body: Your mission is to increase your own replicative success (making many copies of yourself) relative to competing genes. What would you do?” Students are usually good at coming up with excellent answers: Influence the body in which you reside to survive (e.g., get food as fuel for the body; protect the body from environmental dangers such as predators and parasites); ensure that the body in which you reside reproduces (e.g., make it attractive to those of the opposite sex; motivate it to select fertile mates; increase the organisms’ sexual motivation). Occasionally, perceptive students provide a third answer, which is the key to inclusive fitness: Help other organisms that contain copies of you—genetic relatives—to survive and reproduce.

Other thought exercises are specific to topic areas. For mating, I ask students to list all the qualities women want in a long-term mate, and I write their responses on the blackboard (students love this one, and it can go on for 20 or 30 minutes, filling up all available blackboard space). Then I ask them to list all the qualities men want in a long-term mate. For the topic of conflict between the sexes, I start by asking students to list all the things that men they know have done to irritate, anger, annoy, or upset women. Now what do women do that has the effect
of irritating, angering, annoying, or upsetting men? These exercises really get students engaged in the topics and set the stage for tackling them scientifically. Can evolutionary theories shed any light on gender differences and gender similarities in mate preferences? Here I bring in the theory of parental investment (Trivers, 1972) and sexual strategies theory (Buss & Schmitt, 1993). Can evolutionary theories shed any light on conflict between the sexes? At this point in teaching, I bring in a fascinating branch of evolutionary theory known as sexual conflict theory (Arnqvist & Rowe, 2005). Toggling among the student responses to the exercises, evolutionary theories, specific evolutionary psychological hypotheses, and scientific evidence creates deeper understanding and increases long-term retention of the material.

CONCLUSIONS
Evolutionary psychology has the combination of a powerful big-picture theoretical perspective, real-life applicability, and topical intrigue that captures students’ interest. They can see how it applies to their own lives, the lives of their friends, and the issues they grapple with on a daily basis. Many report discussing the course’s content (sometimes heatedly) with their roommates, friends, and parents. Some students experience a paradigm shift, commenting on the class evaluations that it has fundamentally changed the way they understand people. From an educational perspective, teaching evolutionary psychology is highly rewarding and should be a fixture in psychology curricula worldwide.

REFERENCES
TED TALKS ON PSYCHOLOGY

TED, a small nonprofit started in 1984, touts its devotion to “ideas worth spreading.” TED grew out of a conference created to bring together individuals from the Technology, Entertainment, and Design worlds and has now broadened its focus to a number of new disciplines, including psychology!

TED’s website is abundant with helpful and educational resources, including “TED Talks”—free online videos of presentations made by some of today’s greatest minds on a number of exciting subjects. More than 40 videos dealing with a variety of issues in psychology are now available.

Videos include a discussion of happiness by Dan Gilbert, Jim Fallon’s exploration of the minds of killers, a talk on positive psychology by Martin Seligman, and two presentations by Philip Zimbardo, just to name a few. Take a look at TED’s extensive collection of psychology “talks” at http://www.ted.com/talks/tags/id/152/page/1.

NEWS FROM THE SOCIETY FOR THE TEACHING OF PSYCHOLOGY (STP)

Free STP Membership Offered to New Teachers of Psychology

The Executive Committee of the Society for the Teaching of Psychology (STP) invites applications for a FREE 1-year membership from persons in their first year in a faculty position as a teacher of psychology in a high school, community college, or college/university setting. The free membership would run from January 2011 through December 2011. Please call this opportunity to the attention of anyone you know who is in his/her first year in a faculty position as a psychology teacher.

Benefits for these new members to STP include a subscription to the acclaimed journal Teaching of Psychology (ToP), access to all back issues of ToP during the membership year, access to the peer-reviewed resources and course syllabi in the online Office of Teaching Resources in Psychology (OTRP), access to e-Books published by STP, reduced registration fees for STP conferences, involvement in a network of people committed to and experienced in the teaching of psychology, and the opportunity to support and participate in an extensive array of teaching endeavors in psychology. For a full description of member benefits, go to http://www.teachpsych.org/members/whyjoin.php.

To join the 3,000 dedicated teachers of psychology who comprise STP, send an e-mail message to Ted Bosack, STP Executive Director, at stp@teachpsych.org stating that you are interested in joining STP and that you are in your first year of a faculty position in psychology in one of the settings indicated above. You will receive directions for completing an application for membership.

STP is Division 2 of the American Psychological Association (APA). However, persons joining the society need not be members of APA, and membership in STP does not commit a person to membership in APA.

NEWS FROM PSI CHI

Psi Chi Invites Charter Applications

Psi Chi chapters voted last year to change the society from a national organization to an international one. Psi Chi, the International Honor Society in Psychology, welcomes charter applications from universities around the world and encourages students and faculty with international research, teaching, or study experience to let faculty and students in other countries know about the opportunities offered by Psi Chi. Interested parties may contact Executive Director Martha S. Zlokovich, PhD, at Martha.zlokovich@psychi.org for information about applying for a chapter charter.
A cross the nation, universities and colleges are dominated by millennial generation students. These adolescents and young adults who were born between 1980 and 2001 (Howe & Straus, 2000) present unique challenges for psychology teachers due to differing values, and expectations that vary across generations. These cross-generational differences potentially reside at the core of conflicts that may occur between students and professors.

In the interest of enhancing pedagogical techniques, the application of student-centered approaches in the classroom may help to mediate some problems if we are cognizant of the underlying motivations and tendencies that seem to demarcate millennials. We have drawn from the industrial and organizational literature to discuss pedagogical issues for teachers working with millennial students and to make recommendations for enhancing educative experiences in the classroom.

PARENTS OF MILLENNIAL STUDENTS
The voluminous body of parent literature specific to education includes numerous studies that indicate parental involvement is important to student attendance and academic success. MacFarlane (2009) concurred that parental involvement and engagement in their student’s educational experiences is an essential component for student success. However, it is also true that the parents of millennial students can provide challenges for instructors. MacFarlane also found there are instances in which parents will overstep their boundaries and level of involvement to the extent that problems occur between the parent and the school authorities, including instructors. Additionally, Garrett (2009) identified significant perceptual differences between parents and instructors with respect to the role of teachers in the classroom, suggesting that these differences can lead to problematic interactions between parents and teachers. In sum, there is a need to enhance communication and establish an understanding of parental and instructor roles to improve interpersonal interactions between parents and teachers.

Educational institutions have determined that it is necessary to create boundaries with respect to how a parent may be involved in order to avoid conflicts and problems. Parent handbooks include recommendations for facilitating positive transitions for students. Parents are encouraged to adopt an advisory role, yet avoid excessive advising, supervising, and problem solving (Santa Clara University, 2009; University of Nevada, Las Vegas, 2006; University of Nevada, Reno, 2006; University of San Francisco, 2009). These recommendations speak to what is referred to as “helicopter parenting,” meaning that the parents of millennials have a tendency to be over-protective, and rather than allowing the child (student) to resolve issues independently, some parents will tend to interfere and attempt to ameliorate problems on behalf of the child.

SOCIAL LEARNING AND INTERGENERATIONAL TRANSMISSION EFFECTS
The parental attitudes and behavioral tendencies discussed above may be socially transmitted to some extent to the student. Once these children enroll in college, these same tendencies may re-emerge and adversely affect and influence the interpersonal interactions between the college student and their professors.

Given that higher education institutions have begun to address the protective parenting tendencies explicated above, it is important for professors to be cognizant of the potential implications of this type of parenting on the psychological development of the student, including,
but not limited to, adjustment to college life, attitude, personality trait problems, and a proclivity toward irresponsible behaviors.

**SIGNIFICANT CHARACTERISTICS OF THE MILLENNIAL GENERATION**

The industrial and organizational workplace literature has addressed intergenerational effects and the ways in which these effects emerge in employment contexts. The characteristics associated with the millennial generation identified within workplace environments are applicable to classroom interactions between students and professors since many of the common features of hierarchical structures found within the workplace and classrooms are similar and congruent. To inform educative and student-centered practices within the classroom, the sections below present significant overarching characteristics associated with the millennial generation.

**DEVELOPMENTAL ISSUES**

Alsop (2008) refers to members of the millennial generation as “trophy kids.” Alsop explains that key experiences associated with this generation include being raised in a pampering environment by the parents, participating in extracurricular activities, being recipients of awards from various social agents such as school or sports teams simply for participating and not based upon performance or merit, and being raised during a time of technological advancements including the Internet. These socialization effects may be responsible for heightening egocentric trait tendencies such as a sense of entitlement, lack of empathy and understanding of others, lack of awareness with respect to the impact of individual behavior on others, a sense of superiority, and a lack of patience accompanied with shorter attention spans. When these psychological tendencies reach a heightened threshold, they can become clinically significant, especially with respect to impulse-control issues, mood disruptions, and narcissism.

**ATTENTION SPAN AND PATIENCE**

The shorter attention spans of millennial students observed by Nevid (2009, 2010) and Nevid and Mahon (2009) are associated with the instant gratification needs of millennial students and lack of patience toward learning complex concepts and completing complex projects and assignments. Pampering by parents and technological advances have combined to establish an expectancy effect among millennials who now desire and anticipate instant and frequent feedback from employers. The current authors contend that such expectancy effects also operate in the classroom, whereby the students expect the professor to provide them with individual attention and feedback upon request.

Related to the need for instant gratification is the inability for these students to delay gratification and develop patience. This generation tends to seek rewards and stimuli that will have immediate effect, which is related to the work of Skinner (1938, 1989). Skinner found that environmental stimuli will influence learning, and behavior, for example the learned instant-gratification effects associated with technology observed by Nevid (2009/2010) in the form of short videos, sound bites, and so forth is consistent with Skinner’s observations of constant reward reinforcements in his comparative research where, by today’s standards, the food pedal has been replaced by the computer keyboard and cell phone functions.

With respect to the impact of technology on this generation, the use of computers, the Internet, satellite television, video games, DVD players, and cell phones promote the desire and expectation of receiving immediate gratification, feedback, and contact 24 hours a day (Levin, 2009; Tapscott, 1999, 2009). Compared to other generations, the millennial generation is the first generation to experience throughout their life span the availability of information, entertainment, and interpersonal interaction opportunities 24 hours a day. Millennials have become accustomed to contacting other people quickly, interacting with and exchanging ideas around the clock, being entertained 24 hours a day, and, with the advent of networking websites, blogs, and wiki sites, these individuals expect their opinions to count regardless of whether or not the opinions are supported by empirical evidence (Tapscott, 1999, 2009). Psychologically, the latent conditioning and reinforcing effects of technology use likely influence behaviors and psychological development including pervasive personality tendencies that may have long term maladaptive consequences.

These issues may create difficulties within the classroom as the students are predisposed to become more easily frustrated because they expect an assignment, exercise, or other learning experience to be completed quickly and to receive a reward equally fast. Thus, the student is less likely to have the patience to devote the amount of time necessary to cultivate and produce quality work or to devote the time necessary to study, comprehend, and learn the course material.

**RECOMMENDATIONS FOR INSTRUCTION: KEEPING THE STUDENT AT THE CENTER**

To enhance instructional interactions with millennial students, we recommend maintaining the focus on the student and establishing a more egalitarian learning environment that is simultaneously controlled and focused toward the educative objectives of the course.

**DEVELOPMENTAL AND EXPECTATION ISSUES**

Due to past experiences during childhood and adolescence that involved the practice of being given rewards for minimal effort, millennial students may expect that they are entitled to good grades regardless of effort, performance, and level of comprehension, competence, and knowledge.

One demonstration to help mediate this tendency is to surprise the students with an extra credit opportunity that is related to the course material and impending homework and or test assignments. The instructor may begin the class with two to four complex essay questions and offer
the students a set maximum of possible extra credit points for accurate answers. The essay questions should be very challenging such that students will struggle with obtaining accurate responses, thus demonstrating to the students that learning the material will take effort and that they will not receive academic rewards with minimal or no effort. At the end of the demonstration, the instructor may then invite the students to engage in an open discussion about ways they can improve their study habits, such as note-taking skills, active reading skills, and test-taking techniques.

DEVELOPMENT OF PATIENCE AND ATTENTION EXPANSION

The millennial students often prefer to access information for class assignments via the Internet rather than engaging academic resources. This is a problem if the information that they locate is not valid or reliable, which ultimately harms their learning, work, and performance, and they do not learn how to access scholarly and accurate information.

It is typically assumed that students know how to use a textbook or other scholarly resource by the time they are in high school or college. Unfortunately, this may not be the case. To foster patience and lengthen attention spans, instructors can demonstrate and guide students through the attributes and use of academic texts. Toward the beginning of the academic term, the instructor can demonstrate with the students the various characteristics of the texts by having students identify an in-text citation within one of the chapter discussions, followed by having the students locate the source within the reference section. The students are then guided to locate the article in the scholarly database, and to identify the list of references attached to that article. The instructor is then positioned to explain to the students that within less than five minutes the students were able to use their textbook to locate a “chain of legitimate sources” useful for completing a class assignment, and that it would have taken them longer to access these sources had they chosen to surf the web, which also has no guarantee that the information they locate is legitimate or accurate.

Other sections of textbooks that should be reviewed with students are the glossary and index. Many students will rely on electronic dictionaries or Wikipedia-type websites to locate definitions and explanations of concepts and terms. These websites are fraught with inaccurate or incomplete information, which leads to misinformation. The instructor can recommend that students use the glossary and expand or create their own glossary for terms that they have difficulty remembering.

To demonstrate the importance of using the index, the instructor can have the students select a topic, concept, researcher, or term from the index, and then have the students turn to the page where the information is located. This demonstrates to the students that rather than spending a large amount of time searching through an entire chapter to locate the needed information, they can simply look up the key word or term in the index and locate the information more efficiently and quickly without resorting to giving up or using unreliable websites for the information.

These fundamental exercises can be accomplished with both electronic and print textbooks and journals. Taken together, these demonstrations help students realize that navigating academic materials is not as difficult as they may initially believe and provides the students with the desire to interact with the scholarly materials primarily because it is quicker than they realized. Furthermore, instructors consistently search for ways to guide students toward the scholarly material, something these exercises specifically accomplish. Over time, the students are likely to develop more patience and become more willing to spend the time locating reliable information and completing their course assignments because they have learned that the task is not as strenuous as they first believed.

USE OF PERSONAL TECHNOLOGY IN THE CLASSROOM

Professors are often concerned that students are using personal technology devices in the classroom to cheat on a test or other assignment or that these devices serve as a distraction. These are valid concerns, and many schools and/or instructors have prohibited the use of personal technology in the classroom.

Another issue more specific to professors involves the reproduction of class lectures in a digital format that may be loaded onto the Internet. This issue has implications both for the intellectual property of the professor and for the potential to facilitate plagiarism. With respect to the classroom, digital images and video footage of lecture materials can be similarly problematic if these materials are distributed on the Internet without the knowledge or consent of the instructor.

For those professors who are concerned about the protection of their intellectual property, providing students permission to use personal technology devices in the classroom may be a policy in need of consideration. In addition to these academic honesty and integrity concerns, there are other problems with the use of personal technology devices in the classroom. Part of the role inherent to the position of professor/instructor is to provide the students with a safe and comfortable environment conducive to learning. To encourage and establish such an environment, professors should discuss openly with students the proper use of technology in the classroom. Students should feel comfortable and should be able to express their thoughts in an open collegial manner.

The authors recommend that professors discuss the appropriate use of personal technology devices in the classroom and collaborate with the students to establish classroom rules of conduct. Alternatively, instructors may err on the side of caution and simply prohibit the use of devices in the classroom; however, students, especially millennials, will often be more compliant with prohibitions if they were a part of the decision-making process.
FInal reMarks
As new generations emerge so do new traits, tendencies, values, needs, and wants. Educational modalities can be adjusted to account for different or new issues associated with the millennial generation to improve student motivation and learning. By introducing some of these issues and possible ways for instructors to respond to these types of challenges, we hope that educators will explore other creative ways to enhance positive learning experiences with millennial students. 

REFERENCES

PT@CC SEEKS NOMINEES FOR 2011 TEACHING RESOURCES AWARD

The APA Committee of Psychology Teachers at Community Colleges (PT@CC) invites submissions for the new PT@CC Teaching Resources Award! Sponsored by the APA Education Directorate and PT@CC, the 2011 Teaching Resources Award aims to encourage sharing of instructional techniques that community college faculty have developed and used in face-to-face, hybrid, or online psychology classes. The committee is particularly interested in teaching activities, resources, presentation slides, or other materials, to be accompanied by a brief description of the teaching resource, what class it is used in, what topic is covered, and evidence of its effectiveness. The winning entries will be posted on the PT@CC website.

The competition is open to psychology teachers who are members of PT@CC. Faculty members interested in joining PT@CC can obtain more information on the web or by contacting Martha Boenau at 1-800-374-2721, ext. 6140 (e-mail: Mboenau@apa.org). An award of $400 will be given to the first-place winner, $300 to the second place winner, $200 to the third-place winner, and $50 each to two honorable-mention winners. Certificates for all winners will be presented by PT@CC at the American Psychological Association annual convention. Attendance at the convention is not required.

Submissions for the 2011 PT@CC Teaching Resources Award may be mailed to Martha Boenau (APA Education Directorate, 750 First St., NE, Washington, DC 20002-4242) or sent via e-mail (e-mail: Mboenau@apa.org). Entries must be postmarked by May 2, 2011.
William James (Milford High School, Highland, MI) and Scott Reed (Hamilton High School, Chandler, AZ) were selected earlier this year as the 2010 APA TOPSS Excellence in Teaching Award recipients. APA invited James and Reed to write PTN articles on High Impact Teaching Practices for Introductory Psychology.

The speakers provided by NAMI come from a program called “In Our Own Voice.” Cynthia Evans, director of In Our Own Voice, says that each presenter goes through 2 full days of training, and each trainer has been trained for 3 days. The presenters all have been diagnosed with a mental illness and speak about the topics of dark days, acceptance, treatment, coping strategies and successes, hopes, and dreams (see www.nami.org).

The program is designed to last 60 to 90 minutes. It could be done after school or in a lecture series at a college. For the last few years, Carisia has spoken to my classes at Hamilton High. She has adapted the program to fit into my school’s 50-minute class periods. Carisia had been a teacher until she started having difficulty with bipolar disorder in her twenties. While I feel my classes get a lot out of the presentation, Carisia, who is also a trainer, said “Our Own Voice assists many of the presenters in their own treatment”: It’s a win-win situation for the speaker and participants.

One year NAMI sent a young lady who had been hospitalized for treatment of schizophrenia a few times in high school. She had just graduated, so she was the same age as the students in my class. My students and I were both amazed at the presentation and poise of the young lady speaking of her personal struggles. The next year some of my previous students came by to see if she was going to speak again. I had to inform them that she had dropped out of college and was not functioning well enough to come this year. I feel these students learned an important lesson on how not to stigmatize people with mental illness. They saw this young lady when she was functioning very well and knew she was not a “weak” person, yet she still had to cope with her mental illness.

My students have participated in “NAMI Walks,” which are done in over 40 states throughout the year. While this is a fundraiser, it is also an opportunity for my students to be active in their support of those with mental illness. Before the walk, groups provide information and there are bands and other entertainment. During the walk we see people holding signs supporting someone with mental illness and groups chanting or holding signs saying things like, “Stop the Stigma.”

During the NAMI Walks we met Mary Sample, a volunteer advocate for people dealing with mental illness in our community. Last year
Mary got my class involved in cleaning the backyard and patio of a woman whose house was in the process of being condemned by the city. Some other years my students have assisted in fundraisers at grocery stores. The students gave out Tootsie Rolls to people coming to the store and then informed them about NAMI and asked for a donation. It was a great experience in the community for my students and a chance to try out some persuasion techniques.

While I have focused on In Our Own Voice presentations, NAMI does have other programs like “Peer to Peer” and “Family to Family.” These are 10- to 12-week programs offered throughout the year. To book a speaker or find out more about NAMI, you can visit their website, www.nami.org. I am grateful for the information and speakers provided by NAMI. \textbf{PTN}

\textbf{REFERENCES}

Interview with Cynthia Evans, Director, In Our Own Voice, National Alliance on Mental Illness.

National Alliance on Mental Illness \texttt{www.nami.org}

\begin{center}
\textbf{EDUTAINMENT}
\end{center}

\textbf{William James}

\emph{Milford High School, Highland, MI}

As educators we are instilled with the duty to educate all students. While it is certainly true that all students can learn, we have all experienced those classes in which students may not, for some reason or another, want to learn. We are professionals, and we strive to give each student in our classes unique and memorable opportunities for learning about psychological science, and often in ways that promote an entertaining educational experience.

There are many, including the great American critic and educator Neil Postman, who believe that education should not be entertainment. From my perspective, I must say that the best classes/lectures I have given are those that were entertaining (for me and those listening). I believe that it is time we stop calling our profession education, but rather we should adopt the term \textit{edutainment}. Our students want to be entertained, and who would blame them? Not me! If I am watching television and a program does not keep my focus, I simply turn the channel. Rarely am I forced to watch a program which I deem boring or unimportant, unless it’s fulfilling those spousal obligations. Our students are, in essence, forced to take in programming that they feel is unimportant or useless. For many in the field, the reaction to these comments is, “they should realize the value of the education they are receiving!” While this is true, that the students are receiving something that people in other parts of the world are denied, the truth is that many of us didn’t realize this “value” until much later in life. I, for one, am very guilty of taking high school for granted, and it wasn’t until I found my passion that I realized the true value of my education.

As psychology teachers, we are fortunate to teach a subject that many people, high school students, especially, think is interesting. For this we are allowed the luxury of exposing students to topics that are more interesting and personable than mathematics (as a fellow math teacher once so eloquently said). In my class I make it a point to do some sort of demonstration/activity each class day. These small activities help to break up the drudgery of taking notes day in and day out. Using activities to break up lectures is a great way to show students practical applications of what we just talked about, plus it helps keep their interest. I try to approach each class period like a sitcom, intermingling commercial breaks (demonstrations/activities) with content. With this format in mind, it is important to “switch it up” every 15-20 minutes. Research in memory retention has demonstrated that humans remember best at the beginning and end of a class period, and during the middle there appears to be a sharp decrease in what is retained.

This is why it is so important for educators to entertain students, especially during this middle-/low-retention time frame. I feel honored to teach my passion of psychology to high school students, and when they leave a class feeling entertained, they are more likely to remember the material covered in that class. \textbf{PTN}
NEWS FROM PSI BETA

Psi Beta Student Research Poster Sessions at APA!

Psi Beta’s first-ever student research poster session was held on Saturday, August 14th during the annual convention of the American Psychological Association held in San Diego, CA. During this session, over 45 students presented 31 posters depicting a variety of psychological studies conducted at their respective community colleges. The session was so successful that Psi Beta will offer another student research poster session during the upcoming APA conference in Washington, DC, on August 4-7, 2011.

We strongly urge Psi Beta students to attend the APA convention and present their research. Psi Beta will issue a call for proposals directly to all chapter advisors sometime in the spring of 2011 and will have a proposal link on the Psi Beta website (http://www.psibeta.org). All Psi Beta poster session presenters will receive attractive certificates of recognition confirming their participation in a professional conference.

Third Annual National Research Project Launched

Psi Beta’s National Council is pleased to announce the 2010-2011 national research project. Psi Beta’s national research projects provide a way for Psi Beta students, especially students attending community colleges not offering a research methods course, to participate in an actual study. Psi Beta students can use the study’s data to prepare APA-style research reports and posters that can be presented at local, regional, or national conferences. The 2009-2010 national study on personal happiness gathered data on over 900 participants, and a Psi Beta member who used the data for her report, Susan Wensley, won first place in the Pearson/Psi Beta annual student research paper competition.

The focus for this year’s project is “college connectedness.” A number of nationally recognized researchers (e.g., Astin, 2009) have described the various factors that contribute to the ability of college students to persist and reach graduation. The extent to which a new college student feels a sense of social and academic connection to college can be an important factor in the decision to persist or withdraw from college. This year’s (2010-2011) national study involves having members of the target population (first year, full-time college students) complete the College Connectedness Questionnaire (designed specifically for this study), the Big 5 Personality Inventory, and a shyness scale. Student researchers will be able to set a baseline for the level of college connection expressed by new students at their college and test several different hypotheses regarding possible relationships between personality and campus connection.

The study has been approved by the IRB at Irvine Valley College. Each chapter is expected to find participants matching the target population (i.e., full-time, first-year college students), obtain informed consent from the participants, and gather complete data from a minimum of 30 participants. To expedite data gathering, participating chapters will be asked to submit data through an electronic form available on the Psi Beta national website. The data-gathering phase will end on February 28th. Data files (SPSS and Excel) will be made available to all participating chapters by mid-March, 2011.

REFERENCE

The Center for Psychology in Schools and Education (CPSE) has two exciting new projects in development for teachers. Both use evidence-based research to translate effective teaching and learning methods as well as stress-management techniques to improve teachers’ experiences in the classroom.

**Module on Teacher Stress**
Currently in the postproduction phase, Isaac Prilleltensky, PhD, and his team at the University of Miami are developing an online module based on the psychological literature relating to both general and teacher-specific stress. Recognizing that burnout is one of the primary causes of teacher dissatisfaction and retention issues, especially among early career educators, this module covers different definitions of stress and provides survival strategies for the various types of stress. Several K-12 teachers have been instrumental in the review process, ensuring that the information is applicable and appropriately translated. The module will take about 45 minutes to go through and will be shown in the form of a professionally designed PowerPoint with voiceover narration from a professional actor.

**Core Psychology for Teachers Project**
CPSE, in collaboration with the Coalition for Psychology in Schools and Education and 20 deans of education who are psychologists, has been developing a project designed to identify and translate research from psychological science central to topics that aspiring teachers should master to be effective in the third-grade science classroom. In collaboration with colleagues in science education, the project aspires to create a series of modules applying psychological science from child development and learning, adult education, and instructional design to the preparation of teachers in elementary science education. Small teams of researchers, scientists, and teachers affiliated with Georgia State University, University of Maryland, and Teach for America met to serve as consultants in the development of the modules, each focusing on one or two evidence-based strategies that target individual differences in students found in the average third-grade classroom.

Please visit the CPSE homepage at [http://www.apa.org/ed/schools/cpse/index.aspx](http://www.apa.org/ed/schools/cpse/index.aspx) for more information and resources on projects and initiatives.
As psychology teachers, we are always looking for fun quick ideas that can be incorporated into our classrooms. Please feel free to submit ideas to me at kcar223@yahoo.com, and we will add a couple in future issues.

“When I teach the statistics unit and we are learning measures of central tendency, specifically mode, I ask students for what is the most frequently occurring/mode women’s shoe size in a shoe store and they instantly say ‘7.’ Then, I ask for the men’s shoe size, and they respond ‘10.’ It’s a really quick and concrete way to foster the idea of mode in their heads.” —Julia Bryant-Taneda, Walnut Grove Secondary, British Colombia, Canada

“In developmental psychology, I conduct a lab that simulates old age. The students don work gloves, ear plugs, and fuzzy glasses (reading glasses with Chapstick(R) rubbed onto the lenses). The ‘old’ students attempt to complete a series of ‘easy’ tasks: Listen to directions, find an article in the paper, thread a needle, put on a necklace, etc. This generates great discussion on the limitations of elderly people, and it changes their opinions about them.” —Heather Traeger, Hagerty High School, Oviedo, FL


Resources for students of color, prepared by the Office of Ethnic Minority Affairs, are available online at: http://www.apa.org/pi/oema/resources/students.aspx.


NEW TOPSS COMMITTEE OFFICERS ELECTED

Congratulations to the newly elected TOPSS Committee Officers: Jann Longman of Liberty High School in Renton, WA, has been elected Chair-Elect; and Michael Hamilton of Hopkinton High School in Hopkinton, MA, and Michael McLane of Sterling Heights High School, Sterling Heights, MI, have been elected Members-at-Large. Additionally, Ken Keith, PhD, of the University of San Diego, has been named a College Faculty Representative to TOPSS. Longman, Hamilton, McLane, and Keith begin their new positions on January 1, 2011.

MARK YOUR CALENDAR!

2011 APA/Clark University Workshop for High School Teachers

The seventh annual APA/Clark University Workshop for High School Teachers will be held July 11–13, 2011, at Clark University in Worcester, MA. Workshop facilitators will include Clark University psychology professors and high school teachers from the APA TOPSS. Housing in the Clark campus dorms and materials will be provided for all participants. Participants will also receive travel stipends of $100. In 2011, five $250 travel scholarships will also be offered. Application forms and additional information about the 2011 workshop will be available online at http://www.apa.org/ed/topss/conf_wkshop.html. The application deadline is April 15, 2011.

This workshop is sponsored by the American Psychological Foundation, Clark University, and APA, with generous support from Lee Gurel, PhD. Please contact Emily Leary at eleary@apa.org if you have any questions.

2011 PT@CC STUDENT PRESENTATION CONTEST

The APA Committee of Psychology Teachers at Community Colleges (PT@CC) invites your students to participate in the ninth annual PT@CC Student Presentation Contest! Supported through funding by the APA Education Directorate and Allyn & Bacon Publishing Company, the Student Presentation Contest recognizes innovative and high-quality electronic presentations. In 2011, PT@CC looks forward to receiving an expanded set of presentations, including original videos, websites, and electronic presentations.

The PT@CC Student Presentation Contest aims to promote active learning through the submission of psychology student presentations developed in either of the following categories:

- Presentations designed as demonstrations or teaching modules that illustrate and explain a psychological concept, theory, or research discovery
- Presentations that illustrate and explain a service-learning experience or other application of psychology in the community

Entries should be developed primarily by students and designed to explain the concept, research, or application to a 2-year college student audience. Nearly any class project that can be put into a PowerPoint, video, website, or similar electronic format will be acceptable.

The competition is open to students currently enrolled at a community college or other 2-year school. Students are eligible for the contest if they are community college students who have not previously completed a bachelor’s degree. Faculty sponsors must be members of the APA Psychology Teachers at Community Colleges (PT@CC). If you have students who might be interested in entering, tell them about this opportunity and urge them to begin work on their presentations right away. The entry deadline is June 1, 2011.

The first-place winner will be awarded $500; second and third-place winners will receive $300 and $200, respectively. Certificates for all winners will be presented at the APA annual convention.

The contest guidelines and entry form for the 2011 Student Presentation Contest are on the web at www.apa.org/ed/pcue/ptatchome.html. For more information about this competition or PT@CC, please contact Martha Boenau at MBoenau@apa.org.
The American Psychological Association’s new report on Psychology as a Core Science, Technology, Engineering, and Mathematics (STEM) Discipline (www.apa.org/science/about/psa/2010/08/stem-report.pdf) has attracted broad interest from scientific and educational leaders and is already being used to shape APA’s advocacy activities.

The report, which was formally received by the APA Council of Representatives in August, addresses the reasons why psychological science is inconsistently included within public and private initiatives to enhance STEM (science-technology-engineering-mathematics) research and education and offers recommendations to APA and other groups for achieving consistent inclusion. It was prepared by a task force appointed by 2009 APA President James Bray. Members of the task force were: John Dovidio (Yale University), chair; Frank Durso (Georgia Tech); David Francis (University of Houston); David Klahr (Carnegie Mellon University); Jennifer Manly (Columbia University); and Valerie Reyna (Cornell University).

A major point of the report is that psychological science addresses “a critical component—the human being—within scientific and technological solutions to pressing questions of national interest,” including challenges within “public health, public safety, education and learning, and national security.” On this basis, the report argues, justifications for a broad range of support for both basic and applied psychological research and training can be developed.

The report attributes the failure to fully include psychology within STEM policies and programs to decision makers’ often adhering to a popular view of psychology as a therapeutic enterprise based on intuition rather than science. Thus, the report offers detailed recommendations for increasing awareness of the scientific basis and contributions of psychology among the general public, researchers in other fields, academic administrators, funding officials, and government leaders. Emphasis is placed on improving and expanding education in psychological science from the high school through graduate school levels, as well as on bringing psychologists into leading roles in interdisciplinary projects and into the management of government science agencies.

CONVENTION DISCUSSION
A session at the APA annual convention in San Diego featured commentary on the report by three prominent behavioral scientists: Cora Marrett, acting director of the National Science Foundation (NSF); Jamshed Bharucha, provost of Tufts University; and Vivian Ota Wang, program director at the National Human Genome Research Institute.

Marrett emphasized that NSF takes a broad view of science that includes research at the behavioral and social levels and cautioned advocates not to pit one discipline against another. She called for science education at the precollege levels to focus on core principles that are common to all disciplines.

Focusing on higher education, Bharucha noted that academic administrators often need to be educated about the complexity and rigor of psychological science and about its connections with other fields. He also recommended that psychology be utilized more fully in the development of assessments and accreditation standards for undergraduate education.

Wang rallied psychologists to be more assertive about the value of their field and to play more prominent roles in interdisciplinary team science and in newer fields, such as genomics and nanotechnology, that can benefit from a behavioral perspective. She went on to discuss the strong influence of K-12 education on public understanding of science and in building the pipeline of
future scientists and pointed to the critical role of textbook publishers in shaping curricula for public schools.

One issue brought up by all the commentators as well as task force and audience members was how advocates should balance justifications for support of psychological science that are based on its contributions to addressing current societal challenges (as emphasized in the task force report) with justifications based on its long-term contributions to the fundamental understanding of behavior. Which type of justification is emphasized can have an impact on which types of research—applied vs. basic—are funded and encouraged. While all agreed that both applied research and basic research are necessary, no single formula for balancing them was offered. Rather, the discussion tended toward a pragmatic view that arguments for both applied and basic psychology should be tailored to the particular organizations and audiences being targeted. It is clear, however, that all such arguments need to be continually revised and expanded as new scientific directions and new societal and policy issues emerge.

Commentators also stressed the importance of psychologists sharing their work with the general public through both traditional and new media. Wang suggested that methods developed by NSF-supported research for informal science education can be applied to increase appreciation of psychological science among children and adults.

**STEM EDUCATION STANDARDS**

APA has already begun to use the information and arguments in the task force report in its advocacy activities. In July, the Board on Science Education of the National Research Council (NRC; an arm of the National Academies) released a draft version of a [Conceptual Framework for New Science Education Standards](http://www.nationalacademies.org/). When finalized, this framework is expected to provide the basis for national standards for science education at the K–12 levels. However, the current draft excludes concepts from the behavioral and social sciences from the “core ideas in science” that are intended to organize such standards.

Working in concert with other major behavioral and social science organizations, Executive Director for Science Steve Breckler communicated APA’s concerns in writing and in a specially called meeting of NRC officials and organization leaders held in early August. Drawing from the report and other materials, Breckler stressed that the framework should take into account such considerations as: science is increasingly interdisciplinary, psychology in particular is strongly connected to other life sciences, human behavior is known to be an effective domain for stimulating children’s interest in science, and psychology is already being taught in large numbers of high school courses.

The NRC is now evaluating the comments it has received from the behavioral and social science communities (as well as other groups) and anticipates releasing a revised framework in early 2011. APA and its collaborating organizations are keeping close tabs on the process and will provide feedback on the next draft.

Independently, the Office of Behavioral and Social Science Research (OBSSR) at the National Institutes of Health is also examining the place of the behavioral and social sciences in STEM education at the K–12 levels. It held a workshop on this topic on July 13 that was attended by federal officials, scientific organization leaders, and academic scientists. Rena Subotnik of the APA Education Directorate presented the major points of the task force report, focusing on psychology’s status as both a basic and applied science and the central contributions of psychology to the understanding of learning and teaching. These ideas helped guide workshop discussion on such issues as: which fields count as core STEM sciences, cultural and institutional forces shaping views of the behavioral and social sciences, and the role of the behavioral and social sciences in STEM education reform. Ideas emerging from the workshop will help direct future OBSSR efforts to increase public understanding of the behavioral and social sciences, improve science education, and expand the pipeline of future scientists.

**SCIENCE LEADERSHIP CONFERENCE**

The goal of the 2010 APA Science Leadership Conference, sponsored by the Science Directorate and Board of Scientific Affairs, was to turn the task force report into action. Representatives from APA divisions and governance groups as well as other behavioral and social science organizations gathered in November in Washington, DC, to assess the report’s recommendations and develop action plans for implementing them. The intention was for participants to leave the conference with a set of concrete tasks to pursue within their own organizations and communities for enhancing the status of psychology as a STEM discipline. The outcomes of the conference will be reported in future issues of [Psychological Science Agenda](http://www.apa.org/science/about/psa/index.aspx).

The task force report is a step toward achieving one of the three major goals in APA’s new [strategic plan](http://www.apa.org/science/about/psa/index.aspx): to increase recognition of psychology as a science. APA welcomes comments and suggestions on the report and on other topics concerning psychology as a STEM discipline. Please share your thoughts with Howard Kurtzman (202-336-5939).

**Howard Kurtzman is Deputy Executive Director for Science at APA.**

Although minorities are the fastest-growing segment of the population, and demographic shifts point toward a future in which some states will soon be “majority minority” states, African Americans, Native Americans, and Hispanics are underrepresented in the fields of science and engineering, a new report from the National Academies (http://www.nationalacademies.org) finds.

Funded by the Carnegie Corporation of New York (http://carnegie.org), the report—Expanding Underrepresented Minority Participation: America’s Science and Technology Talent at the Crossroads—found that while African Americans, Native Americans, and Hispanics comprise 28.5% of the U.S. population, they represent only 9.1% of college-educated Americans in the science and engineering workforce. The report is available online at http://www.nap.edu/catalog.php?record_id=12984.

For the country to continue to grow and maintain its global economic leadership, the report’s authors recommend that the federal government, industry, and postsecondary institutions collaborate with K–12 schools and school systems to increase minority access to and demand for postsecondary STEM education and technical training. In June 2009, Carnegie and the Institute for Advanced Study (IAS) (http://www.ias.edu/) issued a report that included an urgent call to “transform mathematics and science education and deliver it equitably and with excellence to all students,” along with specific recommendations for government, business, and labor. To date, more than 65 groups have affirmed their support of the recommendations.

As part of the effort, Carnegie has pledged to extend the Opportunity Equation initiative (http://opportunityequation.org/), a project created in partnership with IAS to promote equity and excellence in mathematics and science education. Carnegie also announced that it will include a strategic focus on STEM learning in all its education grantmaking.


KUDOS!
PT@CC ELECTION RESULTS

The APA Committee of Psychology Teachers at Community Colleges (PT@CC) is delighted to welcome two new members who will join the committee beginning in 2011. Craig Cowden, PhD, of Tacoma Community College (Tacoma, WA) and Ladonna Lewis, PhD, of Glendale Community College (Glendale, AZ) were elected to the committee in the 2010 elections.

The PT@CC Committee extends thanks and appreciation to Julie Penley, PhD, of El Paso Community College and Wynn Call, PhD, of Mesa Community College for their service to PT@CC and their commitment to excellence in the teaching of psychology.
FROM THE ASSOCIATE EXECUTIVE DIRECTOR OF EDUCATION

COMMUNITY COLLEGE DAY AT NIH

Robin Hailstorks, PhD
APA Education Directorate

In my last column I discussed high-impact educational practices that have been successful across college campuses, and I requested articles from you that would demonstrate how you are using these practices in your teaching. This column discusses an educational experience for community college students and teachers that supports one of the high-impact educational practices: undergraduate research.

On October 1, I attended the second annual Community College Day Conference that was held at the National Institutes of Health (NIH) in Bethesda, MD. This was an exciting event that included student presentations, a networking lunch, and panel discussions on careers and training opportunities available at NIH. Students had a chance to meet the NIH deputy director and to attend a seminar on the NIH Undiagnosed Diseases Program. At the end of the day, conference participants were invited to take one of two tours of the NIH campus: the National Library of Medicine tour or the NIH Visitor Center Clinical Research tour.

Community college students who participated in the NIH Community College Summer Enrichment Program (CCSEP) gave presentations at the conference. Students in CCSEP participated in intensive summer internships specifically geared toward preparing them for research careers in the biomedical sciences. This program will also be offered in summer 2011; to learn more about how to apply, visit https://www.training.nih.gov/ccsep_home_page (this site also contains helpful hints on writing a competitive application). Students who are selected for this internship are afforded the same resources and opportunities as students who are selected to participate in the NIH Summer Internship Program (SIP). More details about SIP can be found at https://www.training.nih.gov/programs/sip.

During lunch participants networked with NIH staff to learn firsthand about scholarships, research traineeships, and funding available for community college students and teachers. Topics of discussion during lunch included NIH’s Undergraduate Scholarship Program, how to succeed in college, mentoring, careers in the biomedical sciences, and how to apply for summer internships. Community college teachers were engaged in these discussions and offered their insights on these topics as well.

NIH’s Undergraduate Scholarship Program (https://www.training.nih.gov/programs/ugsp) is available to any student who is from a disadvantaged background and is enrolled in a 4-year college or university. Students who apply for this competitive scholarship must also be committed to pursuing a career in biomedical, behavioral, and social science health-related research. This scholarship will pay recipients up to $20,000 per academic year in tuition, educational expenses, and reasonable living expenses. Scholarships are awarded for 1 year and can be renewed for up to 4 years.

Community college teachers participated in two sessions that were specifically designed to gain their input on (a) preparing the infrastructure on their campuses for NIH grants, and (b) mentoring students in science, technology, engineering, and mathematics (STEM) disciplines. Community college teachers discussed a range of issues related to these two broad topics, including resources available on their campuses to support grant writing and how to prepare students for research careers.

NIH’s second annual Community College Day Conference was a huge success! Community college students showcased their talent and expertise before an audience of researchers and administrators, who
were impressed by their level of engagement throughout the day. NIH staff expressed their appreciation and enthusiasm for working with community college students and teachers. I am sure the third annual Community College Day Conference will be equally successful, and I strongly encourage you to attend this annual event.

I hope this column inspires you to share information about these special summer internship and scholarship programs with your students. This would certainly be one way to encourage students to become engaged in undergraduate research and to obtain financial support for their undergraduate degree.

I hope you are also inspired to think about other ways to engage your students in undergraduate research on your campus. Certainly one of the many ways in which students can be introduced to undergraduate research is through the Online Psychology Laboratory (OPL). If you have not used OPL, please visit http://opl.apa.org to learn more about this powerful tool for conducting psychological experiments in your introductory psychology courses. If you are currently using OPL, please send us an article or e-mail about how you are using OPL in your psychology class.

Undergraduate research is gaining momentum on college campuses nationwide, and community college teachers and students are embracing this high-impact teaching practice as well. To learn more about how college campuses are engaging their students in undergraduate research, you may want to visit the Council on Undergraduate Research (CUR) website (http://www.cur.org). The mission of CUR is to support and promote high-quality undergraduate student–faculty collaborative research and scholarship.

We look forward to learning about how you are promoting undergraduate research on your college campus. PTN

PARTICIPATE IN A PT@CC PSYCHAT!

“A Conversation With David Myers”
Tuesday, January 25, 2011
8:00 p.m. ET/5:00 p.m. PT

The APA PT@CC Committee is delighted to announce a new web-based professional development opportunity for teachers of psychology. Envisioned as a virtual, interactive fireside chat, “A Conversation With David Myers” will be the first PT@CC PsyCHAT.

To join the session with David Myers, PhD, of Hope College:
Go to http://bit.ly/aqmDGU
No password is needed. Just type your name to log in.

The session will be moderated by Sue Frantz of Highline Community College. For more information or to submit questions for Dr. Myers, please contact Sue at SFrantz@highline.edu.

APA SUMMER SCIENCE FELLOWSHIP APPLICATIONS NOW AVAILABLE

The APA Summer Science Fellowship program (SSF) aims to immerse advanced undergraduate students in the science of psychology by exposing them to the excitement and promise of the best of psychological science. Our principal objective is to inform these students about the science of psychology and help prepare them for the rigors of graduate study in psychological science.

An expenses-paid, intensive summer training program, the SSF places up to 12 talented students in the psychology laboratories of faculty at George Mason University, located in Fairfax, VA. The lab experience is 6 weeks in length—from June 18 to July 30. Students receive a stipend in addition to travel and living expenses. The SSF program gives students an opportunity to explore the intellectual, personal, and social processes of scientific inquiry and to experience cutting-edge psychological research through hands-on laboratory activities. SSF offers promising students the opportunity to equip themselves with skills essential to succeed in graduate school and gives students who plan to pursue advanced degrees in psychological science the opportunity to be mentored by nationally known faculty.

Eligibility is strictly limited to rising college seniors at U.S. or Canadian colleges and universities. Applicants should be psychology majors, although students with related preparation may apply if they expect to enter a psychological science graduate program. International students enrolled in U.S. or Canadian colleges are eligible; U.S. citizenship is not required. Students from underrepresented groups are especially encouraged to apply.

33RD ANNUAL NATIONAL INSTITUTE ON THE TEACHING OF PSYCHOLOGY (NITOP)

January 3-6, 2011
St. Pete Beach, FL.

Registration is limited to 375 participants; early registration is highly recommended. For more information about the NITOP Conference, go to: http://www.nitop.org.

RMPA CONVENTION SESSION ON TEACHING DEMONSTRATIONS

The Rocky Mountain Psychological Association (RMPA) invites teachers to participate in their 2011 RMPA convention session on “Teaching Demonstrations at the RMPA 2011 Convention,” April 14-16 in Salt Lake City, UT (http://www.rockymountainpsych.org/). Teachers of psychology from high schools, community and junior colleges, and universities are encouraged to bring their favorite teaching demonstrations to share with other teachers of psychology.

To facilitate questions and the exchange of ideas, contributors are asked to include in their abstracts how many minutes their presentation will require. RMPA hopes to have as many short demonstrations as possible to fit into the hour of time allotted for this session. Presenters will need to be prepared to walk through their demonstrations with attendees and have materials available for them to bring back to the classroom. Based on feedback from their 2010 convention session, RMPA advises participants to avoid PowerPoint presentations, unless they are critical for their presentations.

Materials should be submitted to http://psych.colorado.edu/~dmartich/rmpa/convinfo.htm on the RMPA website. Participants should choose “other” for their topics and then type in “teaching demonstration” where they are asked to describe their demonstration, the ideas it is intended to convey, and the classes in which it would be most applicable. A call for papers that may be of interest is available at: http://psych.colorado.edu/~dmartich/rmpa/Call_for_Papers%202011.pdf.

Participants are encouraged to contact Doug Woody (william.woody@unco.edu) with any questions.

KUDOS! PSYCHOLOGY PROFESSORS HONORED

The Carnegie Foundation for the Advancement of Teaching and the Center for Advancement and Support of Education (CASE) honored four educators with the 2010 U.S. Professor of the Year Award and 46 educators with the 2010 State Professor of the Year Award during a November 2010 annual awards program luncheon. The awards program recognizes extraordinary dedication to undergraduate teaching.

Five of the State Professor of the Year awards went to professors of psychology. The APA Education Directorate is delighted to congratulate: Christy Price, EdD, Professor of Psychology at Dalton State College, as the Georgia State Professor of the Year; Deborah Stearns, PhD, Professor of Psychology at Montgomery College, as the Maryland State Professor of the Year; Alan Swinkels, PhD, Professor of Psychology at St. Edward’s University, as Texas State Professor of the Year; Monica McCoy, PhD, Associate Professor of Psychology and Chair of the Psychology Department at Converse College, as the South Carolina State Professor of the Year; and James O’Brien, PhD, Professor of Psychology at Tidewater Community College, as Virginia State Professor of the Year.

COME TO THE 2011 APA CONVENTION IN WASHINGTON, DC!

The 119th APA Annual Convention will be held in Washington, DC, August 4-7, 2011. Information about convention registration and programming will be available through http://www.apa.org/convention. The TOPSS and PT@CC committees will sponsor programs at convention, which will be announced during the spring of 2011. We hope you and your students will make plans to attend!