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NATIONAL CONFERENCE ON UNDERGRADUATE EDUCATION IN PSYCHOLOGY

An Introduction

Diane F. Halpern, PhD

NCUEP Chair



It was like being 18 again, only this time we were wiser. Eighty participants charged with the task of designing the best possible future for undergraduate education in psychology checked into the beautiful dorms at the University of Puget Sound on June 22, 2008. For almost a week, we adjusted to life with roommates, ate at the college cafeteria, worked harder than we ever did in college, and for the most part, loved every minute of it. Our return to dorm life (only older and, we hoped, better) was in response to the decision by APA's Board of Educational Affairs that it was time to address critical issues in undergraduate education. They assembled a stellar steering committee and charged them with the task of redesigning undergraduate education in psychology in a sound, scientific way that would bring about positive change. It was clear that the steering committee needed help with this broad and important task, so we decided to tackle the big questions at a working conference, with participants selected for their commitment to undergraduate excellence.

A call went out for conference participants; the steering committee was humbled by the response. Well over 200 applications were received for the 50 to 60 slots we had available for the conference. The applicants described their visions for the future of undergraduate education in psychology, provided relevant background information, and pledged to work hard to turn their visions into reality. The selection process was almost impossible with such a wealth of talent, but the committee did its best to put together a group that represented the full range of diversity in psychology, including participants from all levels of education, ranging from high school teachers to those who taught only graduate students; we wanted a racially diverse mix of early and late-career psychologists from large and small institutions, including professional schools, different areas of expertise within psychology, and people with disabilities and knowledge about disabilities. The conference participants were a pretty amazing group.

This special issue of *PTN* is devoted to the National Conference on Undergraduate Education in Psychology and to the blueprint for the future that emerged from that conference. To get the full story, look for the book *Undergraduate Education in Psychology: A Blueprint for the Future of the Discipline*, which will be published by APA in 2009. This issue of *PTN* and the forthcoming *Undergraduate Education in Psychology* will make great gifts for skeptical administrators, new faculty, set-in-their-way faculty, policymakers who need to be better informed, forward-thinking funding agencies, and anyone who believes that we can redesign undergraduate education in ways that can have positive and long-lasting effects on the millions of students worldwide who enroll in undergraduate psychology courses.

Portions of this introduction are from Diane Halpern's article "National Conference on Undergraduate Education in Psychology: Drawing a Blueprint for the Future of the Discipline," which appeared in the December 2008 issue of the *Educator*, published by the American Psychological Association (http://www.apa.org/ed/educator_home.html).

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UPCOMING PRESENTATIONS ON THE NATIONAL CONFERENCE

ASSOCIATION FOR PSYCHOLOGICAL SCIENCE ANNUAL CONVENTION

May 22–25, 2009
San Francisco, CA
www.psychologicalscience.org/convention/

117TH ANNUAL CONVENTION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

August 6–9, 2009
Toronto, Ontario, Canada
www.apa.org/convention

NCUEP 2008

This publication summarizes some of the recommendations discussed at the 2008 APA National Conference on Undergraduate Education in Psychology. These recommendations do not constitute APA policy or commit APA to the activities described herein. This particular publication originated with the APA Board of Educational Affairs (BEA) Steering Committee for the National Conference on Undergraduate Education in Psychology.

If you have questions or would like more information about the conference, please contact the APA Education Directorate:
education@apa.org

APS–STP TEACHING INSTITUTE Friday, May 22, 2009 10:15 a.m. –11:15 a.m.

The National Conference on Undergraduate Education in Psychology, which took place at the University of Puget Sound in June 2008, produced a comprehensive and cutting-edge analysis of the major issues facing psychology educators today and forged a “blueprint” for guiding the teaching of the discipline well into the future. The purpose of this special presentation is to share the outcomes of the conference with attendees of the APS–STP Teaching Institute.

ADVANCING THE TEACHING OF PSYCHOLOGY: BLUEPRINT FOR THE FUTURE

The purpose of this APA presentation is to share the outcomes of the National Conference on Undergraduate Education in Psychology with APA convention attendees.

Friday, August 7, 2009
12:00 noon–1:50 p.m.
Metro Toronto Convention Centre
Meeting Room 703

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2008 APA NATIONAL CONFERENCE ON UNDERGRADUATE EDUCATION IN PSYCHOLOGY:

*Blueprint for the
Discipline's Future*

The APA National Conference on Undergraduate Education in Psychology (NCUEP) was held at the University of Puget Sound in Tacoma, Washington, on June 22–27, 2008. In this special issue, the members of the NCUEP steering committee provide background information about the conference planning process, the key conference questions, and some preliminary recommendations for the future of the discipline.

We, the members of the steering committee, hope that the recommendations will provide a blueprint to redesign undergraduate education in psychology.

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BACKGROUND

In response to calls from the undergraduate community, the APA Board of Educational Affairs (BEA) appointed a conference steering committee in 2006 to draft a proposal for a national conference on undergraduate education in psychology. In the proposal, the committee developed a framework to address critical issues in education that have emerged since the 1991 APA National Conference on Enhancing the Quality of Undergraduate Education in Psychology at St. Mary's College of Maryland.

At its February 2007 meeting, the APA Board of Directors approved funding to support continued planning for the conference. In the months that followed, the committee distributed a call for conference site proposals and a call for participants. At its January 2008 meeting, the committee considered more than 200 applications and selected approximately 80 participants. In addition, the committee prepared the conference program and invited **Thomas McGovern, PhD**, of Arizona State University West, **Daniel Fallon, PhD**, of the Carnegie Foundation, and **David Myers, PhD**, of Hope College, to participate as keynote speakers.

The NCUEP was intended to provide a forum where critical issues in undergraduate education could be examined and recommendations made regarding ways to enhance instruction based on changes in the discipline, student and workforce needs, new and emerging technologies, and realities of contemporary academic life. Other topics relevant to the redesign of undergraduate education in psychology

Photo:
Conference participants on the
steps of the University of Puget
Sound in June 2008.

included applications from the science of learning, the increasing diversity among students and faculty, learning outcomes assessment, models of curricula, quality in instruction, and new ethical concerns created by a revolution in the biological and sociocultural understanding of psychology.

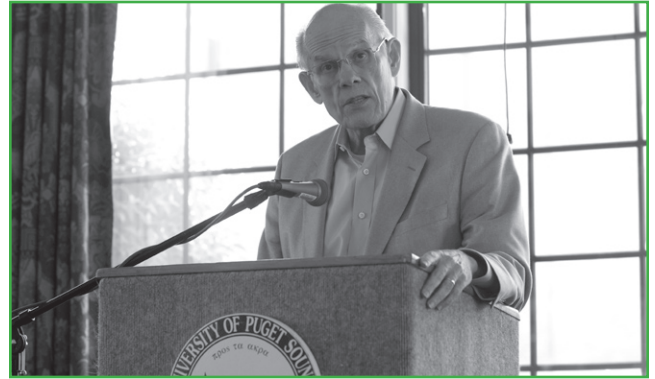
CONFERENCE WORKING GROUPS¹

Conference participants, who represented a wide range of psychological expertise in high schools, community colleges, 4-year institutions, and a variety of graduate programs, were assigned to one of nine working groups, each of which drafted a response to a major question about the future of psychology education. These were questions that the steering committee felt must be answered in order to create a world-class educational program that prepares students for a highly technical workforce, citizenship, and advanced study in a wide range of fields. Each group crafted a response to their question and listed recommendations for all of the stakeholders in higher education, including students and prospective students and their parents, faculty, administrators, funding agencies, policymakers, and accrediting commissions.

Group 1: Why Do We Need to Rethink How We Educate Students in Psychology?

Tom McGovern, PhD (Arizona State University West), chaired the working group that laid the foundation for our plans. The group responded to the broad conceptual question of why we need to rethink the way we educate students in psychology. They created the concept of psychologically literate citizens. These are citizens who have a well-defined vocabulary and basic knowledge of the critical subject matter of psychology, value the intellectual challenges required to use scientific thinking and the disciplined analysis of information to evaluate alternative courses of action, act ethically, recognize and foster diversity, and are insightful and reflective about their own and others' behavior and mental processes. The members of the working group recommended that psychological literacy should become the defining quality for the over 90,000 psychology majors who graduate each year from U.S. institutions and for the millions of others around the world.

¹ Portions of this section are reprinted from Diane Halpern's article "National Conference on Undergraduate Education in Psychology: Drawing a Blueprint for the Future of the Discipline," which appeared in the December 2008 issue of the *Educator*, published by the American Psychological Association (see http://www.apa.org/ed/educator_home.html).



Daniel Fallon, PhD, Carnegie Foundation

Group 2: Who Is Teaching Psychology, and What Is the Quality of Instruction?

Daniel Bernstein, PhD (University of Kansas), and his working group built on the idea of creating psychologically literate citizens by addressing the question of quality in instruction. They noted that in the United States, nearly 50% of credit hours are taught by contingent faculty, and few institutions are willing to invest resources in developing the teaching skills of "nonpermanent" faculty, even when they teach at the same institution for decades. This group recommended that quality in instruction be gauged by contextualized evidence of student work and reflective practices that show improvement over time. They believe that we need to endorse an evidence-based scientist–educator model for quality teaching that parallels the scientist–practitioner model for clinical and other practice.

Group 3: What Is Being Taught and Learned in Psychology Courses?

We need a solid curriculum to guide what is taught and learned. The working group that addressed questions about the curriculum was chaired by **Dana Dunn, PhD** (Moravian College). The group raised concerns about specialization and fragmentation in psychology and the rise of the consumerist culture in higher education, where the catch phrase seems to be "the customer—I mean student—is always right." Their recommendations for the curriculum included making the introductory course a prerequisite for all other courses and having students complete course work in research methods and statistics as soon after the introductory course as feasible. Every major should include courses from the basic four domains (biological bases, developmental, learning and cognition, and sociocultural influences) and incorporate an applied experience.



Conference Plenary



Left to right: Amy Fineburg, Frank Worrell, and Jessica Henderson Daniel

Group 4: Who Are the Students in Undergraduate Psychology?

Chaired by **Linh Littleford, PhD** (Ball State University), this working group addressed the questions of increasing student diversity and how diversity should or should not affect undergraduate education in psychology. They endorsed a model of inclusive excellence that is based on access and equity, student learning and development, diversity in the formal and informal curriculum, and a welcoming campus climate. Psychology courses need to reflect the centrality of diversity issues to psychological science.

Group 5: When and Where Are Students Taking Psychology Courses?

The question of when and where students learn about psychology was addressed by the working group chaired by **Ann Ewing, PhD** (Mesa Community College). Undergraduate education is no longer synonymous with 4-year colleges or universities. They recognized the many formal settings where psychology education takes place, including a wide array of academic institutions and professional development venues, and informal settings, including the popular media, Web sites, podcasts, networking sites, family discussions, and religious communities. About 46% of all college undergraduates are enrolled in community colleges, including about half of all racial and ethnic minority students. Discussions about undergraduate education in psychology must recognize the large numbers of students enrolled in psychology courses in high school as well. Introductory psychology is one of the most frequently selected courses in the undergraduate curriculum, second only to English composition in percentage of credits earned by bachelor's degree recipients. Because the introductory course is the only formal exposure to psychology that most educated citizens will have, it is critical that this course reflect the nature of psychology as a scientific

discipline. The working group recommended that psychology departments be renamed *departments of psychological science* to reinforce the fact and the perception that psychology is a scientific discipline.

Group 6: What Are the Various Modes of Teaching for Different Content, Contexts, and Students?

What are the best ways of teaching psychology as a science? **Stephen Chew, PhD** (Samford University), chaired the working group that was convened to answer this question about pedagogy. After listing over 100 methods of teaching, they concluded that teaching is contextual and there is no single best method. The best method for any situation depends on the outcomes that are desired, the characteristics of the students and the instructor, and the curriculum. The scientist-educator will be knowledgeable about the range of teaching methods that are available and will be able to select appropriately among them to achieve desired goals within a specific context.

Group 7: How Can We Promote Learning With New Technologies?

Keith Millis, PhD (Northern Illinois University), chaired the working group that considered the wide array of learning technologies and how to use them best to promote learning. The group created a model in which technology is a cornerstone for effective learning that also depends on student characteristics and the pedagogy the instructor is using. Thus, like modes of learning, the ideal technology depends on multiple factors in the learning context. In recognition of the rapidly escalating number of online courses, they recommended support for instructors who are teaching in these and other new technology-mediated formats.

Group 8: How Are We Using Knowledge Gained Over the Last Decade About Effective Teaching and Learning?

There have been exciting gains over the last decade in our knowledge about how people learn. **Frank Worrell, PhD** (University of California, Berkeley), chaired the working group that addressed questions about applying what we know about the science of learning to the science of psychology. They designed a model of effective teaching and learning in which scholarly teaching (a) translates promising principles into practice and the scholarship of teaching and (b) extends research on effective learning into college classrooms. They recommended that each college and university develop a reward structure that recognizes the critical importance of high-quality scholarship on teaching and learning, with an emphasis on translational research.

Group 9: What Are the Desired Outcomes of an Undergraduate Education in Psychology?

R. Eric Landrum, PhD (Boise State University), chaired this working group, which focused both on workplace skills and on those needed for advanced study in many disciplines. Students need to understand that if they do not acquire necessary skills during their undergraduate education, future employers may require additional education and training. Faculty members need to understand that if students fail to achieve the competencies that employers value, then we fail to prepare our students for postbaccalaureate success, and others are obligated to fill the gap. They recommended that psychology educators work to develop a system for the assessment of specific student outcomes that is more broadly defined than tests of knowledge. Students need to be able to demonstrate to others (as do psychology educators) not only their acquired knowledge but also well-developed skills and abilities. In some form, this could result in certification of students on the basis of accomplishments in multiple competencies (e.g., Career Readiness Certificates).

QUALITY EDUCATION IN PSYCHOLOGY

As members of the steering committee for the 2008 National Conference on Undergraduate Education in Psychology, we realize that the future of our discipline depends on quality undergraduate programs that prepare students for advanced study in psychology. Our focus extends beyond concern about the future of the discipline. Psychology continues to be one of the most popular majors on college campuses, but most undergraduate psychology majors do not pursue graduate study in psychology. They select psychology as their major because they are interested in the subject and believe that such a major will provide them with the knowledge, skills, and values they will need to enter and succeed in the workforce and to thrive in their daily lives. Our recommendations for quality principles for undergraduate education in psychology are designed to ensure that our students are prepared for the challenges they will encounter as workers, family members, and concerned citizens in the new global century.

We offer recommendations that, within the context of contemporary challenges and changes, are for all of the stakeholders in higher education. These recommendations are designed to foster exemplary outcomes to meet the rapidly accelerating demands of this millennium. We crafted our recommendations to benefit both psychology majors and nonmajors who will need to acquire personal and professional skills to compete and cooperate in a global society. Our goal is to educate students to be psychologically literate citizens who can apply their understanding of psychological principles and methods to the many demands of the future.

Today's students must prepare themselves for a world in which knowledge is accumulating at a rapidly accelerating rate and in which old problems such as poverty, racism, and pollution join new problems such as global terrorism, a health crisis created by alarming increases in obesity, and the growing gap between the very poor and the very rich. All of these problems require psychological knowledge, skills, and values

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Members of Working Group 1



Members of Working Group 2



for their solution. Necessary skills and values include being able to work cooperatively, think critically, communicate and lead effectively, and act ethically. In addition, students should understand diversity and be able to develop creative solutions to existing problems as well as those that will emerge in the coming decades.

Knowing that educational institutions have diverse missions and student populations, we are not overly prescriptive or specific in our recommendations. Moreover, we do not recommend specific courses; the relative mix of teaching, research, or service in which faculty should engage; or the level of academic preparedness expected of students. Likewise, we do not suggest a single model for assessing gains in student learning. Instead, we focus on broad principles that apply across the many institutions with psychology programs in the United States and around the world. A program could be a major, minor, or group of courses that make up a certificate or an area of specialization. Many of our recommendations apply to all quality educational programs. Thus, most departments and programs on college and university campuses can adopt these quality principles with minimal revisions to their programs.

Psychology is a liberal arts discipline grounded in research methods typically associated with the physical and biological sciences. Psychology is a bridge between the social sciences and the physical sciences that facilitates the exchange of ideas with many of our sister disciplines on both sides of the bridge. A well-designed major will provide students with many options, including graduate and professional schools and careers that begin immediately after graduation as well as careers of the future. We recognize the role that psychology plays in general education programs and in the core curricula of other departments such as nursing, education, business, and child development. Psychology is well poised to benefit from the increasing trend toward interdisciplinary course work being offered on many campuses because it

Members of Working Group 3



Necessary skills and values include being able to work cooperatively, think critically, communicate and lead effectively, and act ethically. In addition, students should understand diversity and be able to develop creative solutions to existing problems as well as those that will emerge in the coming decades.

depends heavily on biology, neuroscience, sociology, education, and many other academic disciplines. Our recommendations for quality principles are broad in their applicability and do not constrain creative thinking by any of the stakeholders in higher education.

The following principles for undergraduate education in psychology are designed for creating a world-class educational system that provides students with the workplace skills needed in this information age, a solid academic background that prepares them for advanced study in a wide range of fields, and the knowledge, skills, and abilities that will enhance their personal lives.

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PRINCIPLES FOR QUALITY UNDERGRADUATE EDUCATION IN PSYCHOLOGY²

Quality Principle 1

Students Are Responsible for Monitoring and Enhancing Their Own Learning

The entire educational enterprise centers on the learner and ways to make learning effective, durable, and transferable across academic domains and to out-of-school contexts. The most important variable in learning outcomes is what students do to make learning effective, durable, and transferable.

²These principles and recommendations do not constitute APA policy or commit APA to the activities described herein.

The NCUEP steering committee welcomes feedback on these principles for quality undergraduate education in psychology. Comments may be submitted electronically (www.apa.org/ed) or by e-mail to education@apa.org.

Recommendations

1. Students need to know how to learn.

Knowing how to learn includes the use of learning strategies such as spacing study sessions, processing information for meaning, generating responses to enhance memory, explaining what they know, using both visual-spatial, verbal, and kinesthetic strategies, and becoming actively engaged in the effortful process of learning. Students can reasonably expect faculty and support staff at their institution to be able to assist them in learning to learn.

2. Students need to assume increasing responsibility for their own learning.

Students need to develop the skilled habit of metacognition, which includes knowing when they need help with learning and when they are learning well on their own. Early in the semester, students who need assistance with learning should seek help from their professors and others on campus who can support learning (e.g., staff at student learning centers).

3. Students need to take advantage of the rich diversity that exists in educational institutions and learn from individuals who are different from them.

Projections from the United States Census Bureau suggest that there will be no single majority group in the United States by the year 2050 (U. S. Census Bureau, 2008), a time when most of today's students will still be in the workforce. Demographers expect other regions of the world to become increasingly diverse as well. People vary in multiple ways, including extent of ability and differences in race, ethnicity, and country of origin, age, religious beliefs, sexual orientation, and socioeconomic status. The diverse characteristics of other students and faculty members provide learning experiences for the real-world tasks of understanding people who view events in the world from varying perspectives. Learning from other students and diverse faculty is an important component of a quality education.

4. Students are responsible for seeking advice for academic tasks such as selecting courses in the approved sequence that satisfy the institution's requirements for the major and general education. They are also responsible for seeking advice about planning for a career that is both realistic and tailored to their individual talents, aspirations, and situations.

A corollary of this principle is that faculty and staff will be available and knowledgeable about requirements for the major and career options for majors in psychology.

Quality Principle 2

Faculty Strive to Become Scientist–Educators Who Are Knowledgeable About and Use the Principles of the Science of Learning

Students need knowledgeable and caring faculty to achieve their learning goals. Thus, the quality principles for faculty in higher education and other places where students learn are closely tied to the principles to which students aspire.

Recommendations

1. Faculty need to provide instruction in the ethical standards that undergird our discipline and to model this behavior across professional settings.

Faculty who model ethical behavior in all of their interactions with students, in their research, and in all aspects of their professional and personal lives serve as excellent role models for their students. Faculty can provide opportunities for students to think about both new and old ethical dilemmas. As a means of developing ethical standards in students, faculty provide students with a framework in which they can analyze new and emerging ethical issues such as the use of memory-enhancing drugs, the incarceration of pregnant women who engage in practices that are likely to harm their baby at some later time, and whether teens should be held liable as adults for criminal behavior.

2. Faculty need to understand and apply a variety of learning principles and modes of learning such as spaced practice, generation of responses, active engagement by students, group exercises, and explaining as a way of understanding, among others.

Expertise in one's specialized subdiscipline in psychology is not sufficient to promote quality learning. A large and growing literature applies empirically derived outcomes from the science of learning to college settings and other places where people learn (e.g., high schools, media at home, and the workplace). Faculty need to know how to teach the information in their specialty content areas and in general psychology in ways that promote deep understanding, long-lasting knowledge, and the ability to apply what is learned to disciplines outside of psychology and in settings outside of the formal classroom. Faculty need to know how to alter their teaching, depending on faculty and student learning goals, background preparation of their students, institutional mission, and personal preferences.

3. Faculty need to make the same commitment to using the science of learning in their teaching as we require of scientist–practitioners who use the scientific findings of psychological research in their practice with clients and in other aspects of their professional lives.

There are numerous ways to meet the objective of this principle. Faculty may collect teaching-related data to determine the effectiveness of various modes of teaching. In addition, they may become familiar with the scholarly literature on effective teaching and learning at their level of education. We encourage all faculty to do both and to apply their knowledge of how people learn to enhance learning.

4. Faculty need to engage in continuous, iterative inquiry into the success of their instruction in generating appropriate learning and use that evidence to refine instructional practices in ways that enhance the success of future students.

Once evidence-based teaching practices are implemented, faculty need to ask how many of their course goals are met and how many students are meeting the identified goals. Over time each course needs to have some students achieve all of its goals, and the percentage of students who achieve excellence in the goals should increase. Faculty need to use both the experience of other instructors and the principles of learning to identify and implement more effective teaching practices, as indicated by successful student learning. Continuous adaptation of teaching practices to generate appropriate student success is an essential feature of excellent instruction.

5. Faculty need to foster critical thinking by identifying the critical thinking skills and abilities they wish to promote in their classes and in the psychology major as whole. Faculty should periodically review these skills and abilities throughout the term and through all years of undergraduate education.

Today’s students get their information from many places, including both credible and less than credible

Web sites. The Internet is filled with misinformation (unintentional inaccuracy), disinformation (intentional inaccuracy), propaganda, and just plain nonsense. Students are bombarded with advertisements that now blink on their supermarket shopping carts and are projected onto the night sky. More than ever, the most important outcome for an undergraduate education is the ability to think critically. Faculty need to teach critical thinking by identifying the skills and abilities they wish to promote in their classes and in the major as a whole. After identifying these skills and abilities, faculty should periodically review them throughout the term and at graduation (or the end point of their psychology program, if it is not graduation).

6. Faculty need to ensure that students develop basic skills in communication, numeracy, and working cooperatively with others.

The ability to think critically is an essential outcome of a quality education, but it is not the only basic skill that needs to be developed through challenging course work. Other essential skills include effective writing, fluent speaking, and thinking with numbers, which can be incorporated in classes within and outside of the major. Faculty need to think about their students’ development of these skills and provide systematic learning opportunities so that students can build on earlier skills as they become more proficient.

7. Faculty need to ensure that diversity issues are infused throughout the curriculum, with deliberate inclusion in most, if not all, courses.

Culturally competent faculty will be (or will strive to become) at ease with and knowledgeable about the full range of students, staff, and other faculty on their campus and will communicate that knowledge to their students. We are not providing our students with a quality education if we avoid or deny the importance of diversity as a central topic in psychology. We cannot teach about topics such as human development, love and sexual attraction, motivation, mental disorders,

Members of Working Group 5



Members of Working Group 7





Charlie Blair-Broeker (left) and Tom McGovern



Members of Working Group 9

effective treatments for mental disorders, health and well-being, or the multitude of other topics in psychology without including diversity issues. Diversity is not simply an add-on to an otherwise overcrowded curriculum; it is central to understanding psychology. Inclusive excellence in academia exists when diversity and educational quality efforts are fully integrated and embedded into the core of the academic mission and institutional functioning both inside and outside of the classroom (Williams, Berger, & McClendon, 2005).

8. Faculty need to become proficient in their use of commonly used technologies and encourage their students to develop these proficiencies as well.

Today's students are *digital natives*, a term that is used to highlight the fact that they have never known a time when computers were not used for finding information, communicating with people around the world, or for playing games and listening to music. Despite their birth status as having been born during the decades of increasing use of computers, many students are not proficient in using word processors, spreadsheets, presentation software, and other common programs that will be indispensable to their work lives. Students who do not have these necessary skills need to be identified and strongly encouraged to learn the essential tools of their trade—the computer programs that are needed for success as students and later as workers. Regardless of their level of expertise, student interests and abilities have been shaped by their technology-related experiences. Faculty need to recognize that technology is a language that we need to use to communicate with our students.

Quality Principle 3

Psychology Departments and Programs Create a Coherent Curriculum

Quality teaching and learning for undergraduates take place in an organizational context. Psychology departments and programs need to be organized to support the learning goals of students and faculty.

Recommendations

I. The scientific underpinnings of psychology need to be reinforced throughout the curriculum.

We urge departments to consider ways to communicate the scientific basis of psychology to present and prospective students, to faculty in other departments on campus, and to the general public because of common misunderstandings about the nature of psychology. There are several ways that the scientific bases of psychology could be made more prominent. These include changing a department's name to Psychological Science, seeking greater affiliation with departments in Schools of Science, or other ways that are appropriate for each department's structure, history, and setting.

Research methods are at the heart of psychological inquiry and knowledge. They distinguish psychology as a science from psychology as a pseudoscience. For this reason, students need to complete course work in statistics and research methods as early in each student's course of study as possible. When students acquire knowledge about the research basis of psychology early in their education, statistics and research topics can be included in subsequent courses throughout the curriculum.

Diversity is not simply an add-on to an otherwise overcrowded curriculum; it is central to understanding psychology.

2. Every major needs to include courses from the four basic domains: biological bases, development, learning and cognition, and sociocultural influences. These perspectives need to be included in the introductory course as well.

Regardless of the structure of an individual department's curriculum, the major needs to incorporate these four core perspectives on psychology. Because the introductory course is the only formal exposure to psychology that most educated citizens will have, this course needs to reflect the nature of psychology as a scientific discipline and include sections from each of the four basic domains.

3. The psychology major needs to include an applied experience, if possible.

Learning is more durable and more likely to transfer when applied to relevant, real-world problems. Student internships, externships, volunteer activities, work in a research laboratory, along with certain types of paid employment allow students to apply what they are learning to real-world problems. We recommend a required applied learning experience in the major, whenever this is possible.

4. Curricula in psychology need to be designed to include course work in writing and speaking across the curriculum and courses that teach students how to think critically across a broad range of situations (see the *APA Guidelines for the Undergraduate Psychology Major*).

The psychology curriculum as a whole needs to be designed to foster high-level learning outcomes that include essential skills such as thinking critically, learning effectively, writing well, and speaking fluently. The development of these essential skills needs to be coordinated across classes and systematically developed in the curriculum. Faculty need to identify courses that enhance each of these skills and to assess learning gains for students who take those courses.

5. Courses need to be sequenced in ways that are developmentally appropriate.

Students develop their ability to handle advanced concepts and procedures as they progress through the curriculum. For this reason, we recommend a broad course that introduces the discipline to students, followed by statistics and research methods as soon as is feasible for a department's local conditions (e.g., within the constraints of transfer agreements between community colleges and 4-year institutions), and lower division courses need to be followed by the advanced requirements of upper division courses. A comprehensive introductory psychology course

needs to be the required prerequisite for all subsequent psychology courses. The introductory psychology course is one of the cornerstones of social science general education programs, and as such, it needs to represent the entire field of psychology accurately and reinforce the basic premise that psychology is a scientific discipline. A developmentally appropriate curriculum supports cognitive development in our students.

6. Members of psychology departments need to agree on the desired learning outcomes for the major and, possibly, for a minor, concentration, or other similar psychology program.

Clearly articulated learning outcomes promote development of a coherent curriculum in which students understand what they need to learn and in which faculty can examine what students actually have learned. We cannot improve undergraduate education without assessing what and how much students know when they complete our programs. Learning outcomes can be assessed by numerous methods. Faculty members need to become familiar with some of the ways academic learning outcomes are assessed, the strengths and weaknesses of each method, and how to select among the possible methods the ways that will improve teaching and learning.

7. Making a commitment to quality undergraduate education, graduate programs need to require formal instruction in teaching for all their graduate students, including those students who do not intend to seek academic positions.

Psychology faculty receive most of their advanced education in graduate programs in psychology, which is where they need to receive instruction in how modes of teaching lead to quality learning. Instruction in teaching is needed by all graduate students, whether or not they intend to become academic psychologists. Most doctoral students will teach in formal or informal settings at some point in their later careers. These graduate programs oftentimes rely on a mentoring relationship with a single faculty member to foster teaching skills. Although mentoring relationships are highly desirable, they are not sufficient for teaching graduate students about the science and art of teaching.

8. As a contribution of psychology to the public good, courses need to include knowledge and skill acquisition that is relevant to students' lives.

Students need to walk away with knowledge and skills that they can use in their personal lives, within their families, and in their career and community contexts.

Quality Principle 4

Academic Administrators Support and Encourage Quality Practices in Teaching and Learning

Academic leadership can play a pivotal role in encouraging quality practices that enhance teaching and learning. Quality institutions have high-quality leaders who encourage and support the teaching and learning activities on their campuses.

Recommendations:

1. Faculty need to be encouraged to engage in the scholarship of teaching and learning.

The scholarship of teaching and learning is gaining increased credibility as a legitimate form of scholarly activity on most college and university campuses. But inquiry into practices that support excellence in teaching and learning will be sustained only if these activities are supported by the academic administration. Scholarship and excellence in teaching and learning need to be rewarded in ways that are appropriate for each campus. Regardless of an institution's mission, some amount of high-quality research on topics that promote teaching and learning needs to be recognized for its scholarly contributions.

2. Teaching assignments need to take into account the needs of each campus, but institutions need to assign courses to faculty members who are academically prepared to teach these course.

Everyone loses when faculty are inadequately prepared for the courses they teach. If there is a need for faculty to teach in subject areas that they are not prepared to teach, they need to be given time and support to gain the necessary knowledge. Support may include, for example, paying for an advanced (or basic) class in the needed content area, sending faculty to conferences where they can learn about the needed area, and

arranging mentoring with someone who has the necessary expertise.

3. Psychology departments need adequate support for their laboratories and laboratory-based classes.

As teachers of a scientific discipline, psychologists need space and equipment for data collection and analysis, and students need laboratory courses that teach these skills. Adequate investments in laboratory space and equipment as well as routine upgrading of equipment, computers, and software are essential for a quality undergraduate education. The support of laboratory space for student learning and faculty research is a tangible commitment to psychological science.

4. Academic administrators need to encourage faculty to engage in lifelong learning to stay current in their field.

The knowledge base of psychology is constantly changing, and new technologies are used in teaching and in research. New methods of data analysis and collection are changing the nature of psychology. Academic administrators need to support the learning activities of faculty by funding advanced course work and attendance at symposia, conferences, and other places where faculty can stay abreast of the rapid changes in their field. In many instances, adjunct faculty teach for decades at the same institution, so administrators who care about the quality of instruction their students are receiving will also extend some continuing education benefits to their long-term adjuncts as well as tenure-track faculty.

5. Administrators who support faculty experimentation to enhance teaching and learning need to ensure that faculty are not punished if student evaluations are uneven.

In general, learning will be enhanced when faculty try out different modes of instruction, with the goal of selecting appropriate modes that depend on the propensities of individual faculty (e.g., some may

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Left to right: Kristin Ritchey, Maureen McCarthy, and Pat Puccio



Left to right: APA President James Bray, Diane Halpern, Cynthia Belar, and Charles Brewer



prefer to do mostly lecturing; others mostly group work around problems they pose in class), the nature of the students in their classes, the types of classes, and the learning goals of both the faculty members and the students. Faculty will engage in a variety of modes of instruction only when there is a clear understanding that if student ratings of faculty effectiveness temporarily drop as a result of the experimentation (e.g., an attempt at cooperative learning does not work as well as expected), there will be no negative consequences for their promotion, tenure, or salary decisions. Faculty members need to be free to experiment with different teaching and learning approaches without fear of reprisal. For these reasons among others, we recommend that student evaluations not be used as the sole criteria for promotion and tenure.

Quality Principle 5

Policymakers and the General Public Understand Why Psychological Literacy Is Necessary for Informed Citizens and an Effective Workforce

Principles for quality in teaching and learning need support outside of academia. We need public policies and an informed public to support efforts for quality improvement in undergraduate education.

Recommendations

I. To bring about change in the perceptions of the general public and policymakers, all psychologists need to develop the concept of psychologically literate citizens and to convey this message so that policymakers and the general public will understand that the need to be psychologically literate is similar to being able to read or use numbers in thinking.

Psychologically literate citizens have a well-defined vocabulary and basic knowledge of the critical subject matter of psychology. They value the intellectual challenges required to use scientific thinking and the disciplined analysis of information to evaluate alternative courses of action. They act ethically. They recognize and foster diversity. They are insightful and reflective about their own and others' behavior and mental processes. Psychologically literate citizens know how to cooperate and to help a group come to consensus, and they can discriminate between science and pseudoscience. They can apply their knowledge of psychology to a broad range of situations such as making educational decisions, assisting with plans for someone with advancing Alzheimer's disease, using appropriate disciplinary practices with their children, and using leadership skills in group settings. There are endless ways that literacy in psychology will advance individuals, families, and larger groups. The general

public and policymakers need to understand and value what psychologists know and do.

2. We call upon the media for accurate depictions of psychological science and upon policymakers to use our findings to inform public policies.

For the most part, the general public, including policymakers, misunderstand psychology, thinking that it is entirely a profession that helps emotionally disturbed people cope with their problems or it is perceived as a way of dealing with the paranormal. These misunderstandings are not surprising given the widespread images of psychologists in the media where they are very rarely shown as scientists and practitioners who apply psychological research. We urge the media to present a more accurate depiction of the science of psychology and we urge public policymakers to use psychologists' research findings when crafting public policies and deciding how to act in the public good.

CONCLUSIONS

Taken together, these principles offer recommendations that will have positive and long-lasting effects on the millions of students worldwide who enroll in undergraduate psychology classes. They will advance psychology in ways "that benefit society and improve people's lives" (APA Mission Statement, 2008).

We call upon all of the stakeholders in undergraduate education—students, faculty, departments, academic administrators, public policymakers, and the general public—to adopt these principles for quality teaching and learning.

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THANK YOU, UNIVERSITY OF PUGET SOUND!

For 5 days the University of Puget Sound (UPS) in Tacoma, Washington, hosted the National Conference on Undergraduate Education in Psychology. UPS provided excellent food, attractive dormitory rooms and meeting facilities, and wonderful hospitality to 80 participants and APA staff. We thank President Ronald R. Thomas, PhD; Kristine Bartanen, PhD, Academic Vice President; Robin Foster, PhD, Chair, Department of Psychology; and Barry Anton, PhD, a faculty member in the Department of Psychology and liaison to the conference steering committee. We sincerely appreciate the high quality of service provided by the UPS Conference Services staff, and especially our conference lead, Lyndall Ellingson, who, along with many other UPS students helped with the onsite logistics.

The faculty, staff, and students at UPS anticipated our every need, and without their support, the national conference would not have been possible. We have fond memories of our time spent at UPS. For the graciousness and generosity of the University of Puget Sound, we extend our deep appreciation and say THANK YOU!

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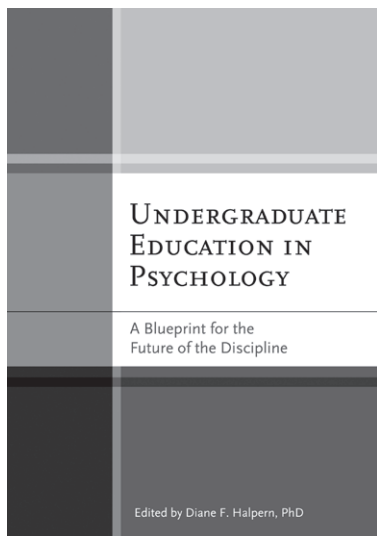


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Undergraduate Education in Psychology A Blueprint for the Future of the Discipline

This book, edited by Diane Halpern, presents highlights of the 2008 National Conference on Undergraduate Education in Psychology and its major recommendations. Scheduled to be released in 2009 by the American Psychological Association, the book examines recent changes in our undergraduate students and faculty; in our knowledge about how people learn; in our understanding of diversity; and in our beliefs about what our students need to know to be psychologically literate citizens of the world, caring family members, and productive workers who can meet today's challenges.

With practical recommendations in every chapter, this book will help teachers and administrators design the most effective undergraduate psychology programs using the best modes of teaching for the coming decades.

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