

TEACHER-READY THEORY REVIEW

Measuring the Benefits of a Bachelor's Degree in Psychology: Promises, Challenges, and Next Steps

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At the present growth rate, over 1 million undergraduate students will earn a bachelor's degree in psychology in the next 8 years. The emphasis on skills, workforce readiness, and gaps between employer expectations and graduates' skills affects psychology majors. The value of an undergraduate degree in psychology has long been questioned by the general public, and there is currently an urgent need for improved assessment of psychology majors' skills at graduation. We identify the challenges associated with measuring the outcomes of an undergraduate degree in psychology, and we highlight the insights and contributions of our colleagues at the graduate level who train and educate professional psychologists. Finally, we make recommendations for documenting the utility of the degree as strong preparation in the liberal arts and as a means for informing the citizenry of the value of our discipline.

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According to the [Centers for Disease Control \(2014, 2015\)](#), many of the leading causes of death in the U.S. are preventable and behaviorally linked. Psychology, as an academic and professional discipline, offers the greatest promise for addressing the health and wellness of people globally. More than 100,000 students graduate with a psychology degree annually in the United States. Over the course of the past decade, more than one million students earned their bachelor's degree in psychology. If the current rate of growth continues, it will take only 8 additional years to graduate the next one million psychology majors ([National Center for Education Statistics, 2016](#)). Despite the large

number of students graduating, psychology workforce graduates (our term for students earning a bachelor's degree in psychology but do not pursue graduate education in psychology) remain the most underutilized resource for addressing, understanding, and resolving behavior-related threats to our collective quality of life. If educators reenvision the undergraduate degree as a vehicle for addressing behavioral change, our large number of graduates become a resource for educating the general public about the science of psychology; even the MCATs have now been reenvisioned to focus on psychology ([Mitchell, Lewis, Satterfield, & Hong, 2016](#)). In this article, we briefly review the general skills developed through the undergraduate degree, and more specifically, the skills of the psychology major. We also identify the challenges in measuring the outcomes of the major and offer recommendations for capitalizing on the opportunity to deploy this large number of students as ambassadors of the discipline.

Many educators within psychology are passionate about the content of the discipline, and in some cases educators may focus too much on the selection of content to be taught rather than the student's ability to apply what is learned.

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That is, to measure the outcomes of a bachelor's degree in psychology should be about both the content acquired and the skills developed. We gently argue that there should be (at least) dual emphasis on content and skills; there are multiple recent instances where the importance of what to major in is being called into question (Haskins, 2016; Lohr, 2017; Selingo, 2013). These recent trends shape our approach to these important topics.

Skills Expected of All College Graduates

In this section, we provide a brief overview of the skills purported to be developed as a function of a college education. Many higher education organizations provide guidelines for skills that should be developed throughout the undergraduate experience. For example, the Association of American Colleges and Universities (AAC&U, 2004) offered five key outcomes for a liberal education, including (a) strong skills (analytical, communication, quantitative, information); (b) deep understanding and applied experiences within disciplines that study nature, society, and culture; (c) collaboration skills and intercultural knowledge; (d) civic responsibility with a proactive approach, and (e) habits of mind that promote integrative thinking, and the ability to apply/transfer knowledge and skills from one setting to another. Lumina Foundation for Education (2010) recommends a more general degree profile approach around four broad areas of learning: applied learning, knowledge (specialized, broad, and integrative knowledge), skills (communication and thinking skills), and civic learning.

Although higher education organizations have provided some guidance for skills developed through an undergraduate degree, employers value related (but slightly different) skills. In 1991 the U.S. Department of Labor issued the Secretary's Commission on Achieving Necessary Skills (SCANS) report listing requisite workplace skills, categorizing basic workplace skills as competencies or foundation skills (i.e., reading, writing, and arithmetic). To establish a foundation, workers need to possess basic skills (reading, writing, math, communication skills), thinking skills (creative thinking, decision-making and problem solving, metacognitive skills), and personal qualities (individual responsibility, self-esteem, sociability, integrity).

Effective workers must then be able to apply their foundational skills to productively use (a) resources, (b) interpersonal skills, (c) information, (d), systems, and (e) technology. However, the Association for Career and Technical Education (ACTE, 2010) suggested that these skills are essential, but incomplete. They suggested that employees should also be able to apply academic knowledge and technical skills in practical situations, such as demonstrate the precise skills that may be necessary for licensure or certification in certain fields.

Using survey methodology, employers and college students about to graduate were each asked to rate the preparedness across multiple learning outcomes (e.g., working with others in teams, critical/analytical thinking, oral communication). Hart Research Associates (2015) reported large gaps between employer perceptions and student perceptions of preparedness of current college graduates—in every instance, college students reported that they were better prepared as compared with employers reporting of student preparation. They also found that employers continue to highly value oral and written communication skills, teamwork skills, ethical decision-making skills, critical thinking, and the ability to use and apply knowledge in real-world setting. In this study, these cross-cutting “soft” skills were rated more important to employers than the success of the student in his or her undergraduate major.

In addition to employers and higher education organizations, the general public has expectations of college graduates. In a survey of the general public, AAC&U (2005) found that (a) preparing undergraduate students for a career, (b) preparing students to be responsible citizens, (c) providing education to adults so they qualify for better jobs, (d) helping elementary and high schools do a better job teaching children, and (e) offering a broad-based general education to undergraduate students were among the top priorities or expectations of college graduates. Similarly, Baum and Ma (2007) suggested that societal benefits of higher education include lower unemployment, lower poverty rates, increased overall earnings, healthier lifestyles, higher levels of civic involvement, and increased consideration of others' opinions, as compared with those without a college education. These goals do not comprise specific learning objectives, but rather the broad goals of higher education. It is unfor-

tunate that when the general public was asked to rate the job that higher education system (*Chronicle of Higher Education*, 2011) is doing in providing value, 5% responded with an excellent rating, 35% good, 42% fair, and 15% poor. Thus, employers and the general public expect college graduates to possess a set of general skills at the conclusion of the baccalaureate degree, yet there is little evidence or confidence that these skills are present in college graduates.

Skills Expected of Psychology Graduates

Organizations, employers, and the public expect a general set of skills to be present as a result of an undergraduate degree (Baum & Ma, 2007; Hart Research Associates, 2015). The discipline of psychology has long held that these liberal arts skills are at the foundation of a baccalaureate degree in psychology, and that the discipline offers a value-added promise of understanding basic behavioral principles. If psychology can clearly measure both the general and specific skills that are the result of a bachelor's degree, graduates will be better positioned in the workplace and as global citizens. A number of recent good works have been published about this topic, including skills in general (Strohmetz et al., 2015), skill development in introductory psychology (Jhangiani & Hardin, 2015), and student perceptions of skills valued by employers (Miller & Carducci, 2015).

Although there are data available about the preparedness and satisfaction of psychology alumni in the workforce (Borden & Rajecki, 2000; Fried & Johanson, 2003; Landrum, Hettich, & Wilner, 2010; Rajecki & Borden, 2010), few researchers specifically address the assessment of *skills*. Understanding the role that skill development plays for an undergraduate student is important for tracking the both workforce readiness and satisfaction with the major at graduation.

In a highly visible case drawing national attention, the Board of Governors of the State University System of Florida questioned whether there were too many psychology majors (Halonen, 2011). Leading Florida educators collaborated to answer that question with respect to the popularity, utility, and rigor of the psychology major. Not only did this effort help to define the roles and values of a psychology

undergraduate degree, but it also highlights the importance of a discipline to be able to tell its own story, that is, can psychology articulate the beneficial effects of a bachelor's degree in psychology and back those opinions with empirical evidence? Although Halonen (2011) was able to eloquently defend the value of the bachelor's degree in psychology, the challenges continue. Republican presidential candidate Jeb Bush suggested in 2015 that the typical psychology major will end up working a Chick-fil-A, a national fast food restaurant chain (C. Mills, 2015). These public assertions about the value of the psychology major emphasize the need for empirical data documenting skills developed through the major, rather than just heartfelt beliefs by psychology educators. Meaningful rejoinders to the Board of Governors or Jeb Bush would be much more convincing with valid, behavior-based assessment data. Although Norcross et al. (2016) refer to the availability of assessment data, these data are about program assessment or outcomes assessment, whereas descriptive programmatic data are gathered nationally, or programs are asked about the types of evidence that departments use in a self-study. These data typically do not address the quality of outcomes regarding the workforce readiness of individual psychology baccalaureates, per se.

Clear evidence of well-developed skills would allow psychology graduates to be a powerful lever of change as our ambassadors to the public. That is, our graduates could promote the public face of psychology through helping educate the public about the diverse applications and scientific foundation of psychology, and serve as engaged citizens in a myriad of work settings to help affect change and solve problems. Although work does exist about the public's perceptions of psychology (Ferguson, 2015; Lilienfeld, 2012; K. L. Mills, 2009), effective ambassadors need credibility and an accomplished skill set if they are to promote the public face of psychology as well as affect behavior and attitude change.

Psychology's Progress and Promise

The leader in national policy-making about postsecondary education in psychology is the American Psychological Association (APA). APA has sponsored numerous task forces and conferences to address the undergraduate edu-

cation; for a summary, see Halpern (2010). In 2013, the *APA Guidelines for the Undergraduate Psychology Major Version 2.0* emerged, with five overarching goals for the undergraduate psychology major. The *Guidelines 2.0* document is not only aspirational, but provides concrete suggestions about how many of the goals and subgoals may be assessed in a meaningful manner. Three efforts which are particularly relevant to psychology's promise are the APA Board of Educational Affairs Task Force document *Teaching, Learning, & Assessing in a Developmentally Coherent Curriculum* (APA, 2008), the quality benchmarks offered to aid in the evaluation of how well undergraduate psychology programs achieve their goals (Dunn, McCarthy, Baker, Halonen, & Hill, 2007), and the recent APA (2017) Board of Educational Affairs document *Assessment of Outcomes of the Introductory Course in Psychology*. The *Developmentally Coherent Curriculum* document provided specific advice to educators on how to achieve *Guidelines* goals across the curriculum as a student progresses through the undergraduate major, and the quality benchmarks work provided markers and rubrics for departments in their evaluation of the extent to which goals are achieved, using an evaluative continuum ranging from underdeveloped—developing—effective—distinguished levels of accomplishment. More recently, the working group that created the *Assessment of Outcomes of the Introductory Course in Psychology* document recommended offered five concrete recommendations for assessment in the introductory psychology course; many of these recommendations overlap nicely with the recommendations we offer at the conclusion of this article.

Following a national conference on undergraduate education in psychology held at the University of Puget Sound in 2008, Halpern (2010) curated a volume of edited chapters about that event in *Undergraduate Education in Psychology: A Blueprint for the Future of the Discipline*. This edited volume of 10 chapters ends with the *Principles for Quality Education in Psychology*, and also contains chapters about psychological literacy, the emergence of the scientist-educator model, curriculum matters, and pedagogical principles. In the penultimate chapter about outcomes (Landrum, Beins, et al., 2010), recommendations were made concerning the assessment of undergraduates beyond that of

content knowledge. The importance of assessment continues to be echoed when an APA Board of Educational Affairs working group published *Assessment of Outcomes of the Introductory Course in Psychology* (APA, 2017); see also Gurung et al. (2016). Key recommendations include the encouragement to develop a national assessment plan for the introductory psychology course. In June 2016 the APA Education Directorate and the Committee on Associate and Baccalaureate Education (CABE) hosted the Summit on National Assessment of Psychology (SNAP) at the University of Wisconsin-Green Bay. The outcomes of this summit include a resource repository of authentic assessments for 2-year (foundational) and 4-year (baccalaureate) students (Hailstorks & Boenau, 2017). This resource can be accessed at pass.apa.org; after registering for a free account, users gain access to assessment strategies organized around the five *Guidelines 2.0* goals, and includes information such as if the assessment strategy is evidence-based or evidence-informed, an overview of the courses/contexts for its use, formal instructions, grading rubrics, and access to user reviews of the strategies. For example of how the *Guidelines 2.0* document may be useful in thinking about assessment, see Table 1.

Continuing Challenges

Psychology educators have a good idea about a student's skill level within a particular course, but less is known about their overall skill levels at commencement. Surely one of the added benefits of an undergraduate psychology education is the attainment of skills, but we currently lack the resources or desire (and in some cases, we may lack the measurement tools) for meaningful skills assessment on a national level over a longitudinal time frame.

Although there are many resources available to support students applying to graduate school admissions (e.g., APA, 2015a; 2015b; Buskist & Burke, 2006; Kracen & Wallace, 2008; Norcross & Sayette, 2014; Privitera, 2014), being successful in graduate school (e.g., Giordano, Davis, & Licht, 2011; Walfish & Hess, 2001), and the career launch for psychology master's degree and doctorate recipients (e.g., Davis, Giordano, & Licht, 2009; Morgan & Landrum, 2012), there is relatively little attention and re-

Table 1
Assessment Examples Matched to the APA Guidelines 2.0

Guideline	Potential assessment examples
1. Knowledge base in psychology	GRE Subject Test in Psychology, Psychology Area Concentration Achievement Test, Psychology Major Field Test
2. Scientific inquiry and critical thinking	Collegiate Learning Assessment, Psychological Critical Thinking Exam, Halpern Critical Thinking Assessment, Watson-Glaser Critical Thinking Approach
3. Ethical and social responsibility in a diversity world	Beliefs, Events, and Values Inventory, Munroe Multicultural Attitude Scale Questionnaire, Scale of Ethnocultural Empathy, Intercultural Development Inventory
4. Communication	COMPASS Writing Skills Test and Writing Essay Test, CAAP Writing Essay Test and Writing Skills Test, WorkKeys Foundational Skills Assessment
5. Professional development	Metacognitive Awareness Inventory, Learning and Study Strategies Inventory, Emotion and Social Competency Inventory

Note. Examples are excerpted from the American Psychological Association (APA, 2013) *APA Guidelines for the Undergraduate Psychology Major Version 2.0*.

search devoted to the 75% of psychology undergraduates who do not pursue a graduate degree in psychology, with few exceptions (e.g., Hettich & Landrum, 2014; Landrum, 2009). We refer to this group of psychology bachelor's degree recipients as workforce graduates. The postmodern psychology educator should not be singularly focused on self-replication (i.e., encouraging all students to go to graduate school to be like himself/herself). More attention needs to be paid, both in terms of empirical research and advising resources, to the majority of our pipeline—that is, workforce graduates.

Our students need to be able to tell their success story with data (credentials, badges), and Departments of Psychology need to be able to tell their success stories with data; not just the perfunctory 5-year outcomes assessment efforts, but meaningful data that links undergraduate coursework and high-impact practices (internships, research assistantships) to persistence (graduation) and then followed into career satisfaction measures, satisfaction with undergraduate education, and ultimately enhanced quality of life. Psychology educators are no longer the singular providers of psychology content knowledge (MOOCs, online for-profits, YouTube). If Departments of Psychology cannot articulate their added value to an undergraduate education compared with cheaper alternatives, then we are at risk (Kuh, Kinzie, Schuh, & Whitt, 2010).

Additionally, these efforts should be coordinated on a national level, such that the outcomes

are more generalizable and not limited to interpretation at any singular institution. If psychology as a discipline wants to promote public good and be able to demonstrate the benefits of majoring in psychology (such as the attainment of psychological literacy), then we need tangible measures of skills such that we know how to better prepare graduates for interpersonal and workforce success. Educators have made great strides in certain areas of *Guidelines 2.0* and the efforts to develop measures of the components of psychological literacy. But if we value abilities such as critical thinking and communication skills, should we not use our fundamental, discipline-based approach in seeking empirical evidence to demonstrate the efficacy of our pedagogy? In other words, if we were to measure critical thinking skills at graduation, not only would we have assessment data that would be valuable for mapping departmental performance and developing pedagogical best practices, but we could also link outcomes at graduation to later measures of personal satisfaction and workforce success for our graduates and our profession. There are some measures available for each of the *APA Guidelines 2.0* goals; some measures are more directly related to the goal than others. One question to ask is this: how many institutions or departments administer any of these measures at or near graduation? The era of seat time must end (Laitinen, 2012); earning the minimum number of credits to graduate with a bachelor's degree is a distant proxy for competency. Without systematic administration and

coordination of these efforts, we cannot even answer the question of prevalence of measurement, much less answer the question of level of competency attained by our graduates.

We believe that psychology as a discipline is at a critical crossroads—we have a substantial desire to teach students core knowledge and applied skills to be successful, both interpersonally and professionally. If we fail to educate our students and the public about human behavior, others will fill the void, whether it be through the propagation of myths (see examples in Liliensfeld, Lynn, Ruscio, & Beyerstein, 2010), the preponderance of self-help literature (see examples in Stanovich, 2010) with no evidence-based foundation, or the denigration of the selection of psychology as one's major (see Halonen, 2011; C. Mills, 2015). Not only does this void leave us vulnerable to stereotypes and misperceptions about the discipline (Halpern, 2010), but this misinformation robs psychologists of the potential to promote the benefits of psychological literacy and the value of our discipline to higher education constituencies and the general public. Accurate self-promotion and positive public relations are not evil; if we do not tell our story, then who will tell it for us?

We owe it to our past and future ambassadors of psychology (millions strong) to develop multiple measures of skills attainment, and to organize and coordinate national efforts to document individual achievement as well as develop best practice pedagogical recommendations for departments and institutions. As psychologists, we have the basic and applied skills to develop such measures, and other disciplines may look to us to lead this charge—if we do not step up, others will, and we lose control over our disciplinary destiny. Our undergraduate pipeline is the key to our discipline's future, for the advancement of science, the practice of the profession, and in the public interest. Psychology educators should strive to create intentional learners (AAC&U, 2002). Intentional learners adapt to new environments, use methods of inquiry to integrate data from multiple sources, and foster lifelong learning. Intentional learners become empowered through the acquisition of knowledge and demonstration of skills, and they become informed about the world by using multiple forms of inquiry, and become responsible for their personal behavior and espouse civic values. Whether the label be intentional

learners or the psychologically literate, attainment of these goals is too important to leave to chance.

Next Steps for Improving Undergraduate Psychology Education

Our colleagues in the professional graduate psychology world have admirably tackled the complex task of establishing practicum, internship, and entry-to-practice benchmarks necessary for establishing competency as a professional psychologist. Beginning with the competency cube model (Rodolfa et al., 2005), this work was revised and transformed into the competency benchmarks model (Fouad et al., 2009). This model is organized around 15 foundational competencies, each of which is appropriate to assess readiness for practicum, internship, and entry to practice. Consider the challenges in establishing competency benchmarks in the following foundational areas: professionalism, reflective practice (self-assessment, self-care), scientific knowledge and methods, relationships, individual and cultural diversity, ethical legal standards and policy, interdisciplinary systems, functional competencies, assessment, intervention, research and evaluation, supervision, teaching, management/administration, and advocacy. Together the model includes 45 competencies that are measured using behavioral anchors that must be demonstrated at a level commensurate with the level of training expected of a professional psychologist possessing the foundational competencies. Our colleagues in the practice realm have found a way to measure complex constructs to ensure that professional psychologists are qualified. Why not employ a similar model with measurable benchmarks for undergraduate assessment? A fully implemented multimodal multimethod approach includes behavior-based embedded assessments, nationally standardized tests, cross-sectional and longitudinal studies, and the creation of a national database of test results that may be useful for program review purposes and well as the identification of best practices.

First, we recommend that psychometrically appropriate measures of skills (i.e., writing, speaking, research skills, collaborative skills, and information literacy skills) should be utilized systematically throughout the undergraduate experience. A common assignment or activity used across class sections would provide

one measure of these skills purported to be developed through the undergraduate degree in psychology. Many possible measures are available at the curated APA Project Assessment website pass.apa.org.

Second, we recommend that a nationally standardized test of basic content should be used to assess the information that we hope ambassadors of the discipline will convey throughout their lives. Such an instrument would measure content related to common myths and those areas most likely to contribute to the overall health of the global citizenry. Although the Major Field Test (MFT) published by the Educational Testing Services already offers a comprehensive measure of the outcomes of the content (Educational Testing Service, 2017), the instrument is expensive and to our knowledge it is used by very few programs.

Third, we recommend that departments maintain an ongoing alumni database to track the careers of students who graduate with an undergraduate degree in psychology. If the APA provided a template for such tracking, this data could be submitted annually to a data warehouse. This type of information would provide the discipline with important data about the utility of the undergraduate degree in psychology. Ideally, nationally coordinated research would start to emerge that measures the skills attained at the time of graduation and their retention into the first jobs of the graduates' career.

Fourth, as educators we need to work to lift the collective value of assessment and make sure that faculty members and students alike understand its importance. It is important to have empirical data available so that psychology educators understand the perceptions of what employers *think* psychology graduates know and can do. If the process of examining assessment data and student outcomes were akin to the promotion and tenure process, imagine the enhanced value and effort that would be focused. This emphasis needs to include professional support (i.e., expertise), fiscal support, and enough time for faculty members to assess and reflect fully.

As Carey (2010) stated,

Without information about learning, there is less learning. Faculty cultures and incentive regimes that systematically devalue teaching in favor of research are allowed to persist because there is no basis for fixing

them and no irrefutable evidence of how much students are being shortchanged. (p. A72)

In our opinion an important component of assessment is using the information to inform and revise educational practice, that is, the now-classic cliché “closing the loop.” The ultimate goal of testing is the prediction of nontest behavior. The ultimate goal of an undergraduate education in psychology is to impact behaviors, attitudes, and opinions of our students following graduation so that they can create real change in the world, whether that be through their own behavior or through positively influencing others.

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