Competency-based education (CBE) is a model that guides the educational process toward acquisition of the knowledge, skills, and attitudes needed for effective professional practice in service of the public. Increasingly adopted by medicine and other professions, the CBE model involves establishing competency goals, developing curricula and other experiences designed to help students reach these goals, integrating instruction in the full range of competencies throughout the educational sequence, guiding and evaluating student learning through ongoing assessment of competence, and revising courses and activities in light of student competence outcomes. Included in a full CBE model are attention to unintended learning outcomes (the “hidden curriculum”) and to areas not covered (the “null curriculum”), and efforts to promote education based on individual student learning trajectories as opposed to set courses or number of hours. Within professional psychology, we suggest that APA accreditation is aligned with a version of the CBE model; and significant progress has been made in identifying and measuring professional competencies. However, these are merely tools that can help training programs implement a broader CBE educational model that we contend has not been widely realized in professional psychology. This article reviews CBE and its application in medicine, discusses the benefits and criticisms of CBE, and considers what a fuller realization of CBE would look like in professional psychology training programs, including graduate programs, practicum, internships, and postdoctoral settings.

Keywords: competency-based education, curriculum, graduate education

In recent years, the time-honored processes of doctoral education and training in the health professions have been challenged by a new model known as competency-based education, or CBE. This model has greatly affected education in a number of professions, including medicine and dentistry (Chambers, 1993; Frank et al., 2010; Licari & Chambers, 2008). Some features of CBE have
emerged within professional psychology (Kaslow, 2004), but we believe that there is much room for further growth. Certainly, there have been continuing efforts to identify core, developmentally ordered professional competencies, and to identify and create effective means for assessing competence (Fouad et al., 2009; Hatcher et al., 2013; Health Service Psychology Education Collaborative [HSPEC], 2013; Kaslow et al., 2007). Accreditation in professional psychology is based on demonstrating assessment and achievement of explicitly stated educational outcomes (APA Commission on Accreditation [CoA], 2009). However, it is noteworthy that CBE is actually an organizing basis for accreditation, and the implications of CBE for the competencies movement with professional psychology have not been fully explored.

In this article, six psychology educators who have played significant roles in developing and implementing competency models during the past decade describe and discuss CBE, and offer their views on its role and relevance for education in professional psychology. We examine developments in medicine and refer to developments in dentistry, where CBE has been implemented and documented extensively. The critical discussions in these disciplines that have exposed the benefits and pitfalls of CBE can assist professional psychology educators in developing their own approach to CBE. The efforts in medicine and dentistry to implement CBE may inform deliberations within professional psychology as to how, and to what extent, it wishes to embrace what has been called a “culture of competence” (Roberts, Borden, Christiansen, & Lopez, 2005). At the conclusion of this article, we offer our recommendations for how educators in professional psychology might best utilize CBE in their programs.

What Is CBE?

The Goals of CBE

The overriding goal of CBE is to ensure that the public is served by competent professionals—by graduates who possess and employ the full range of knowledge, skills, attitudes, and behaviors that are required for skilled and effective performance as a professional (Albanese, Mejicano, Anderson, & Gruppen, 2010). The emphasis on social responsibility, on protecting and serving the public, is a hallmark of CBE, and has been a prime motivator behind its support by governmental regulators such as the U.S. Department of Education and by accrediting organizations. CBE is student centered, and seeks optimal learning conditions for students (Frank et al., 2010; McGaghie, Miller, Sajid, & Teldner, 1978). Ensuring that every student is competent for practice is beneficial to students as well as to the public. Students are more satisfied and competent, better understand the goals of their training, and take more responsibility for their own learning (Albanese et al., 2010; Frank et al., 2010; Litzelman & Cottingham, 2007). CBE seeks to optimize use of educational resources, including the use of student time; to document students’ progressive achievement of competence; to provide earlier and more effective remediation when student competence lags; and to demonstrate and evaluate achievement of program goals.

Tools for Implementing CBE

To achieve these goals, CBE focuses on competencies, “the knowledge, skills, attitudes and personal qualities essential to . . . practice” (Albanese, Mejicano, Mullan, Kokotailo, & Gruppen, 2008, p. 250). CBE is based on identification and careful description of the competencies a graduate must attain, and of the competence milestones that should be met during training. Once competencies are identified, the quality of CBE stands or falls on the quality of assessment. Assessment is critical in guiding student learning, and in determining that students have truly achieved competence in the required domains. Thus developmentally based competency frameworks and good evaluation methods are essential tools for CBE. However, they are only tools; the biggest challenge of CBE lies in creating and implementing a competency-based educational program.

Implementation

Given that the goal of CBE is to produce graduates competent in explicitly identified competency domains, how fully it is implemented may vary along four major dimensions:

1. To what degree the curriculum is organized to optimize coverage and acquisition of all required competencies, and to integrate each competency within each component of training when feasible;

2. To what degree the program is designed to utilize assessment of specific, developmentally based competencies to guide student learning and to track student progress;

3. To what degree the program utilizes assessment outcomes to review and improve the curriculum;

4. To what degree the program’s structure is built to accommodate the individual student’s trajectory of developing competence, so as to optimize individual student learning and waste as little student time as possible.

The fullest implementation of the CBE approach is entirely competence-based. The learning process is driven by the acquisition of competence, not by a set sequence of didactic and clinical experiences (Frank et al., 2010). This approach requires deep and continual commitment to teaching and assessing competencies on the part of faculty and administration. The curriculum is rigorously examined, rebalanced, and restructured to ensure that each competency is addressed fully throughout, and to eliminate content not relevant to competency goals. Across programs, a uniform curriculum is not necessary, as long as the product of any given program is competent graduates.

This full version of CBE is student centered, rather than course or teacher centered. It is not that a student must pass course A, B, and C; it is that the student must demonstrate competencies 1, 2, and 3, which courses A, B, and C, along with other experiences, are designed to promote. Further, because students arrive with different competency levels, and gain competence at different rates, time takes on a new role in the curriculum as education is liberated from set schedules. A student spends as much time learning a topic, method, or technique as is needed to acquire the...

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1 We use the term curriculum broadly, to include all planned components of training, such as formal courses, informal seminars, colloquia, practicum training, supervision, research mentorship, etc.
expected level of competence, as determined by frequent assessment. “Time then becomes a resource for education, not the marker of learning itself” (Frank et al., 2010, p. 643; see also McGaghie et al., 1978). Each student will have his or her own continuously changing competence profile, demonstrating relatively stronger competence in some areas, and less developed competence in others. These profiles drive individual learning plans, which are tailored to maximize acquisition of additional levels of competence, and minimize time spent beyond what is needed to achieve competence. Administrative structures are set up to monitor how well the courses and experiences offered help students achieve competence, and this information feeds back to optimize the program’s offerings.

CBE’s emphasis on competence and competencies is in tension with typical academic program structures. Curricula are generally built around sequences of courses and other experiences of set content and duration. This structure tends to encourage faculty to focus on their particular courses and learning objectives rather than on the larger picture. Licensing, and to some extent accreditation, are also keyed to time spent in specific courses and activities. As recent experiments in medical schools have demonstrated (L. Gruppen, personal communication, 2009; see also Albanese et al., 2010), the radical form of CBE is not surprisingly very difficult to implement, both in the context of a sequential curriculum and in the context of clinical rotations. Administrative, logistical, and service needs inevitably play a role in determining the time a student spends in an activity or course. Further, assessing and tracking individual students and their changing competence profiles can become a significant task for administrators and faculty unless class sizes are small. Overall, the full form of CBE is an awkward fit with typical academic structures and practices, and with licensing laws and regulations, all of which may require that certain amounts of time be spent in specified courses and training experiences, where time is a marker of learning rather than a resource.

Nevertheless, CBE programs can function with less rigorous implementations of CBE, while achieving many of its features and advantages, based on consideration of the four dimensions noted above. Programs will determine how fully to invest in these features of CBE, so as to produce graduates with demonstrated competence in the expected domains, and to achieve other benefits of CBE. Programs’ implementation of CBE will occur in negotiation with the established realities of curricular structures, university policies regarding faculty time and course structure, accreditation standards, and licensing requirements. These implementations involve compromises with the full, radical version of CBE.

CBE’s Current Presence in Professional Psychology

Competencies have received a fair amount of attention in professional psychology in the past decade, but actually a competency-based approach dates back to the delineation of competencies by the National Council of Professional Schools in Psychology (Peterson, Peterson, Abrams, Stricker, & Ducheny, 2010) and the changes made to accreditation guidelines in 1996. The former have been thoroughly documented elsewhere (Fouad et al., 2009; Peterson, others), but the role of CBE in accreditation is less well understood.

Accreditation

From the start, accreditation in professional psychology was intended to provide public accountability, to ensure that the public was served by competent psychologists, and to protect students (Altmaier, 2003; Nelson & Messenger, 2003). Accreditation and CBE share these fundamental purposes. It may not be widely recognized that accreditation in professional psychology, as conducted by the APA Commission on Accreditation, is structured by many key elements of CBE (APA CoA, 2009). These include:

1. Development of a training model with explicit, measurable educational outcome goals;
2. Demonstration of how the program assesses student outcomes and requires students to meet outcome standards;
3. Demonstration of how the curriculum provides the necessary training to achieve outcome goals, and how the program uses outcome assessment to modify the curriculum to better meet these goals.

Despite sharing key elements with CBE, APA accreditation guidelines and implementing regulations place much less explicit emphasis on demonstrating that program competency goals are well matched to the needs of the public served, although, as of this writing, the Committee on Accreditation is seeking comment on including a standardized set of competencies in its next set of guidelines. Accreditation policies place a good deal more emphasis on specific curricular content and time spent, thus leaning toward a curriculum that is more course- and time-based than the full version of CBE would typically entail. Thus the pace of learning is not keyed to acquisition of competence as in the full CBE model. Accreditation guidelines also place less emphasis on programs’ efforts to ensure that individual courses and training experiences incorporate learning across competencies, and do not attend to streamlining the curriculum or tailoring it for optimal training of each competency across courses and training experiences.

Further, APA accreditation does not expressly concern itself with incorporating assessment into the learning process itself, beyond simply determining that a student has met outcome standards. Although the accreditation guidelines stipulate that programs must match assessment to program outcomes, assessment in accredited programs most often involves course grades, qualifying exams, and supervisor ratings, requiring fairly minimal involvement of individual faculty in conceptualizing the links between their courses, case conferences, and supervisions and the program’s competency goals. There is limited focus on the specific competencies as realized in courses and training, and on the particulars of a student’s competence profile. Nevertheless, thinking explicitly and in detail about what a model graduate should be able to do, about how the curriculum addresses attaining the competencies involved, about how to measure the acquisition of these competencies, and about how the results of assessment should lead to modification of the curriculum—these are key features of CBE that are also core elements of APA accreditation standards. To the extent that programs embrace the values and processes required by accreditation, they have taken significant steps toward implementing CBE.
Competencies

The growth of professional psychology’s interest in competencies has roughly paralleled the rise of the current CoA accreditation model (Altmaier, 2003; Rubin et al., 2007). Surprisingly little attention has been paid to links between the two. The recent history of the competencies movement in professional psychology has been well documented (Fouad et al., 2009; Rubin et al., 2007). The overall goals of the competency movement, as described by Kaslow and colleagues (2007), are to “enhance the competence of professional psychologists and . . . [to] serve better and protect the public and consumers of psychological services” (p. 701). The focus of the competencies movement on identifying and assessing professional competencies has produced a comprehensive, developmentally sequenced set of professional competencies, with examples of how competence can be manifested throughout training, along with a comprehensive description of methods for assessing competence (Fouad et al., 2009; Hatcher et al., 2013; HSPEC, 2013; Kaslow et al., 2007; Rubin et al., 2007).

This work has produced valuable tools for furthering CBE in professional psychology. These tools can be used to assess the curriculum and associated training experiences to ensure that relevant competencies are taught and assessed in a sequential, developmentally appropriate way. They can help students understand what they need to know and be able to do as they progress through their training. They provide methods to assess student progress that can be used as formative feedback to help guide the individual student’s training experience. They generate cumulative, aggregated data that can demonstrate program outcomes, and can be used to review and modify the curriculum so as to better meet competency goals. All of these tools and activities should be of great help to programs in meeting and implementing the accreditation goals and activities set by the CoA.

Culture of Competence

The processes required to meet accreditation standards, and the tools developed through the competencies movement, certainly move education and training in professional psychology toward CBE practices. Several authors have expressed optimism in recent years that programs in professional psychology are near to adopting a fuller CBE model. For example, Rubin and colleagues (2007) concluded that:

Psychology education, training, and credentialing are on the brink of a major paradigm shift in culture toward an approach that is devoted to providing outcomes-based education and training; defining benchmarks of specific competencies; ascertaining how to most effectively attain these competencies; developing and implementing reliable, valid, and high-fidelity measurements of outcomes; and offering remediation and enrichment for individuals whose performance is not consistent with expected outcomes (p. 459).

Citing Nelson (2007); Fouad and colleagues (2009) stated that “a major pedagogical shift has occurred in professional psychology, a move toward measuring trainee learning outcomes, articulated as competencies, as a primary focus of the education and training process . . . ” (p. S8). Fouad and colleagues also stressed other CBE features, including recognizing that the CBE model implies individual training trajectories, the need to monitor students’ progress carefully and frequently to ensure optimal progress, and the need for consistent documentation of students’ progress toward competence.

Although current efforts in professional psychology have taken hold of some of the key features of CBE, there is little evidence that they have been assembled into a full CBE model for the field. The processes required by accreditation, and the competency and assessment tools, provide some basic building blocks that could be used to develop an integrated CBE program. However, fuller integration of these tools and processes into the core functioning of educational programs would be necessary for even a moderate version of CBE, and the other CBE features we have discussed have gone largely unaddressed in professional psychology. We would argue that the culture of competence is in the beginning stages of development.

What might a fuller implementation of CBE in professional psychology look like? We are aware of no published examples of CBE programs in our field to draw upon. However, there are numerous examples and discussions of implementing CBE in medical education that may be helpful in envisioning CBE for professional psychology.

Implementation of CBE: Examples From Medicine

Origins of CBE in Medicine

Medical education is in the forefront of implementing CBE and provides examples of successful CBE programs, as well as highlighting the various advantages, costs, and challenges involved. Medicine’s focus on CBE grows out of a long tradition of review and critique of medical education and training dating back to the Flexner Report (Chapman, 1974), and is supported by a large and growing international literature in a variety of dedicated journals (e.g., Academic Medicine, Medical Education, Medical Teacher, Advances in Health Sciences Education), and by departments of medical education in many medical schools in the U.S. and abroad. A series of critical reports sponsored by the Association of American Medical Colleges (AAMC) and the Macy Foundation (Smith & Dollase, 1999; Smith & Fuller, 2000) called on medical schools to ensure that each graduate had the necessary knowledge, skills, and attitudes to practice medicine competently, and to ensure that all students were adequately assessed in these competencies during their training. Responding to these critiques, Brown University School of Medicine took the initiative to become a pioneer in implementing CBE (Smith & Dollase, 1999). More recently, the work of transforming a medical school on CBE principles modeled by Brown was taken up with special vigor by the Indiana University School of Medicine (IUSM, comprising seven campuses; Cottingham et al., 2008; Litze1man & Cottingham, 2007). In addition to Brown and IUSM, the University of Minnesota (Powell, 2012), the University of California San Francisco (Loeser, O’Sullivan & Irby, 2007; Loeser & Irby, 2010)), and the University of Florida (University of Florida College of Medicine, 2012), among others, have mounted competency-based programs (Sherwin, 2011).

Setting up CBE Programs

Common processes in setting up a competency-based program can be gleaned from several detailed reports in the medical edu-
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1. Create or adapt a set of competencies that graduates must possess in order to provide competent medical care to the public. To create their sets of competencies, Brown and IUSM utilized an iterative internal process involving faculty and students; IUSM utilized Brown’s and other schools’ competency accounts as resources. Since 1999, all graduate and undergraduate medical programs are guided in this process by a set of six general competencies, with extensive supporting documentation, developed by the Accreditation Council for Graduate Medical Education (ACGME; 2012). Faculty and students are fully familiarized with the resulting detailed competency goals.

2. Assess the current curriculum to determine whether and how the competencies are covered and mastered. Surveys of graduates were used as part of this process.

3. Build or modify the curriculum to ensure that each course or training experience addresses each competency as appropriate. Develop suitable methods to assess acquisition of these competencies in the context of each course or training experience, including ongoing formative assessments to guide student learning during the course or experience. Brown took a conservative approach, leaving each course intact, but requiring faculty to show how its content addressed and assessed the required competency areas. This actually resulted in considerable modification of course content (Smith & Dollase, 1999). IUSM worked to modify courses or course content to enhance effective assessment and mastery of the competencies, and to establish new courses to help address competencies not properly covered in the existing curriculum.

4. Set up administrative structures to work with instructors to ensure that courses meet expectations for covering and assessing competencies, and that the curriculum in total serves to generate graduates who have mastered all competencies. IUSM established competency directors for each of several competency domains to ensure that all competencies were represented in all courses as appropriate. Brown set up assessment committees to ensure that assessment plans, guided by competency goals, were properly set up and maintained in each course, with regular reports from each instructor. These groups in turn participated in higher level administrative structures set up to review the curriculum regularly in light of assessment outcomes to ensure effective coverage of competency domains.

5. Build and store individual student competency plans, organized by competencies, and containing results of assessments. Build an advising system to support planning and monitoring these plans. Brown and IUSM set up electronic systems with this information, accessible at all times by the individual student. To graduate, students must be certified as competent in all domains, and may select different training experiences to achieve certification.

CBE and the Hidden Curriculum

In addressing the curriculum, a number of medical schools have found it important to look beyond the formal curriculum to other significant ways that the institution and faculty influence student learning and competency outcomes. These other ways have been called the “hidden curriculum,” drawing a contrast between “what is openly intended that students learn and what, although not openly intended, they do, in fact, learn” (Martin, 1976, p. 136). Martin’s thoughtful discussion and definition of the hidden curriculum includes both positive and negative learning outcomes, and she notes that the hidden curriculum is not confined to educational programs, and can be found in any situation where learning occurs. Martin’s broad definition of the hidden curriculum has been used by other authors (e.g., Cribb & Bignold, 1999; Turbes, Krebs, & Axtell, 2002), recognizing that unintended influences on learning can come from any source, including the formal curriculum itself. An additional, complementary concept, the “null” curriculum, refers to what is excluded from the curriculum (Ahwee et al., 2004). These important sources of influence on student learning have received extensive attention in the medical education literature (e.g., Ahwee et al., 2004; Cribb & Bignold, 1999; Hafferty, 1998; Karnieli-Miller, Vu, Holtman, Clyman, & Inui, 2010; Lempp & Seale, 2004; Ozolin, Hall, & Peterson, 2008; Turbes et al., 2002).

Examples of the negative hidden curriculum include negative supervisor or faculty attitudes toward women, minorities, and impoverished people; negative attitudes toward science- or evidence-based practice; dismissive or critical attitudes toward students who are novices or are struggling to achieve competence; reluctant, unresponsive, or overly critical advisors; and reluctance to consider alternate approaches to treatment. Positive examples include supervisors going out of their way to help patients in distress, faculty modeling positive attitudes and approaches toward diverse others, receiving criticism and differing views respectfully, and providing growth-oriented criticism versus critical and negative feedback (Karnieli-Miller et al., 2010; Lempp & Seale, 2004).

To detect the hidden and null curriculum, programs have used faculty discussion groups (e.g., Litzelman & Cottingham, 2007), surveys, focus groups, qualitative interview studies of student experience (e.g., Karnieli-Miller et al., 2010; Lempp & Seale, 2004; Ozolins et al., 2008), content analyses of case conferences, and examples (e.g., Turbes et al., 2002), among other methods. Uncovering hidden and null aspects of the curriculum requires an ongoing effort. These approaches have sometimes been guided by broader curriculum review goals. IUSM faculty and administration have worked extensively to assist students and faculty in reflecting on, articulating, and enacting the moral, ethical, and humane values their formal curriculum espouses (Karnieli-Miller et al.,

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2 Professional psychology took on an important instance of its “null” curriculum, and perhaps its hidden curriculum, by addressing the lack of organized teaching about individual and cultural differences (e.g., APA CoR, 2002).
Obstacles and Objections

In the course of implementing CBE, medical programs have encountered both practical and philosophical obstacles and objections. At a philosophical level, there is concern that a competence approach replaces the overall goal of excellence with a minimum standard of competence, leading to lower quality programs and graduates (Hodges, 2006). A related concern is that by focusing on demonstrable behavior, the competence approach becomes “behaviorist,” losing sight of the less tangible essence of a good physician (Brooks, 2009; Reeves, Fox, & Hodges, 2009). These objections have been addressed by Frank and colleagues (Frank et al., 2010; Snell & Frank, 2010) among others. In a culture of excellence, competence is a minimum requirement, an assurance that every graduate is capable of effective practice. However, assuring that no student falls behind does not require abandoning an overriding commitment to excellence. CBE would fail if the process of identifying the competencies and linking them to the curriculum fails to preserve the model of the complete physician upon which it is based, including an overall commitment to excellence. The counter argument to the objection concerning the essence of a good physician is that if these qualities exist for a given professional, they will become manifest in the professional’s behavior, and if they are manifest, they can be described and evaluated (Snell & Frank, 2010). At the same time, it is widely acknowledged that the danger of becoming narrowly focused on “meeting competencies” is real, if the program loses sight of the overall goals of CBE (Licari & Chambers, 2008).

Practical obstacles to implementing CBE include the structures and policies of the university and program as well as the established practices and attitudes of the faculty. The medical education literature has been primarily concerned with faculty issues (e.g., Grochowski, Halperin, & Buckley, 2007; Litzelman & Cottingham, 2007; Smith & Dollase, 1999). Faculty and trainers tend to focus on the specific content of their domains of expertise, expecting students to master this content, and are not necessarily motivated to consider how their courses do (or do not) contribute to the broader set of knowledge, skills, and attitudes needed by their students to perform their professional roles competently. They may believe that the current curriculum works adequately, and have difficulty seeing a reason to change it. Even if the overall idea is accepted, faculty may be reluctant to take on new competency-related topics in their courses (e.g., ethics in a statistics class). The chief means of addressing faculty concerns has been to embrace faculty as partners in considering and implementing CBE from the start. Effective leadership, with a good understanding of CBE and the issues in implementing it, is essential in bringing change to the curriculum (Bland et al., 2000; Litzelman & Cottingham, 2007).

A second and related practical obstacle is implementing effective assessment methods. Faculty and supervisors may be uncomfortable with the use of formal evaluation, which may be seen as interfering with the supportive, mentoring relationship between student and advisor or supervisor. Challenges posed by this conflict in roles for supervisors and advisors have been much discussed (e.g., Bogo, Regehr, Power, & Regehr, 2007; Cavalcanti & Detsky, 2011), and have led to ongoing efforts to reduce positive bias in faculty ratings, which pose a special problem in implementing policies for identifying and dealing with students with serious competence problems (Bogo et al., 2007; Dudek, Marks, & Regehr, 2005; Forrest, Shen Miller, & Elman, 2008; Gonsalvez et al., 2013).

Implementation of CBE in a large and complex medical school can take a substantial investment of financial and faculty resources over an extended period of time. Both Brown and IUSM took 4 or 5 years defining their competency goals and developing new curricula. Administrative structures and processes to support CBE were created, and problems in implementation worked out over that time, extending 6 to 8 years from the start (Litzelman & Cottingham, 2007; Smith & Dollase, 1999). The process would likely be considerably easier for the smaller programs that make up the majority of programs in professional psychology.

CBE in Professional Psychology

Examples from medicine may provide valuable guidance as professional psychology begins to implement a culture of competence. It is important to note, however, that there are differences in history, practice, structure, culture, and aims that affect how CBE may be implemented in medicine and professional psychology. For example, academic training in medicine is strongly oriented toward practice, and is increasingly organized around a broad consensus regarding core competencies (ACGME, 2012). Professional psychology continues to wrestle with competing and in some respects divergent competency goals that are broadly categorized by training model (e.g., scientist practitioner, practitioner scholar, clinical scientist). This makes defining the characteristics of a competent professional psychologist more challenging to educators seeking to frame competency goals. Nevertheless, the core CBE principles reviewed and listed above (see Implementation in The Goals of CBE section) may be applied in any of the settings where training and education in professional psychology occurs, including doctoral programs, practicum sites, internships, and postdoctoral residencies, at the level of an individual course or training module, and even in an advisement relationship. Further, CBE principles may be adopted at varying levels and in various ways, with increasing benefit to students and training settings.

A low level of CBE adoption approximates the minimum requirements for APA accreditation. Settings may utilize a preestablished set of outcome goals, and may not engage in their own extensive, inclusive discussions about goals. Individual instructors and supervisors may have considerable investment in the specific competencies that are the subject of their particular course or training, but may not seek to incorporate coverage of all a range of competencies as possible. To meet accreditation requirements, the setting must ensure that all competencies are covered, but may have limited investment in considering how best to balance the time spent on each competency across courses, or in setting up a procedure to monitor this issue over time. There may be minimal consideration of the steps toward competence expected
at various milestones during training, such as prior to practicum training, or at the end of the second year of the program. These developmental competencies may be loosely incorporated into the program’s goals—programs may track grades or other less discriminating markers of competence development, or may simply track whether a student has reached the level required for graduation. Supervisors or instructors may not make much use of competency indicators to guide the student’s learning during the course of a semester or training period. Settings may have a method for utilizing the outcomes of student assessment and other relevant data to evaluate the curriculum, but this method may not involve ongoing collaboration with faculty to modify their courses or trainings. Finally, there may not a systematic effort to modify the time spent in courses or training experiences according to the student’s learning trajectory. A setting operating at this low level of implementation will not reap the many benefits that can come from fuller implementation of CBE.

A high level of implementation involves an inclusive, setting-wide effort to identify and define the setting’s competence goals. For example, a graduate program or an internship may wish to dedicate itself to graduating professional psychologists competent to deliver health care services to the public within a scientist-practitioner model, implying a balanced emphasis on providing health services to clients and producing relevant original research. To aid in this effort, the setting may consult the literature that deals with the scientist-practitioner model (e.g., Belar & Perry, 1992) and the sets of matched competencies available from the Health Service Psychology Education Collaborative (HSPEC, 2013) or the Benchmarks Competencies (Fouad et al., 2009; Hatcher et al., 2013). A program will refine these general formulations to match its specific competency goals, filling in details as needed. Once competency goals are established, such a setting would work inclusively to examine its curriculum (including the hidden curriculum) to determine whether and how it helps students gain the desired competencies. Changes and additions to the curriculum, designed to better reach the desired competency goals, would be discussed and implemented. Each course instructor and supervisor, in consultation with others or an appropriate committee, would review the full list of the setting’s desired competencies and determine how the course, supervision, or other experience could incorporate as many of the competencies as possible. Are ethical issues dealt with in this course? Are measurement validity and reliability addressed in the context of the course or supervision? Are features of professionalism (e.g., how best to explain test results to clients) part of the course or supervision? Does the way feedback is given in the course, or by advisors and supervisors, match the setting’s goals for respectful but honest communication (hidden curriculum)?

A setting that seeks a high level of CBE implementation will utilize, and perhaps adapt and develop, a set of developmentally organized competency goals and indicators (e.g., Fouad et al., 2009; Hatcher et al., 2013; HSPEC, 2013). Postdoctoral programs may utilize specialized competency sets (e.g., France et al., 2008). These goals and indicators link the overall competencies expected of graduates to the sequential steps students will likely follow in acquiring them during the sequence of their training. A high level of implementation will involve examining each course or training experience in light of its set of competency goals, and then using the relevant indicators to guide student learning in an ongoing way. This involves a continual and thorough give and take between the student and the faculty or supervisor regarding the student’s performance and its evaluation in competency terms. For example, Schwartz (Schwartz & Grus, 2013) developed a course and associated practicum in evidence-based supervision. Utilizing a developmentally based competency manual for supervision (Falender & Shafranske, 2012), competency goals were established and discussed with students. Each supervision session was video recorded, and students sorted relevant portions of the recordings into relevant competency categories in an electronic file system. These excerpts were viewed by the instructor and then reviewed with the student, providing weekly feedback and guidance on competence development. In a high implementation setting, ratings of competence progress across multiple training experiences are assembled and are used to track student progress, and to guide the choices and goals of further training experiences. Finally, indicators of student accomplishment are used to modify the content and process of individual courses and training experiences, and to address the overall balance of training across the various competencies.

To accomplish these various tasks, a setting must establish systems to organize the overall effort and to ensure that the tasks are carried out. In a small setting, this could be accomplished by a few committees. In larger settings, more elaborate administrative structures would be necessary—the statewide competency administration established by IUSM would be an upper limit on this.

The highest level of implementation would involve organizing the curriculum and training experiences to accommodate individual student learning trajectories, as determined by ongoing assessments of competence. This step may be possible in practicum, internships, and postdoctoral residencies, but is unlikely to be broadly feasible in graduate programs because of the constraints of academic structures and policies.

Prior to taking on an advanced CBE plan, programs could explore more rigorous versions of CBE through pilot projects of smaller scope, such as the supervision course described above (Schwartz & Grus, 2013), or on a broader scale within a practicum training clinic, or in a sequence of courses such as assessment. There are likely many paths that a program, internship, or other setting could take toward further implementation of CBE.

**Should Professional Psychology Further Embrace CBE, and If So, How?**

All programs in professional psychology want their graduates to be competent, and CBE is a method for ensuring and demonstrating that this happens. Guided by CBE principles, the program is designed and implemented so that every graduate is competent in all relevant domains, and so that the program is efficient and effective in reaching this goal. What would motivate programs in professional psychology to take on the extra burden of CBE, or even to take initial steps to see if it might be of real interest to them?

Unlike medicine, psychology has not been subject to years of critiques and demands that it maximize its responsiveness to the needs of the public its graduates serve. It has not integrated standardized knowledge competency examinations into its graduate curriculum as has medicine (Stedman & Schoenfeld, 2011).
Calls for change in professional psychology have been largely internal.

In a series of articles, members of the APA Task Force on the Assessment of Competence in Professional Psychology presented detailed arguments and information focusing on their call for a “culture of assessment” as the key to advancement of a competence-based professional psychology (Kaslow et al., 2007; Leigh et al., 2007; Lichtenberg et al., 2007; Rubin et al., 2007). Additional encouragement to adopt CBE approaches has come through the efforts to describe and systematize competencies, and to bridge these descriptions to practical methods of assessment (e.g., American Psychological Association Education Directorate, 2012; Hatcher et al., 2013; HSPEC, 2013; Kaslow et al., 2007). However, we believe that psychology’s focus on assessment is unlikely to drive a major culture change, because we believe that assessment of competence is not itself a motivating value for most programs.

Similarly, APA accreditation exerts pressure on programs to conform to some important CBE features, but accreditation does not necessarily motivate programs to embrace CBE as a core, integrated, everyday approach to education and training (Maiden, Knight, Howe, & Kim, 2012). For such a change to occur, we believe that faculty and staff would need to see CBE and the culture of competence as congruent with, and strongly helpful to, the goals they value most highly. However, the experience of medicine and dentistry in implementing CBE has shown that many faculty believe their programs to be functioning just fine, even though these programs could actually make better use of their resources to reach their educational goals. Even in medicine and dentistry, with earlier and more vigorous advocacy by more centralized leadership, CBE has been fully embraced by only a portion of graduate programs (Licari & Chambers, 2008; Sherwin, 2011), although residency programs have taken it up more fully as a result of a strong push by the Accreditation Council for Graduate Medical Education (ACGME), its accrediting body.

Accountability to the public is the motivation at the base of the discussions calling for implementation of CBE offered by Roberts et al., (2005); Kaslow et al., (2007), and Albanese et al., (2010). Roberts and colleagues note that “although the status of ‘professional’ incurs certain privileges, it also invokes a number of obligations,” which culminate in ensuring that graduates are prepared to apply professional competencies “for the betterment of others” (p. 355). Albanese and colleagues suggest that a CBE curriculum offers faculty and staff “rewards beyond the moral and ethical satisfaction of preparing students to serve the public, noting that “Quality control and relinquishing control are not things most faculty get ecstatic about” (p. 452). However, they also note the satisfaction that comes from seeing students grow in their skills, which becomes more evident to faculty because of frequent assessment (p. 452). We would suggest that faculty and supervisors in professional psychology are strongly motivated to provide the best possible training for their students (Hatcher, Wise, Grus, Mangione, & Emmons, 2012), and that they are strongly rewarded by the satisfaction expressed by their students as they gain professional skills. We train our students because we have a deep commitment to training. CBE offers a way to enhance our students’ experience and improve their skills.

CBE points the way to an opportunity, and provides conceptual and practical tools to help realize the opportunity. Because of its success in medicine and dentistry, programs in professional psychology may well find value in it as they seek to train the most competent students they can.

References


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