Chapter 12
Designing and Developing Competency-Based Education Courses Using Standards

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ABSTRACT

Standards provide designers and developers of competency-based education courses and programs with a structure and framework that serve as a way to create quality learning environments that align objectives, instruction, and assessments. At the micro-level, standards facilitate direction of the structure, format, and content of a competency-based course that ensures a high-quality product. At the macro-level, standards help institutional administrators and faculty make good, informed decisions about program policies and procedures.

INTRODUCTION

Competency-based education (CBE) is not a new concept in higher education; it has, however, in the early 21st century, been the focus of considerable interest – especially when considering the needs of adults who are returning to college to complete academic credentials in an environment where higher education has been challenged to meet the future needs of the workplace (Sluijsmans, Prins, & Martens, 2006). Adults desiring to earn a postsecondary academic credential often have had academic, professional, and life experiences that can be used to jumpstart the next step of their journey.

CBE is based on a notion that permits a student to show what s/he knows about course content through some sort of formal assessment that permits the student to clearly demonstrate competence. In this environment, a student has the opportunity to "test out" of known content or deeply engage in unknown content where time is not the primary course-based factor. Erisman and Steele (2015) identify the need for institutions to create systems that are "affordable, flexible, and student centered" (p. 1) that

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can specifically serve the needs of adults who want (or need) to return to college. CBE programs can help fill the gap between current traditional higher education systems and innovative next steps that can help frame higher education opportunities for adult learners.

Design and development are critical components to the successful implementation of a CBE program. The overall CBE system must be well thought out and implemented, however, without a strong foundation of high-quality courses and learning experiences, students will not be able to meet learning outcomes and performance expectations. In this Chapter, we set the stage for how to use standards by presenting examples related to the design and development of competency-based courses. As part of this process, strategies for course sequencing and embedded assessment are included. In addition, expectations for faculty and support systems that ensure a successful learning experience are presented.

CBE AND ONLINE LEARNING

Technology has opened up opportunities for online delivery of CBE which has, in turn, provided additional instructional access to students and functionality for faculty and administrators. Learning management systems and the continued improvement of student information systems as well as overall campus technology infrastructure permits academic support, administration, and delivery of instruction. In addition, an LMS supports interaction with and monitoring and evaluation of students. The integration of CBE into an online learning platform enables institutions to launch CBE programs to meet the needs of increasingly larger numbers of students. Using online design and development standards that place the student at the center of the environment and clearly connecting competencies to course content and assessment helps frame the development of a CBE learning environment.

Standards, Strategies, and Action: Macro Level

The purpose of standards in any learning environment is to maintain high-quality instruction that meets the needs of the students (NEA, nd). There are a variety of standards that help designers and developers of online instruction build high-quality courses. Standards are general agreements or guiding principles that can be considered to be best practices, foundational knowledge, and practitioner guidelines. A few organizations and/or individuals have extended those standards to CBE and developed associated rubrics to assist in evaluation of the CBE course. Common areas of focus in the standards are content, learning objectives/competencies and associated assessment, technology and usability, instructor and student support, and availability of resources.

Standards for online learning have led to educational institutions, including K-12 systems, colleges, and universities, developing their own internal requirements for online course design and development, implementation, and delivery. These standards set expectations and goals for the online environment. From outlining instructional design strategies for an LMS (e.g., Moodle; Elias, 2010) to specifically identifying factors that influence quality in a distance learning course (McClary, 2013), standards can be used to help designers, faculty, instructors, and administrators create learning environments that are of high quality, effective, and promote student performance. These standards can be extrapolated to many aspects of CBE systems and the launching of CBE programs.

There are 2 layers of standards that can be used to help create a framework for design, development, and implementation of CBE systems. A macro level frames the overall learning environment, involving