Chapter 10
A Framework for the Design of Online Competency-Based Education to Promote Student Engagement

Robin Colson
University of West Florida, USA

Atsusi Hirumi
University of Central Florida, USA

ABSTRACT

Advances in technology offer opportunities for many varieties of online learning but much online learning design is based on past practices and technologies (Hirumi, 2013). This practice could prove to be particularly detrimental for competency-based education (CBE) given its unique profile as a form of online learning that is self-driven and asynchronous. Furthermore, the majority of CBE students in higher education are non-traditional adult learners who require a high level of support and engagement from their educational experiences. One instructional technique that has proven to be effective for promoting student engagement in online learning is interaction (Wang, Chen, & Anderson, 2014; Hirumi, 2006; Anderson, 2003). This chapter draws from Hirumi's (2002, 2006, 2013) framework for designing interaction in online learning courses to provide suggestions for creating online CBE instruction that engages and motivates non-traditional students in higher education.

INTRODUCTION

Educators often face opposing forces that make it difficult to translate theory into practice. For decades, teachers and professors have been taught theories of human learning, principles of instructional design, and the importance of engagement, creativity, and learner-centeredness. Yet, funding continues to be based on credit hour generation and schools, colleges, and universities continue to be rewarded for high enrollments and high test scores. Coupled with relatively little time, training, and resources, faculty have

DOI: 10.4018/978-1-5225-2584-4.ch010

little recourse but to rely on past practices; that is, the use of teacher-directed instructional methods and materials, and conventional criterion-referenced, multiple-choice tests that focus on the transmission, memorization and recall of content information rather than facilitating cycles of knowledge acquisition, evaluation, and validation that is essential to higher-order thinking (Hirumi, 2013; Shale & Garrison, 1990).

However, in higher education, the landscape is beginning to shift. As the cost of post-secondary education has significantly increased in recent years, institutions are beginning to be held accountable for student retention, graduation and job placement rates, and debt levels. This accountability movement has created a push for innovation and experimentation in higher education.

One of the innovations being embraced by many institutions is competency-based education (CBE). As explained in the first section of this handbook, CBE is an instructional approach that is different from many other course delivery methods primarily in that it is self-driven, allowing students to progress through a course or program based at their own pace, taking longer on subjects that are difficult for them and accelerating through those that are easier. They may also test out of coursework by demonstrating their mastery of required competencies through various forms of assessment. Learner independence in CBE is high in contrast to traditional coursework that requires students to progress together as a class at the same time in the same manner directed by the instructor.

Finally, CBE is further distinguished from traditional online higher education courses in the techniques used to assess student mastery (i.e., competency). While students in CBE courses are typically required to pass traditional (i.e., multiple choice, true/false, and short answer) tests of their declarative knowledge, they also must demonstrate mastery of competencies which usually implies the application of high-level cognitive skills and, sometimes, the execution of motor skill or procedures. Application and execution testing requires authentic forms of assessment such as the completion of projects, the solving of complex problems, the assembly of tools or equipment, or the development of portfolios that contain work samples and artifacts that demonstrate learners' skills, knowledge and dispositions.

CBE's unique profile of student self-governance, totally asynchronous delivery, and authentic assessment is a valuable alternative for many adult learners who need the flexibility and opportunity for acceleration it affords and appreciate the value of applying their new skills to solve real-world problems. Yet CBE's unique profile also allows students to become disengaged, to underestimate the required amount of time and study, and to procrastinate in the completion of coursework. These challenges may be exacerbated for non-traditional learners (the majority of students enrolled in CBE courses in higher education). Non-traditional learners, as a group, are already at higher risk for poor grades and non-completion due to risk factors that include work responsibilities, family obligations, and part-time enrollment (Horn, 1996; Rabourn, Shoup, & BrckaLorenz, 2015). Given the characteristics of CBE and the risk factors already at play for non-traditional learners, CBE learners must be provided with instruction that is engaging, motivating, and meaningful to compel them to engage, persist, and succeed.

COMPETENCY-BASED EDUCATION'S UNIQUE PROFILE

"Put simply, CBE is a learning model that prioritizes competence over seat time," (Brightspace, 2014). The intent of the competency-based education model is to reduce the cost and time required to obtain an academic credential via: