

# Chapter 2

## Constructivist Instructional Design: A Blueprint for Online Course Design

**Carlos R. Morales**  
Lock Haven University, USA

### ABSTRACT

*With the continuous growth of online learning in higher education, the need to design course materials that capitalize and leverage on the richness of the Internet and learning technologies has taken on new dimensions. Constructivist theory paired with instructional design models is believed to have a positive influence on the design of learning environments that apply content to real-life situations. Constructivist instructional design for online learning challenges instructional designers regarding the philosophy and methodology to be used, while it provides the conditions for learner-centered instruction. Instructional design and learning theories have been separated into their own arenas. Developing online learning environments using constructivist instructional design addresses and serves the learning needs of students by providing opportunities for increased knowledge construction and participation.*

### INTRODUCTION

The growth experienced in distance education through the online learning delivery method has been steadily exponential, requiring the use of new instructional and design strategies. Vital to this growth is the course design process that, paired with an increased accountability and requirements by accrediting agencies and the public, has prompted the addition of new course

design methodologies, adjoining significance and relevance to online education (Merisotis and Phipps, 2000; Middle States Commission on Higher Education [MSCHE], 2002; Oliver, 2000). Instructional designers have found that traditional instructional design theories alone have limited applicability when designing online learning environments from a constructivist approach (Reigeluth, 1999; Williams, 2002).

The aforementioned growth is validated by the increasing number of colleges and universities that offering certificates, courses and entire

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programs through the Internet (Allen and Seaman, 2004; 2005; 2006, National Center for Education Statistics [NCES], 2003). The growth seen in online learning has prompted the application of structured methodologies to ensure that online courses are equivalent to or better in content, activities, and rigor than their face-to-face (FTF) counterparts (Brooks, 2004; Howell, 2001, Kassop, 2003). Instructional design theories and models have been adapted to the online learning environment in an effort to meet the needs of non-traditional students as well as the requirements of accrediting bodies (Reigeluth, 1999; 2005). At the same time, an increased emphasis on quality assurance in the design of the virtual classroom has been seen in recent years (Monterrey Institute for Technology and Education, 2008; Quality Matters, 2008; WCET, 2008).

The use of instructional design models paired with learning theories like constructivism might aid higher education institutions in addressing low student interaction by increasing the impact on student learning in online courses (Morales, 2007).

The use of constructivist principles in the design of online courses and online programs capitalizes on the ability of the learner to construct knowledge while accessing prior knowledge. This process not only fosters the construction of knowledge in the learner, but also builds expertise in the subject, procedures, and skills (Clark, 2003; Jonassen, 1999). Constructivism is in line with learning-centered environments, in which the control of learning shifts from the instructor to the learner. The focus of design is on learning and the learner Berge (2002). Constructivist grounded learning environments provide learners with greater opportunities for engagement by working on activities that are authentic, relevant and applicable beyond the classroom.

## **CHAPTER OBJECTIVES**

The reader will be able to:

- Recognize the importance of incorporating instructional design for the design of on-line courses.
- Comprehend how the constructivist theory can be used in online course design.
- Understand the educational implications of constructivist instructional design in online learning.
- Be aware of what course activities leverages on the constructivist approach.

## **MAKING TECHNOLOGY WORK FOR LEARNING**

With the continuous growth of online learning in higher education, the need to design course materials that capitalize and leverage on the richness of the Internet and learning technologies has taken on new dimensions. The design of content that appeals and captivates the attention of online learners while providing opportunities for its application beyond the online classroom has increased as well. Constructivist instructional design for online course design might provide assistance to instructional designers and faculty in addressing learning styles in online learning. Karagiorgi & Symeou (2005) asserted “pairing constructivist instructional design with technology plays an important role by allowing non-linear learning” (p.23). These practices stimulate authentic learning by fostering the development of instructional strategies that facilitate further active construction of knowledge. The information presented in this chapter might assist course developers, instructional designers and faculty as they rethink and retool the design and delivery of online courses. This approach of combining instructional design models with learning theories for the development of learning environments grounded in constructivist theory might be of

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