Chapter XI

Developing Learning Objects: Implications for Course Content Strategies

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Abstract

This chapter examines the issues and concerns of faculty regarding the development and use of learning objects as instructional resources. It describes the characteristics and benefits of learning objects, barriers to adoption, and strategies to increase learning object use. Included are communication and support strategies for working with faculty. Concerns about quality and effectiveness are also discussed, and a comprehensive set of criteria is presented to guide learning object design and evaluation. The chapter concludes with ten recommendations to help overcome barriers to faculty adoption of learning objects. The chapter is based on the authors’ personal experiences in using learning objects, current literature,¹ and their involvement in the Fund for the Improvement of Post Secondary Education (FIPSE) Grant entitled “An Investigation of the Pedagogical and Economic Effectiveness of Sharable Content Objects, Using Standards, in Online Instruction.” The work of the grant was conducted from November 2002 through December 2005.

¹ The reference to the publication is not included in the document.
Introduction

In 1992, Wayne Hodgins, Director of Worldwide Learning Strategies at Auto Desk, Inc., was credited with both the term and the concept of reusable learning objects, mini reusable programs that provide instruction over the Internet. According to Hodgins (2002), these small digital lessons are mixed and matched to meet individual learner needs at a time and place that is convenient for the learner. This suggests that learning object use is dependent upon the learner engaging with the content outside the normal instructional environment. When students have the opportunity to determine when and how they learn, they begin to move toward a learner-centric model of learning that benefits both learners and instructors alike. This is but one of the benefits that reusable learning objects bring to the learning environment. While learning objects have been around for some time, their use in instruction in higher education is limited.

In order to understand why learning objects are on the periphery of higher education, it is important to identify issues and concerns related to their adoption. Thus, after a brief introduction that includes a definition, history, and the characteristics and benefits of learning objects, this chapter will focus on the following four areas: barriers to faculty adoption of reusable learning objects, strategies to increase reusable learning object use, achieving quality and effectiveness with reusable learning objects, implications for teaching and learning, and recommendations for practice.

Definition

Reusable learning objects have their roots in information technology and object oriented programming, “representing a combination of the concept of learning and the paradigm of object orientation” (Oakes, 2002, p. 1).

Simply put, object oriented programming supports the creation of individual objects (programs) that can be used repeatedly in different contexts to perform specific tasks. For example, instead of recreating a program to add numbers over and over again, object oriented programming uses an “add numbers object” to perform the “add numbers task” in multiple contexts. Reusable learning objects use the same concept only instead of adding numbers, learning objects provide stand alone guided instruction on a specific topic that can be used over and over again in a variety of contexts.

Adhering to the idea of reusable learning, a learning object for this chapter is viewed as an individual lesson, which includes a learning objective (a single objective is preferred), content to support students in reaching the learning objective, one or
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