

## Chapter 22

# Customisation and the Interprofessional Application of E-Learning Objects

**Helen M. Lynch**

*Canberra Institute of Technology, Australia*

**Kerry Trabinger**

*Canberra Institute of Technology, Australia*

### ABSTRACT

*Toolbox learning objects are a class of pedagogically rich, sophisticated e-learning objects created for the Australian vocational education and training system (VET). Their richness makes them very attractive to teachers and trainers working across a range of learning contexts but at the same time makes them difficult to reuse. While these e-learning objects have been designed to be customised and are often repurposed for use within one vocational context, an approach is emerging that sees them increasingly customised for reuse across a range of intervocational or interprofessional contexts. This chapter describes this approach, focusing on the tools and techniques of customisation, and presents a model of reuse that can be implemented elsewhere with any pedagogically rich web based e-learning object in intervocational and interprofessional settings. Toolbox learning objects are freely available to anyone with internet access from the Toolbox Learning Object Repository website. The Repository is fully searchable and objects can be previewed from the Repository website and downloaded without charge for educational use. This chapter will be of value to teachers, trainers and academics who are exploring the reuse of pedagogically rich web based e-learning resources for interprofessional or intervocational education.*

### INTRODUCTION

Definitions of e-learning objects, reusable learning objects or just plain learning objects (Ashley, Davis & Pinsent, 2008, p.13) are as many and varied

as the names by which they are known. Kay and Knaack (2005), after an extensive literature survey, settled on a definition incorporating perspectives from the field of object orientated programming and teaching and learning. They defined learning objects as “reusable, interactive web-based tools that support the learning of specific concepts by

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enhancing, amplifying, and guiding the cognitive processes of learners” (Kay & Knaack, 2005, p. 230). In providing this functional, working definition from the literature the authors identified a quality of learning objects that has been greatly debated: that of reusability (Elliott and Sweeney, 2008; Ashley, Davis & Pinsent, 2008; Paris, 2006).

Emerging from the debate is a suggestion that the capacity of practitioners to reuse learning objects depends on the development of an understanding of reuse that addresses it in three important contexts. First, conceptually, a clarification of the idea of reuse and its “defining properties” (McDonald, 2006, p. 542) is needed. Second, practically, practitioners require “better tools ... to create and edit their own and others’ online learning activities” (Fill, 2006, Section 6). Finally, what is also needed is a practical and holistic approach to the implementation of pedagogically coherent learning objects that will guide teachers and trainers in their efforts to repurpose them for use across diverse professional and vocational contexts (Elliot & Sweeney, 2008).

In the Australian VET system practitioners are already working with a holistic approach using tools and techniques that support the reuse of a class of e-learning objects called Toolbox learning objects. These are derived from an e-learning resource called Flexible Learning Toolboxes created for Australian VET practitioners through Australia’s national VET e-learning strategy. The work discussed in this chapter has the potential to be implemented with many types of pedagogically rich web based e-learning objects outside the Australian VET system in ways that enhance and support the use of e-learning objects in interprofessional education.

## **BACKGROUND**

Definitions of e-learning objects have generally focused on specifying their attributes. Polsani (2003) suggests that there is general agreement

that e-learning objects should have technical qualities that make them accessible, interoperable and reusable. Further definitions suggest that e-learning objects should not just support learning but be instructionally designed to ensure they are credible educational resources (Harvey, 2005). Pedagogically rich, highly granular e-learning objects amply meet these criteria. However their size and sophistication can make them difficult to reuse because of the depth at which the learning or subject specific context is often addressed in such objects. This difficulty highlights the fundamental tension between pedagogically rich, high granularity objects and their reuse.

Despite this, practitioners recognise and are excited by e-learning objects that are well designed, instructionally sound, and rich with activities, explanations and information. They immediately see how such objects could be customised to support reuse with their student group or teaching and learning context. What stops them from undertaking such activity is a lack of technical skill and appropriate, freely available, easy to use tools and techniques for repurposing (Fill, Leung, DiBiase & Nelson, 2006; McDonald, 2006). They are further hampered by trying to work with e-learning objects where little attention has been paid in their design, presentation and creation to the ways in which they might be reused (Paris, 2003).

## **An Approach to Customising E-learning Objects**

### **Flexible Learning Toolboxes**

The Australian VET system has access to a group of web based teaching and learning resources whose development is funded through the Government’s e-learning strategy: The Australian Flexible Learning Framework (The Framework). Toolbox learning objects (TLO) are one type of resource in this group. They are highly granular (consisting of many segments or pages), peda-

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