

## Chapter XXVII

# Evaluating Large-Scale European LO Production, Distribution, and Use<sup>a</sup>

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### ABSTRACT

*This chapter will examine the approach taken in the evaluation of a large-scale feasibility trial of the production, distribution, and use of learning objects (LOs). This was carried out by partners in several countries of Europe as part of the Context E-Learning with Broadband Technologies (CELEBRATE) project, coordinated by European Schoolnet. The project produced a large number of LOs and involved linking up commercial and ministry producers of LOs to make available their products to teachers in six countries. The chapter examines what it means to evaluate learning objects, given that they are both particular objects and a general idea, especially important given the dearth of empirical studies of the use of LOs. It then goes on to explore the way this was tackled strategically and tactically, bearing in mind a European context of distributed locations, different languages, and education systems.*

### INTRODUCTION

The CELEBRATE project was an Information Societies Technology Programme project funded by the European Commission over 30 months, from June 2002 until November 2004.

<sup>b</sup> It involved 23 participants from 11 countries, including commercial producers of learning

materials, multi-media specialists, ministries of education, software and network companies, university academics and schools and associated local authorities. Its objectives were to create and use a critical mass of material for a new generation of learning environments, and this material was distributed and used in schools in six countries: England, Finland, France, Hungary, Israel, and

Norway. The LOs were made available via a Demonstration Portal (a Web site) to selected schools across Europe in order to further stimulate the development of LOs by teachers themselves. CELEBRATE took the idea of an “exchange” and applied it to the school sector through a brokerage system. The CELEBRATE Brokerage system, initially connecting four repositories of LOs and allowing users to search for and retrieve a LO on that system, provided a working model for how both schools and commercial publishers could develop and make available media-rich LOs both separately and in partnership. Precisely because all the elements of production, distribution and use of LOs was involved, this project was considered a feasibility study, and all that could be achieved by way of use of LOs by teachers was in the form of a pilot lasting a relatively short period of time (a maximum of 4 months).

Here the focus will be on the evaluation methodology and methods (see Chapter XXV for the results of the evaluation).

## **CAN LOs BE EVALUATED?**

When we presented our preliminary findings of the evaluation at the European Association for Learning and Instruction (EARLI) annual conference in 2005 (Ilomäki, Lakkala, & Paavola, 2005; Jaakkola & Nurmi, 2005; McCormick & Li, 2005) our discussant, Wouter van Joolingen, rightly posed the question of whether and in what way it was possible to evaluate learning objects in the general way we were apparently doing. He drew parallels between trying to evaluate “pills” (rather than a specific drug), and argued that the concept of a LO applied to a form of packaging and the metadata, not the content and, in which case, the whole process of production, storage, selection, and use had to be part of the evaluation. As he graphically put it “Just *evaluating learning objects* does not say anything.” At that conference we were only reporting the results of the “use”

of LOs, and it was an important reminder of the limitations of what can be claimed and for the importance of reporting our general approach to evaluating LOs in the context of the project. Here I will examine how we answered his justifiable question, which of course also contains within it the definition of what constitutes a LO.

The definition of an LO we used was rather general: any entity, digital or nondigital, that can be used or re-used or referenced during technology-supported learning.<sup>c</sup> This makes it difficult to answer the question that Wouter van Joolingen posed, as in a sense it has no special characteristics. There are, however, a number of such characteristics that are usually associated with LOs, namely that they are:

- Interoperable, that is, that they will operate in any technical environment;
- Reusable, that is, that they can be used by any teacher in any context;
- Modifiable, that is, that a teacher can alter some features of the LO to suit their situation;
- Adaptable, that is, that they will adapt to the learners needs.

In effect “reusability” is the main feature and the other characteristics serve to enable this feature. Chapter XXV deals in detail with these characteristics, and here it is sufficient to point out that there are technical issues that underlie interoperability and adaptability, and pedagogic issues that underlie reusability and adaptability, though inevitably they are inter-related. One assumption is that to make LOs different from “assets” (e.g., a picture), the LO must have some pedagogy “built in,” as it were. This is controversial, as Chapter XXV reveals, but for the purposes of a discussion of the evaluation methodology it is only necessary to recognise that this “encapsulated pedagogy” is a possibility. Thus in evaluating LOs (as objects, rather than as part of a system), it is necessary to consider both technical and pedagogic issues.

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