

Chapter VII

The Learning Technologies Model

Introduction

The learning activities model (LAM) developed in the previous chapter provides a theoretical framework for the analysis of the process of learning through the categorization of activities. During the design of learning events, different techniques, methods, and technologies can be applied to activities within each category or to complete categories of the LAM. This matching process is, in essence, the basis of the technology selection method (TSM), presented in Chapter VIII. However, before technologies that are appropriate to learners and learning events can be selected it is essential to have a clear understanding of the nature and capabilities of the technologies. To assist in the understanding and analysis of learning technologies, a theoretical framework of them, called the learning technologies model (LTM), is presented.

Learning technologies differ in the function and roles they can play in the process of learning. In past times when learning technologies were simple and limited they were

used primarily as adjuncts to face-to-face teaching and learning. Teachers had little difficulty in coming to terms with them and generally used them in pedagogically appropriate ways. However, particularly in e-learning, learning technologies have increased in number, complexity, and diversity to such an extent that a theoretical framework is needed to help teachers and designers understand the nature of different technologies and hence apply them appropriately.

At many universities and colleges, and in the training of human resources, a range of learning technologies is used in an approach to learning that blends face-to-face and online methods. Often those who design blended courses are teachers and not specialized designers. These teachers/designers need tools to guide their decisions of which technology to match to learning activities. The LTM was developed to assist teachers/designers in making appropriate use of learning technologies by classifying them within a simple system. The model produced is sufficiently robust for general application and simple enough to be accessible to busy staff such as academics who most likely have areas of research outside of educational technology and the design of technology-rich learning events.

Theoretical Basis of the LTM

The theoretical basis for the LTM is provided, in part, by researchers in the field of distance education through their description of learning technologies as one-way or two-way (Bates, 1995; Rowntree, 1994; Taylor, 2001). Writing in the area of open and distance learning, Bates distinguishes between one-way and two-way technologies by stating that two-way technologies are those that support communications between humans. He suggests that while they are significant for communications between learners, instructors, and tutors they have probably greater significance for communications between learners (Bates, 1995, p. 32).

The research reported on here takes this rather basic conceptual approach, redefines it, and juxtaposes it with theories developed for technology selection in the field of organizational communications to produce a new theoretical framework for the analysis and categorization of learning technologies. This forms the basis of the LTM. The LTM is the second original theoretical framework discussed in this book and can be used to assist learning designers in the analysis of learning technologies as well as in their selection. When the selection of learning technologies is addressed in Chapter VIII, learning technologies, as analyzed by the LTM, will be matched to categories of the LAM.

The LTM has been developed in two stages. Firstly, the two theoretical dimensions are juxtaposed to form a matrix. Secondly, the matrix is placed into a context that includes two further criteria by which characteristics of learning technologies can

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