

Chapter IV

A Review of Methods for Selecting Learning Technologies

Introduction

In the recent past, the role of learning technologies in the human resource development and higher education sectors has changed, and today technology plays a central role in learning in many courses, subjects, and programs. In several places in the literature, learning technologies have been classified and categorized, resulting in the development of theoretical or conceptual bases upon which an understanding of the nature and role of learning technologies can be built. In many cases these bases are intended to inform the process of decision making regarding the planned use of learning technologies with some degree of confidence in the appropriateness of the result. Two clear levels of decision making regarding the use of learning technologies have been identified in the literature as the strategic and tactical (Bates, 1995).

The capital and infrastructural costs of some learning technologies dictate that decisions to use them are typically made at the executive level of the institution or

organization. Less expensive, yet important to the learning process, are the decisions made by designers of learning events as to what material or learning activities are to be mediated or facilitated by each technology. These are referred to as strategic and tactical decisions, where strategic decisions are of the nature to invest, or not, in a technological system and tactical decisions are concerned with the nature of the use of the technology in the achievement of a particular learning objective. Both strategic and tactical decisions regarding learning technologies are made for development of human resources in organizations and for teaching and learning at universities and colleges.

An example of a strategic decision at the institutional or organizational level is the decision to invest in the equipment and infrastructure needed to offer Web-based online or e-learning, whether to purchase a commercial learning management system (LMS) or to build one that precisely suits the specific needs of the institution or organization. At the level of the designer of learning events, tactical decisions are made in terms of what technological elements of the LMS will be used and what parts of the learning events in the course, will they be used for. For example, will part of the course use text and images on Web pages in the LMS, or will a forum or forums be used for student interaction? What other techniques and technologies will be used?

As mentioned in the previous chapter, there are parallels between the history of the use of technology in human resource development, higher education, and instructional design. There are several instances in the literature (Berge, 2001; Gagné, Briggs, & Wager, 1992; Smith, 1992; Wilson, 1999) where changes in terms and approaches in the education sector have been adapted for use in training and development in the contexts of human resource development and instructional design. When compared to traditional classroom teaching and learning, open learning, distance learning, and flexible learning—as educational paradigms—have all impacted upon the way in which learning events are provided and the way that learning technologies are used. These new paradigms have impacted on organizations and when applied to training and development can provide reductions in costs of training and advantages in timing through the introduction of flexibility of when and where training occurs. As in higher education, the application of these paradigms in human resource development often involves an increase in the use of learning technology and the separation of learner from the facilitator. In particular the Internet and the World Wide Web have had an impact large enough to generate a new approach to training and development and the concomitant terms. For example Web-based training (WBT) (Khan, 2001) and technology-based training (TBT) (Kruse & Keil, 2000) provide approaches to training that rely on the World Wide Web alone in the case of WBT and the Web plus CD-ROM in the case of TBT. While the literature on these single or limited technology approaches to training is quick to point out the advantages to be gained, it does not dwell on the limitations inherent in an approach that is limited to one

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