# Chapter 18
# Costs of E-Learning Support:
## A Hong Kong Study of Costs for Supplemental E-Learning and Impact on Institutional Planning

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## ABSTRACT

*Understanding e-learning costs informs decision making on support for the development and implementation of teaching and learning technologies in higher education. This chapter describes costs and processes in a central e-learning support service that is especially applicable to face-to-face universities that use e-learning in a blended or supplemental mode. We differentiate three types of costs: infrastructure costs that are less sensitive to variation in the complexity of e-learning strategies, and e-development and e-delivery costs that are directly related to the nature of the strategies used. Using actual data from a three-year e-learning support project (e3Learning) with 139 sub-projects, the chapter illustrates how the calculations promoted an understanding of e-learning in the following four aspects: 1) total cost of running an e-learning support service, 2) individual costs attributable to each of the sub-projects, 3) 'price-tags' of e-learning strategies, and 4) initial exploration of the cost-effectiveness issue. Institutional decisions made as a consequence of this study are described.*

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## THE ISSUE OF E-LEARNING COSTS

Teaching and learning technology is resource-intensive. Schechter (2009) warned that it involves considerable initial costs as well as ongoing costs. Bowles (2004) described the early phase of e-learning development as being characterized by rapid adoption of the technology, followed by a mature phase of reflection on practice, including examination of issues such as determining costs and benefits. Even some years ago, there were concerns about the value of e-learning in supporting learning and justifying continued investment. Lytras and Pouloudi (2001), for example, stated that many e-learning strategies in practice are not as effective for learning as they were initially hoped to be. Nicol and Coen (2003) reported the challenges that university administrators and funding bodies have in collecting systematic information about costs and benefits of e-learning to inform decision making. Higgins and Prebble (2008) noted that finance questions, including cost-effectiveness of e-learning, are the responsibilities of educational leaders.

As Bates (2005) noted, any educational technology is not intrinsically good or bad; its effectiveness depends on how well it is used. Hence, studying the costs of e-learning does not imply that we should base all educational decisions purely on monetary considerations. Cost is only one aspect to consider. Nicol and Coen (2003) commented that knowing the expenses is not the final solution; it only represents a guide for decision making: "It helps users to 'reflect upon and structure their thought processes' while making decisions in areas of professional practice" (p. 55). Knowing more about the costs in e-learning will increase our ability to figure out ways to maximize effects while minimizing costs (Twigg, 1999; Boettcher, 2004; Pätzold, 2005).

When empirical evidence is lacking, cost-effectiveness judgments must necessarily be speculative. In this spirit, the present paper, through analyzing actual expenses of a central support service on e-learning, aims to provide insights to the question "How much does e-learning cost?" (Ash & Bacsich, 2000).

## STUDIES OF COSTS IN DIFFERENT MODES OF E-LEARNING USE

Twigg (2003) described e-learning modes using three classifications. The substantially online mode represents cases where teaching is mainly conducted online, and e-learning is the sole mode of delivery; this applies most often to distance-education institutions. The replacement mode represents cases where the technology is intended to substitute for at least some of the traditional classroom activities. In the supplemental mode, e-learning is used to assist the traditional face-to-face teaching, and very often there is little change to the class activities. There have been studies of costs in each of the three modes of e-learning use and their approaches tend to differ.

In the substantially online mode, e-learning costs are relatively easy to identify as a substantial portion of the institution's costs are related to the development and maintenance of the e-learning environment. Typically, these costs may include staff expenses, administration expenses, and preparation and delivery of online materials and activities. Bassi (2000) suggested grouping these costs into fixed costs (costs that tend to stay the same regardless of student size), and marginal costs (costs that increase per student head multiplied by the number of learners served). There is also a distinction between direct and indirect costs among these fixed and marginal costs. The direct costs are money paid for services and equipment: trainers' compensation, material development, material production and material distribution. The indirect costs are opportunity costs that teachers and departments, for example, pay through sacrificing some other revenue-generating activities because of their engagement in e-learning. In a professional training context, the indirect costs