



# The Role of Organizational, Environmental and Human Factors in E-Learning Diffusion

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## ABSTRACT

*Improvements in technology have led to innovations in training such as Electronic Learning (E-learning). E-learning aims to help organizations in their training initiatives by simplifying the training process and cutting cost. It also attempts to help employees in their learning processes by making learning readily accessible. Unfortunately, the diffusion of this innovation has not been as successful as was initially predicted. In this article we explore the drivers behind the diffusion of e-learning. Apart from the factors investigated by previous research, we believe that one more dimension—human factors—should be taken into account when evaluating the diffusion of a training innovation, since learners are, to a large extent, the central issue of training. In the case of e-learning we believe that motivation plays a key role in the diffusion of e-learning.*

*Keywords: internet-based instruction; virtual learning; Web-based education*

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## INTRODUCTION

With the rapid improvement in technology and the growing demand for a knowledge-based labor force, the demand for e-learning has grown considerably over the past few years. E-learning has provided organizations and employees with tremendous advantages over traditional training (Li & Lau, 2006). It transcends the limitation of time and space and has been reported to provide companies with time

and cost saving benefits in the long run (Li & Lau, 2006; Ong, Lai, & Yishun, 2004; Zhang, 2004). In a recent report, Deloitte and Touche (2002) spell out some of the major advantages of e-learning including: increased volume of training, geographic distribution and reusability of content. E-learning gives organizations the ability to simultaneously train a larger percentage of employees than does traditional classroom-based training as employees can be

trained anytime from anywhere. Moreover, it permits large dispersed organizations to train all their employees with homogeneous content. This is extremely useful for organizations that want to ensure that employees gain standardized skills and knowledge. Furthermore, it has the power to bring people together for collaborative learning (Zhang & Nunamaker, 2003).

Along with its unique advantages, the improvements in technology have also facilitated the adoption and implementation of e-learning. The wide accessibility of the internet, increased bandwidth, better delivery platforms, and the growing selection of high-quality e-learning products have all added to the feasibility and attractiveness of e-learning (McCrea, Gay, & Bacon, 2000). The strategic importance of e-learning is real and many companies have been investing heavily in this education sector (Huynh, Umesh, & Valacich, 2003). In fact, 95% of the respondents of an American Society for Training and Development survey conducted in 2003 indicated that they had used some form of e-learning in their organizations (Renée, Barbara, & Eduardo, 2005). However, many e-learning initiatives are not living up to initial expectations. According to a study done by the Silicon Valley World Internet Center on corporate e-learning (Duggan & Barich, 2001), out of 44 respondents, only 21% indicated a very high level of executive confidence in e-learning; 58% regarded top management confidence as moderate, 15% unknown and 6% as very low. Additionally, a number of studies have suggested that a large number of e-learning initiatives fail (Hamid, 2001). Such findings have spurred research which attempts to identify factors which contribute to the success of e-learning.

One research stream has primarily focused on the effect of technology on the

success of e-learning. Researchers have indicated that text-based e-learning systems tend to make learners disengaged and have proposed the use of different multimedia systems in e-learning (Merchant, Kreie, & Cronan, 2001; Zhang, 2004). Prototype systems that are multimedia integrated are also developed and tested to demonstrate the important role of technology in e-learning (Sampson, Karagiannidis, & Cardinali, 2002; Zhang, 2004). Although such studies have improved our understanding of the alignment between different technologies and e-learners, they remain hampered by one major limitation: they adopt a technological deterministic view and postulate direct links between technology and e-learning success. By its very nature, such an approach propagates technological materialism and amplifies technology specifics. Human action, interpretation, and organizational and environmental contexts play little role in this stream of research. Hence, this approach provides relatively little detail about the organizational contexts and human action that shape the observed e-learning outcome. Such a materialistic view diminishes the importance of human agency, organizational structures, and complex social environments and falls short in explaining why identical e-learning technologies succeed in some organizations but fail in others.

Hence, an adequate understanding of the factors that facilitate the success of corporate e-learning requires a more balanced view which does not privilege technology over human agency and the social context (Bruckman, 2002). Another research stream has challenged the technological deterministic view and has focused on the social aspects of e-learning. A number of studies have examined the way in which organizational culture (Harreld, 1998; Nurmi,

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