Chapter 13

Influences on the Acceptance of Innovative Technologies Used in Learning Opportunities: A Theoretical Perspective

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ABSTRACT

In this chapter, the author presents a theoretical framework to better understand how individuals adapt to innovative technology used to support learning opportunities. This chapter begins with an overview of literature concerning technology acceptance, specifically centered on the seminal work of Venkatesh, Morris, Davis, and Davis (2003). This is followed by a discussion of three theoretical perspectives change that include Lewin’s (1997, 1952) change model, Schein’s (1996) adaptation of Lewin’s model as it related to learning, and Roger’s (2003) diffusion of innovation. Next, the chapter includes a discussion on the concept of digital personalities as framed by Prensky (2001b) and Palfrey and Gasser (2008) and how this concept may impact technology acceptance. The chapter concludes with a discussion of how these theoretical perspectives inform our understanding of technology acceptance.

INTRODUCTION

Learning has the potential to be a positive, transformational experience (Cranton, 2002; Mezirow, 1991). Yet, the potential also exists that the learning experience will be anxiety-filled and frustrating (Schein, 1996). Learning experiences leave lasting impressions that sweeten or sour an individual’s outlook on future learning opportunities. Creating and delivering meaningful and positive learning opportunities require a careful, thoughtful, and deliberate approach, regardless of how the course is delivered. This approach should enlist a team of professionals that includes instructional designers, technical writers, subject matter experts, managers, and instructors. Quite often, learning opportunities have innovative technology integrated into the course design to engage (McGurn & Prevou, 2012; Pavera, Walkera, & Hunga, 2014) and even entertain...
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(Junginger, 2008) the learners. One example is the use of virtual reality simulations to train police officers and firefighters how to properly respond to high-risk situations. While these simulations may appear to be full size, interactive video games, they provide learners with the experience of the stress and kinesthetic activities without the risk of serious or grave injury. Another example is the use of simulated disaster response props to teach master of business administration (MBA) students team building and decision-making skills (Wilkins, 2014).

Adding innovative technology into learning opportunities also increases the complexity and creates additional challenges and anxieties for learners and instructors alike. These challenges and anxieties can result in decreased performance and negative attitudes about the learning opportunity. This is often the result of learners rejecting an innovative technology. The risk posed by these challenges may discourage some learning developers from integrating innovative technologies into a learning opportunity. However, Rossett and Marshall (2010) suggest that failing to integrate innovative technology into learning applications results in “opportunities … being left on the table” (p. 7).

The purpose of this chapter is to examine a framework that may help instructional designers, instructors, and other learning professionals understand the issue of technology acceptance, especially the acceptance of innovative technologies used in learning applications. To accomplish this, I present a framework that explains how individuals adapt to innovative technology used to support learning. As Figure 1 illustrates, I weave together the theoretical perspectives of technology acceptance (Davis, 1986; Venkatesh et al., 2003), change specific to learning (Lewin, 1997, 1952; Schein, 1996); Rogers’s (2003) diffusion of innovation and the discussion of digital personalities (Palfrey & Gasser, 2008; Prensky, 2001a). In this chapter, I will provide a unique perspective on the use of innovative technology in learning opportunities that informs scholars and practitioners alike. I conclude with a discussion of the implications drawn from these perspectives and how they can enhance the design of learning experiences through improving the understanding of technology acceptance.

Figure 1.