Technology Development: Learning from Project Failures

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Abstract

It is estimated that over half of companies had a technology project fail in the past year costing the company in productivity, capital, and employee morale (McWhorter & Bennett, 2014). This working paper explores cases involving technology project failures that underscore the need for Technology Development as an area of expertise for Human Resource Development (HRD) professionals. This paper defines Technology Development within the context of Virtual HRD and utilises a case study research approach of technology project failures to extrapolate content relevant to developing expertise in Technology Development in HRD. Implications of this research include the implementation of Technology Development as a core practice in HRD alongside Training and Development, Organization Development and Career Development (Bennett & McWhorter, 2014). Also, this working paper discusses the need for HRD scholars and scholar-practitioners to consider integrating Technology Development into courses of study at the higher education and professional development levels that have potential for advancing the field of HRD.

*Keywords:* Technology Development, Virtual HRD, technology failure
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Introduction

Recently, a U.S. news agency reported that “bad management is responsible for the failure of the U.S. healthcare.gov website… and the Administration has agreed over and over that the site is unacceptably flawed” (Fox, NBCNews.com, 2013, para. 1). This faulty website project for the Affordable Care Act prevented U.S. citizens from registering for insurance coverage in a timely manner (Brill, 2014) and is one example of a large-scale technology project failure. Such an example underscores the need for technology and its accompanying processes to be intentionally planned and designed before implementation.

Purpose of the Study

The purpose of this working paper is to explore case studies of technology project failures and thereby present the need for Technology Development as an area of expertise for Human Resource Development (HRD) professionals. In this working paper, Technology Development will be defined with additional examples of the high cost to productivity when technology is improperly implemented and also implications for HRD are presented.

Defining Technology Development

The contemporary workplace is highly technology-enabled that requires intentional planning and design for optimizing learning and productivity. These planning efforts are highly associated with the processes of human resource development (HRD) and “building expertise is one of the central purposes of Virtual HRD” (Bennett; 2009). While technology has the potential to be a strategic asset for an organization to increase human performance and promote workplace learning, it also has the potential to undermine the viability of an organization through loss of productivity and capital (Bennett & McWhorter, 2014; Benson, Johnson & Kuchinke; McWhorter & Bennett; 2014; McWhorter, Hurt & Mancuso, 2008; Swanson, 2009).
As HRD “plays an important role in work system design and in the improvement of the human-technology interface” (McGuire & Jorgensen, 2010, p. 37), technology planning efforts are opportunities for HRD professionals to “unleash human expertise” (Swanson & Holton, 2001, p. 4) and Technology Development has been posited as an avenue for HRD professionals to build human expertise through unleashing the power of technology in Virtual Human Resource Development (Bennett, 2010). Technology Development has been described as the operational component of Virtual HRD and defined as “the integration of technology with HRD objectives and processes to improve learning capacity and performance” (Bennett & McWhorter, 2014, p. 18).

**Learning from Technology Project Failures**

One way to develop expertise in Technology Development is to learn from technology project failures that have been very costly for organisations (Bennett & McWhorter, 2014). Within an organizational setting, when confronted with failure “it’s natural to ask why disaster struck” (Build Network Staff, 2013, para. 4) and this reflection provides time and space for failure to be confronted and learning to occur.

This research explores technology project failures through case study methodology that allow further exploration of the skills needed for HRD professionals. According to Yin (2013) defined case study research as: “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 16).

Technology project failure cases at the organization level include integrated systems such as enterprise resource planning systems (ERPs) that “integrate the core business processes such as inventory control, accounting, marketing, Human Resources (HR), finance, purchase, and distribution for the purpose of enhancing business operations” (Tsai, Lee, Shen & Lin, 2012).
Also, organization-wide systems include: 1) Customer Relationship Management systems (CRM) (Marks, 2013), 2) Enterprise Content Management (ECM), and Electronic Health Records (EHRs).

**Implications for Human Resource Development**

This working paper holds several potential implications for HRD professionals. For example, learning from technology project failures can provide opportunities to build Technology Development expertise utilising negative cases. Also, it is reasonable to consider implications may include the implementation of Technology Development as a core practice in HRD alongside Training and Development, Organisation Development and Career Development. Also, HRD scholars and scholar-practitioners should consider integrating Technology Development into courses of study at the higher education and professional development levels that have potential for advancing the field of HRD and will be further explored.
References


Response to Reviewer’s Comments

Thank you to the reviewers of this paper who gave very specific and helpful suggestions for us to improve our working paper. In response to these suggestions, we identified the primary need for revisions around: (1) methodology and (2) the purpose of the paper. Therefore, we give the following responses to the need for revision. First, we tightened up our methodology and presented it as a case study approach (Yin, 2013) whereby we present cases of technology failure that underscore the need for HRD professionals to develop expertise in Technology Development. See page 4 for evidence of this addition to our paper. Also, in response by both reviewers to tighten up the purpose of our paper, we added a separate section on page 3 specifically addressing these concerns. We wish to thank the reviewers for the time and attention to our paper so that it could be improved and feel we have accomplished that task.