Chapter 4
Capability Demands of Digital Service Innovation

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ABSTRACT

This chapter explores the demands that digital service innovation places on those stakeholders who use the digital service through three lenses: workers and workplace, digital literacy, and, finally, digital education. The chapter includes an overview of digital service innovation. The impact of digital services generally is explored from the perspective of the workforce and the future of work developing an argument for the need for ongoing upskilling in the digital space. The skills required in the age of digital disruption are explored, and a definition and general understanding of what digital literacy entails is presented. Finally, the opportunities for education in digital environments are explored through three vignettes which illustrate different opportunities for upskilling and retraining. The chapter highlights adaptations required in socio-political environments, education and training, and curricula to allow digital service innovations to achieve the expected benefits.

INTRODUCTION

Digital service innovation is emerging in diverse sectors in the economy, including, retail, education, tourism, hospitality, social services, and distribution. This chapter synthesises findings from three different research projects to address questions about how digital service innovation is changing work; what

types of change will be socially beneficial; what digital skills will be required by the future workforce; and how education and training can meet these needs. This chapter will explore four questions:

- how is digital service innovation changing work and workplaces?
- what are the potential socio-cultural benefits and pitfalls of digital service innovation?
- what are the implications of these changes for digital literacy? and
- how is education and training being developed to meet various digital literacy needs of the future?

RESEARCH METHODS

The research presented here builds on a recent research project on digital skill acquisition conducted by Coldwell-Neilson (2016) combined with digital discernment research by Cooper (2019) and with Patterson's extensive experience designing, building and teaching in online and MOOC environments. Three vignettes are presented which illustrate contrasting education and training skills that can be used to develop of various digital service skills.

Central to this chapter is the research conducted by the Coldwell-Neilson (2016) on future digital literacy requirements. A twenty-first century perspective of digital literacy was developed through an extensive literature review, which included a scan of existing digital literacy definitions and frameworks, as well as a review of industry expectations of the impact of digital service innovation on skills and capabilities. This was validated through a series of workshops with academics from higher education as well as through conference presentations. This led to an updated understanding of digital literacy as presented in the following sections.

Cooper conducted a research project to integrate digital discernment skills into an undergraduate degree, reported in vignette 3. Barnett and Coate's (2005) curriculum framework with Threshold Concepts (Meyer, Land & Bailie, 2010) was used to develop an initial curriculum for digital discernment for youth work and community work students. An action-learning methodology was used to fine-tune curriculum implementation changes through four iterations, as reported in (Cooper & Scriven, 2017). A cyclical inquiry process of dialogical questioning, planning, observation, information gathering, reflection and re-questioning, learning and re-planning was used as a reflexive research method to document and theorise process, and to improve delivery strategies. Digital discernment problems were identified and strategies to address each of these were developed and trialled.

BACKGROUND

Digital Service Innovation is driven by the need to deliver new solutions rapidly to a wide audience through digital technology. Digital Service Innovation is often assumed to be motivated by the pursuit of economic efficiency and the use of ICT to reduce workforce cost (Green, 2017) producing savings that are passed on to consumers as lower prices, or through increasing profit. Nylén and Holmström (2015) contend that better user experience is at least as important as price competition.

Digital Service Innovation brings about digital disruption. This has both positive and negative outcomes. Digital services, the electronic delivery of information and data over the internet, provides many benefits to employees, employers and consumers if it provides easier access to such services. Digital

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