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Digitally Enabling 'Learning by Doing' in Vocational Education

Enhancing 'Learning as Becoming' Processes



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Preface

This book arose through my work team's continuous and ongoing challenges as we grappled to better support our institute's practice-based learning and teaching approaches, when access to face-to-face teaching and learning environments ceased due to the onslaught of the 2020 global pandemic. As with almost all countries, Aotearoa-New Zealand experienced episodes of the closure of educational institutions. My work, as an educational developer supporting teachers to develop practice-based learning, was deeply tested when there was the need to rapidly shift to digitally enabled/supported or 'remote'/distance learning. Hence, the work undertaken to assist with the design or learning and teachers' capability development across 2020, frames the discussions and recommendations presented throughout this book. Our educational development work was informed by premises and strategies, consolidated from over a decade of VET research. These studies had the underlying objective of improving learning for many practice-based disciplines across various levels of learning. Studies included the development and implementation of technology-enhanced learning (TEL) to support the learning of skills, knowledge, and attributes/dispositions across a range of specialised occupations. The findings and recommendations from these, frame the overall direction of this book.

Christchurch, New Zealand

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Ka mate kāinga tahi, ka ora kāinga rua —When one door closes, another will open.

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Chapter 1

Supporting Practice-Based Learning with Digital Technologies



Abstract In this first chapter, the rationale for the book is presented. The chapter discusses how the ongoing COVID-19 pandemic has increased the deployment and reliance on using digital technologies to support practice-based learning. However, replacing ‘hands-on’ learning or ‘learning by doing’ with virtual environments is challenging as it is difficult to fully replicate all the affordances of physical interaction with the teachers, tools, machinery, materials, and specialised work/learning environments. Then the following sections detail the Aotearoa-New Zealand (NZ) context as studies underpinning the concepts, processes, and strategies proposed and described through this book were carried out within the NZ vocational and education (VET) sector. An overview of each of the following chapters closes this chapter.

Keywords Learning by doing · Learning as becoming · Learning to become · Technology-enhanced learning · Forced change · Distance learning · COVID-19 pandemic

1.1 Introduction

The premises and motivations for writing this book arose through reflection on the experiences and challenges posed by the rapid forced changes inflicted on the global educational sector due to the COVID-19 pandemic of 2020. This event affected the social-economic-political fabric of the world; continues to be of major concern for many countries; and has eventuated in life-changing consequences for many countries and their citizens. One outcome of the pandemic was the forced and rapid closure of all educational institutes (Bozkurt et al., 2020). Governments around the world scrambled to shift their educational systems wholesale from face-to-face (f2f) learning to distance/remote learning (see Hipkins, 2020 for the Aotearoa-New Zealand (NZ) response). In many countries, the shift to ‘remote teaching and learning’ relied on the affordances provided through digitally enabled or mediated learning. In this book, the particularly demanding aspect of moving from practice-based teaching and learning (i.e. the learning of authentic work skills, knowledge, and attributes) from being based on teaching and learning through ‘learning by doing’, often in specialist