

BOOK REVIEW

Identity, Pedagogy and Technology-enhanced Learning: Supporting the Processes of Becoming a Tradesperson

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Identity, pedagogy and technology-enhanced learning supporting the processes of becoming a tradesperson is a good place to start if you want to understand the practice of vocational education and training (VET). Each chapter includes a summary of relevant research, references an extensive bibliography, and introduces various frameworks to make sense of, and support the application of, the concepts discussed. It covers modern use of technology in trades teaching and VET research and the author illustrates points with evidence from her own experience.

The first chapter introduces the importance of occupational identity formation in the trades and the concept of ‘learning as becoming’ for apprentices. The second chapter outlines three elements by which apprentices learn skills (doing), knowledge (thinking) and dispositions (feeling and being). The first element is constructivism – learners need to build into their cognitive structures ways of doing, thinking, feeling and being, for the occupation they are learning. The second element is socio-cultural – teachers or trades tutors, peers, workplace colleagues, mentors and teammates help apprentices learn. The final element is socio-material – those learning trades work with animate or inanimate objects, materials and machinery specific to their occupation to become able to do, think, feel and be. The third chapter digs deeper into the socio-cultural and socio-material aspects, noting the multiliteracies and complexity inherent in these processes.

Chapter 4 discusses the role of socio-cultural and socio-metric feedback within authentic learning environments, such as workplaces and simulated contexts. The first is from teachers, peers and various work colleagues and relies on a blend of verbal and non-verbal means. The second is feedback from the materials with which apprentices learning to become tradespersons must engage (socio-material). Tradespeople build skills through deliberate practice involving repetitive learning to establish muscle memory and attain automaticity. Experts can struggle to deconstruct their practice because they learned it in a holistic way. This chapter discusses the application of the feed up, feedback, feed forward framework in trades contexts to seek to overcome these challenges. Chapter 5 then focuses on the potential for digital technologies, such as simulators, to enable and enhance socio-cultural and socio-material feedback. It introduces a framework for implementing technology in VET environments, drawing on New Zealand case studies. Advantages of technology include its accessibility, timeliness and multimedia capabilities. Challenges include the text literacy focus of



systems developed for school and higher education contexts and the digital literacy of VET teachers and learners.

The sixth chapter explores how to teach tradespersons to become teachers by drawing on the apprenticeship model with which they are familiar, providing a range of opportunities for observation, imitation and practice, and recognising the multiliteracies they bring and need to pass on to their learners. This chapter also outlines teaching and learning strategies to assist VET learners. It discusses the cognitive apprenticeship theory of learning and VET-appropriate approaches such as project-based learning and practical demonstration, illustrating these with examples.

Chapter 7 argues for scholarship of teaching and learning to extend beyond its present focus on school and higher education to VET. It introduces a framework for paradigms, strategies, approaches and methods for researching VET learning, and stresses the importance of involving VET teachers and learners in the process. The author shares an example of practice-based participative research from her own experience. Chapter 8 then digs deeper into the use of video to study the learning of a trade. Video is a powerful tool for gathering authentic practice and for involving teachers and learners in the process, and can capture the different modes and literacies relevant to VET. With growing uptake of mobile phones, video is increasingly affordable, accessible and easy to use. However, there are potential challenges with ethical use and ensuring validity, reliability and generalisability. Again, the author shares her experience in effective use of video in researching VET.

The last two chapters look to the future. The ninth chapter discusses the future of trades learning, first considering predictions regarding the future of work and from this arguing for ongoing demand for the trades. It identifies skills to include in future-proofed VET curricula, such as the ability to solve 'wicked' problems, keep innovating through 'design thinking' and self-directed career planning. The final chapter then raises the age old issue of lack of parity of esteem between VET and other education sectors, despite growing recognition of its present and future economic importance and the rewards within trades occupations, particularly for those who have an affinity for practical work. The book ends with a repeated call for greater support for VET-specific scholarship of teaching and learning initiatives.

A key strength of this book is that it brings together a wealth of literature across the topic of VET teaching and learning. VET education is less frequently researched, so it can be hard to find amongst the plethora of education papers published. It is helpful to have succinct summaries of existing research in one place, supplemented by workable frameworks and the author's own research. Where relevant, the book draws on evidence from other spheres of research, such as the school and higher education sectors, and sports and medical training, and applies it to the VET context. However, it is unashamedly VET-focused and digs deeply into concepts that are specific to that sector.

VET is more complex than other types of education. Learners who are diverse in age and background learn in schools, tertiary settings and workplaces to prepare for hundreds of different occupations. Pedagogical approaches used in school and higher education, as well as authentic learning environments, develop competence in complex work-relevant tasks.

It is helpful to have frameworks to help practitioners understand and navigate these complexities. This book introduces new frameworks, references those developed by others, and applies frameworks developed in other contexts to learning a trade.

However, academic jargon and repeated use of the passive voice mean that readers (certainly, this reader) may have to re-read sentences to be sure of their meaning. Admirable attempts to help readers understand by signalling topics before they are introduced and summarising after they have been covered result in extra reading and some confusion as to which topic is being covered when. When writing about education, there is an ongoing tension between academic rigour and ease of understanding by practitioners. I believe this book veered too far towards the former to be of value to many VET practitioners — not because they couldn't understand it but because they lack the time to read and re-read it, to be able to comprehend and apply it.

I hope that researchers and those responsible for supporting and upskilling VET teachers will take the time to understand the wealth of knowledge within this book and use it to develop accessible resources that help practitioners understand and apply the riches contained within it. This will ensure that VET teaching and learning is able to develop innovative solutions to meet the constant shifts in digital technologies and the ongoing challenges posed by the future of work.

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