

Preface

This volume follows on from an earlier collection (Bridges, Whitehill, & McGrath, 2012) “Problem-Based Learning in Clinical Education” and seeks to build on what this editorial team, all of whom contributed to that volume, had come through our research to identify as an emerging trend in problem-based learning, i.e. the growing role of educational technologies. Our aim in this 2015 volume is to expand upon these initial thoughts and earlier research to share recent scholarship investigating our understandings of educational technologies in two specific contexts in health sciences education: (a) knowledge building in problem-based learning and (b) applied learning in clinical contexts. Our definition of educational technologies for the purpose of this edited volume broadly encompasses affordances for learning in physical and virtual learning spaces. As such, this includes both the installation of new hardware and infrastructure as well as the development of new software to support learning within and across the two thematic contexts. To date, one can broadly describe the uses of educational technologies in health sciences in preparing undergraduate and postgraduate students for clinical practice as blended synchronous and/or asynchronous approaches.

Chapters in this evidence-based collection draw on studies that examine educational technologies in medical and health sciences programmes which lead to applied, clinical practice. The range of affordances includes digital learning objects, such as video cases and virtual patients; learning management systems; virtual reality software and 3D simulations; as well the innovative use of hardware such as interactive whiteboards with internet searching capability; and integration of mobile devices. This list is not exhaustive but illustrates the broad range of applications in this under-researched field.

The focus in the collection is research-based seeking to expand and synthesise current understandings of both theoretical backgrounds and empirical evidence regarding the use of educational technologies in medical and health sciences education. While more general literature on their use in teaching and learning exists, this volume’s contribution aims to be in publishing studies that reflect the growing body of empirical research on educational technologies for situated, contextual learning in clinical education. It draws on both evaluation and applied research data to

analyse patterns of usage as well as individual and group cognition and psychomotor skill development. An eclectic approach has been taken by including various methodological and analytic lenses so as to support wider understandings of the impact (intended or not) of educational technologies on the learning process in these two contexts.

Practical implications of each study illustrate how the inclusion of such technologies can be purposefully designed to enhance deep learning and promote student engagement. In summary, the focus of this volume is twofold—research-driven and embracing new methodologies to explore how the inclusion of educational technologies can enhance students' learning in health professions education courses and programme. We trust readers will enjoy this wide-ranging sample of the cutting-edge work being undertaken with educational technologies in medical and health sciences education.

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