Chapter 50
E–Simulations for Educating the Professions in Blended Learning Environments

Dale Holt
Deakin University, Australia

Stephen Segrave
Deakin University, Australia

Jacob Cybulski
Deakin University, Australia

ABSTRACT

This chapter introduces digital, role-based simulations as an emerging and powerful educational approach for the professions and for broader workforce development purposes. It is acknowledged that simulations used for education, professional development, and training, have a long history of development and use. The focus is on digital simulations (e-simulations) situated in blended learning environments and the improved affordances of the newer digital media used via the web to enhance the value of their contribution to learning and teaching in professional and vocationally-oriented fields. This is an area which has received less attention in the whole "e-learning" literature compared with the voluminous body of knowledge and practice on computer-mediated communication, online community building, social networking, and various forms of online (usually automated) assessment. A framework of blended e-simulation design is outlined. The chapter concludes by examining what the future might hold for simulations in further and higher education, and ongoing work-based learning.

INTRODUCTION

The cornerstone of frameworks for providing *open*, *distance* and *flexible* education, is associated with online and recent pervasive technologies. Advances in networked media technologies

drive new forms of blended learning and teaching practices. There is an extraordinary volume and richness of literature relating to educational technologies emanating from, and applying to, these various intersecting fields of educational and training practice. From this publisher's more recent series alone, online education can be seen as being informed by the rich heritage of adult

learning theories and practices (Kidd, 2010; Kidd & Keengwe, 2010), while information and communication technologies (ICT) are foregrounded in developments in blended learning practices (Stacey & Gerbic, 2009), to include ICT support for evidence-based assessment practices (Spratt & Lajbcygier, 2009). While these publications draw on contributors from across the world and from an enormous variety of national and institutional settings, the totality of reported works represents only a small amount of the large body of literature relating to research, scholarship, practice, and policy making surrounding educational technologies globally.

The world of educational technologies is rapidly expanding, and its boundaries are dynamic to continually include new stakeholders, to span novel problems, and to embrace new scope and concerns. For the new researcher, practitioner and policy maker, it must seem like a bewilderingly complex and confusing world to navigate and achieve well evidenced outcomes. While acknowledging the broad sweep of the literature, our concern in this book is to focus on one area of online education, which offers great potential for enhancing teaching and learning experiences in contemporary settings. More specifically, we examine the design, implementation, and evaluation of e-simulations to enhance the education of those in professional and vocational fields. This chapter maps some of the key territory for the development and use of e-simulations, including their theoretical foundations, nature, characteristics and benefits. We highlight the value of centring role-based e-simulations in the blended design of contemporary learning environments. The field of e-simulations has its own diversity of perspectives and practices. These are acknowledged and explained throughout this publication. However, we see e-simulations as a reasonably well-defined and understandable educational technology that can add significant value to mature and nuanced blended learning designs and, ultimately, students' learning experiences.

THE CHANGING CONTEXTS OF HIGHER EDUCATION AND TRAINING

In the 21st century, higher education must meet a number of new (and continuing) challenges. External pressures have forced institutions to focus strongly on vocational courses at the expense of more scholarly classical studies. Reduced finances available from governments have led to the constant need to find alternative funding arrangements. Extra demands are placed on academic staff to do more with less in respect to their teaching and research. The nature of student cohorts has changed quite considerably, with respect to diversity in ability, cultural background, learning preferences, technology experience, levels of motivation, and the time they are able or willing to spend on their study (Biggs, 2003). The following are typical observations made by teachers of the newer generation of students:

- They have less time for everything.
- They pay less attention (often to authority).
- They demonstrate less persistence and endurance.
- They see less need for deep knowledge.
- They have somewhat less fear of failure and are open to pursuing alternatives and new options.
- They see their new wealth as buying results and act like pragmatic customers or consumers of (educational) services.
- They undertake a critical rating of benefit for the effort they expend.
- They consistently value friends and networks.

What implications do such observations have for fostering student learning? In relation to higher education, Oblinger and Oblinger (2005) discussed the needs and characteristics of the 'Net generation' (or Generation Y, those born on or after 1982) and highlighted their learning preferences as including:

Related Content

Internet Governance: Definitions, Issues, and Challenges
Lauren Movius (2011). *Handbook of Research on Information Communication Technology Policy: Trends, Issues and Advancements (pp. 468-483).*
www.irma-international.org/chapter/internet-governance-definitions-issues-challenges/45401

Developing an Internet and Intranet Usage Policy for a Metropolitan Municipality in South Africa
Udo Richard Averweg (2011). *Handbook of Research on Information Communication Technology Policy: Trends, Issues and Advancements (pp. 89-105).*
www.irma-international.org/chapter/developing-internet-intranet-usage-policy/45381

An Exploratory Analysis of the Relationship Between Organizational and Institutional Factors Shaping the Assimilation of Vertical Standards
Rubén A. Mendozaand T. Ravichandran (2011). *International Journal of IT Standards and Standardization Research (pp. 24-51).*
www.irma-international.org/article/exploratory-analysis-relationship-between-organizational/50573

The Perils of Access and Immediacy: Unintended Consequences of Information Technology
Linda L. Brennan (2004). *Social, Ethical and Policy Implications of Information Technology (pp. 48-58).*
www.irma-international.org/chapter/perils-access-immediacy/29305

Standardising the Internet of Things: What the Experts Think
Kai Jakobs, Thomas Wagnerand Kai Reimers (2011). *International Journal of IT Standards and Standardization Research (pp. 63-67).*
www.irma-international.org/article/standardising-internet-things/50575