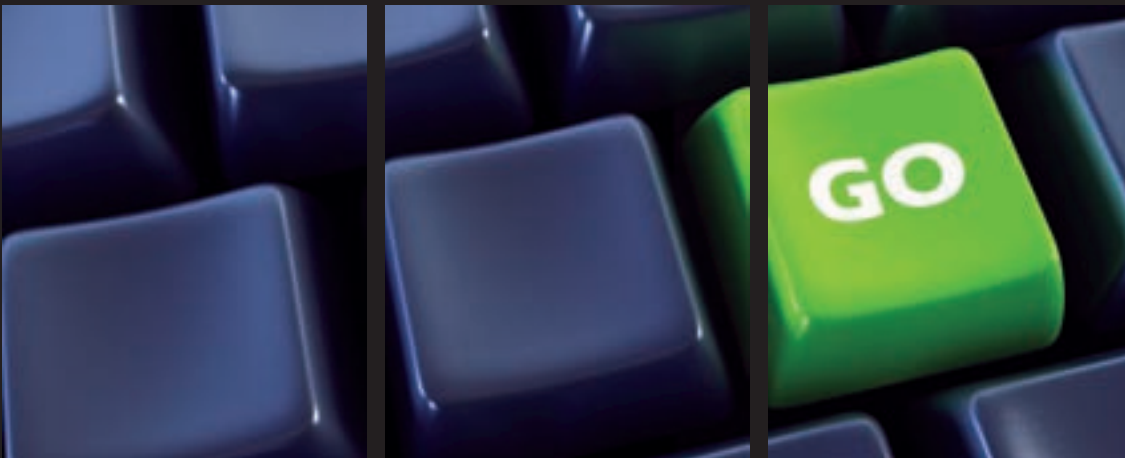


The E-learning Toolkit

DR ELSPETH MCKAY



The E-learning Toolkit

is published by Ark Group



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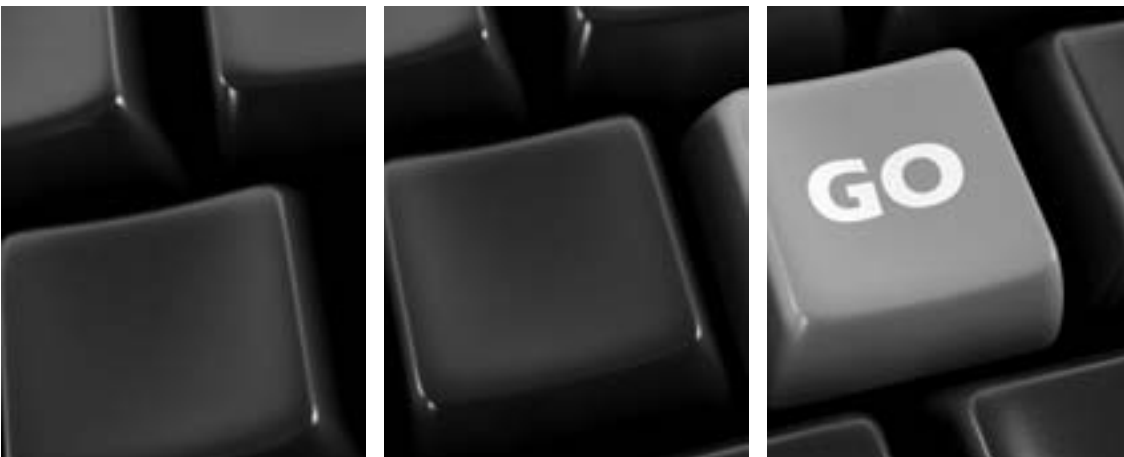
ISBN: 978-1-906355-62-3

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Executive summary

THIS REPORT aims to portray the current position in Australia and the Asia-Pacific region of the use of e-learning through a social context lens that is relevant for both business and government sectors.

The *E-learning Toolkit* follows on from Patti Anklam's *Social-Network Toolkit*. Consequently it focuses on the human dimensions and the transportable nature of e-learning/e-training, forming an important part of the social networking that transpires in all parts of our daily lives.

The Introduction in Part One describes the current position in Australia and the Asia-Pacific region of the use of e-learning/training through a social context lens, which is relevant in both the business and government sectors. This opening section introduces concepts of 'organisational and social capital' offering practical strategies for creating effective e-learning experiences for older learners/industry trainees. The 'Asia e-Learning Network' (AEN) is emerging to enhance this region's effectiveness. We see a fine example of how to facilitate best practice through third generational e-learning designs, to emphasise that a blended approach may indeed be the best practice after all.

Chapter 1 explains why e-learning matters through a social networking lens. This enables us to understand the broader concepts of organisation capital within e-learning networks. Change is all around us; there is even a special variety of digital linguistics that plays an important role in

any discussion on e-learning. This means that our comprehension of what people experience may be slightly different in different corners of the globe. Consequently, our notion of social networking that is used within the business community *per se* is changing the way we understand 'trusted communication' between two or more business people in an online e-learning/training environment.

The social context of e-learning goes hand-in-glove with e-communities. In most cases these communities develop online through a digital osmosis, changing the ways we deal with our tacit (conceptual) knowledge sharing. Since the beginning of time, we have experienced our learning through our collaborative ventures, like watching our parents interact with those around us. Collaborative online environments develop our digital tacit knowledge into more concrete and explicit knowledge that people pass on as digital artefacts through the internet.

Chapter 2 shifts from the broader focus taken in the first chapter, where the central themes link the social context of learning and organisational performance – to examine the interactive effect of e-learning social networking structures in a range of business or corporate sector settings on performance outcomes. Instead it looks more closely at e-learning to highlight the human dimensions of human-computer interaction (HCI). The relationship is constantly changing between human-

beings and their reliance on technology for educational/training purposes. One of the more powerful influences noted here is the merging of the relationship within the fields of distance education and social networking. This is partly due to the emerging virtual community practices. This means they now overlap the previously disparate learning/training agencies, shedding new light on the differences between co-operative and collaborative education and training. Co-operative environments are prescriptive where there is a set pathway of tasks to reach the intended outcome; in a collaborative environment, there is flexibility for sharing new ways to achieve the final result.

Chapter 3 takes a step away from the e-learning environment *per se* to explain that not all people will visualise their online learning materials in the same manner. Unlike the popular myth, which says that visualisers learn best from pictures and verbalisers learn best from text, researchers know that away from a computer, our mode of thinking about the information we receive will vary according to the task at hand. People will choose to think of the information they are receiving in terms of verbal (text-driven) or mental images (visualising concepts). Researchers in general have been aware of learners' cognitive (learning style) differences – and the implications for instructional design. Yet it is still unclear how individuals respond to screen-based information. Research is yet to provide a comprehensive evaluation that considers the full Riding dimensions of cognitive style (people's representation of information during thinking and their mode of processing information) to determine the interactive effects of adding colour, movement and sound to our comprehension in online learning/training environments.

Chapter 4 provides common-sense tips for developing your own e-learning development strategy. These ten design and delivery tips are offered as strategic *E-learning Toolkit* rules; they draw upon the human dimensions of HCI to guide the building of your e-learning solutions. These rules offer some practical tips to overcome the common view that training programmes for new corporate employees are readily available.

Chapter 5 takes a brief look at the future for e-learning and learning more generally, considering the impact of mobile and home working.

Part Two presents eight e-learning case studies written by academic researchers in a mix of corporate/industry sector training and education sector online learning programmes. While most of these case studies are located in the Asia-Pacific region, the professional training practice as it applies to the Australian view is threaded throughout this *E-learning Toolkit*. Although inclusivity is viewed as highly desirable, the common threads between the case studies reveal a strong tendency towards cost savings as a prime motivator for devising e-learning programmes.

The contributions from Singapore and the Philippines bear this out. In particular, the collaborative approach is valued most by the Singaporeans – while in the Philippines they extend this collaborative relationship into customising the e-learning programmes by involving the local communities. In the case study from New Zealand, the authors add access and quality training to facilitate their systems analysis training, while in the case study from Taiwan the author notes that the values of improved performance and quality training are the key drivers that enhance the acceptability of e-learning among teachers there. While the treatment of e-learning is quite different in Japan and Malaysia, these case studies

share a common thread to emphasise the value of group dynamics. Their key drivers include informal learning, knowledge management and skill capture. The final case study, from the USA, concentrates on inter-agency collaboration for implementing a blended e-learning programme. This e-learning programme is based upon sound instructional design principles, to meet the performance expectations of each agency.

About the author

ELSPETH MCKAY, PhD, FACS, is a senior lecturer/researcher in the School of Business IT at the RMIT University, Australia. Her PhD is in computer science and information systems, from Deakin University, Geelong, Australia. Dr McKay also holds further qualifications in instructional design, computer education and business information systems.

She is passionate about the interactive effects of the human dimensions of human-computer interaction (HCI) in designing effective e-learning resources for the education sector and industry training/reskilling programmes. Her research interests involve investigations of how individuals interpret text and graphics within web-mediated learning environments. In recognition of her contribution to the professional practice of information systems research, she was elected as a Fellow of the Australian Computer Society (ACS).

Her work involves developing specialist e-learning tools implemented through rich internet applications, including: ARPS – an advanced repurposing pilot system, COGNIWARE – a multi-modal e-learning framework, GEMS – a global eMuseum System, eWRAP – electronic work readiness awareness programme, and EASY – educational/academic (skills) screening for the young, offering enhanced accessibility through touch-screen technologies.

Over the last decade Dr McKay has published extensively in the research fields of HCI and educational technology, including her 2007 monograph entitled 'The Human-Dimensions of Human-Computer Interaction: Balancing the HCI Equation'.

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Acknowledgements

I WOULD like to take this opportunity to say thank you to all the case study authors. Without your energies this would be a very ordinary publication. We are also grateful to all those people who have been very generous in providing permission to quote from their published material for this *E-learning Toolkit*.

Moreover, I am especially grateful for Associate Professor Margaret Tan's case study from Singapore; I'm so glad that we could draw her away from her busy senior role at the Nanyang Technology University. An extended appreciation is also due to her co-authors (Paul Wu Horng-Jyh and Chia Yew Boon).

Thanks too are due to Professor Toshio Okamoto, from the University of Electro-Communications, Tokyo. RMIT University enjoys an ongoing collaborative research relationship that hopefully one day will bear fruit in securing another funded e-learning research project.

Closer to our shoreline lies New Zealand, where Mike Mullany and his colleague Colin Dyer sent their excellent case study on teaching with e-learning simulations. No doubt Mike and Colin will draw many enquiries for more information on how to run such a successful instructional/training programme

Then further away comes Professor Carole Bagley, who is not only the team leader of the technology group but also a busy academic; her valuable contribution certainly is appreciated. Carole's success as an e-learning consultant is evident as one reads her account of her industry engagement research project. Thank you, Carole, for your generosity in sharing this project with us – especially while the project is still 'in progress'. We extend our appreciation towards her funding body for their approval for Carole to submit her case study for publication within this *E-learning Toolkit*.

This is a special opportunity to mention our gratitude to Victoria Rivera from Smart Point Solutions, Inc., in the Philippines. We can all learn from your sharing of this set of industry sector case studies, which heavily involve the local community.

Lastly, and by all means not the least important, is the gratitude owed to my four PhD students – for submitting such interesting case studies from their home countries: Cenie Vilela-Malabanan, Kuo-Tung Huan (Alex), Jessnor Elmy Mat-Jizat and Asmidah Alwi have certainly added to the richness of this *E-learning Toolkit* with their first-hand experiences. They are all in the early stages of their candidature at RMIT University, School of Business Information Technology. Consequently, they have my utmost admiration for accepting the invitation to submit e-learning case studies while squirreling away at the 'frontiers' of their own studies. To my other PhD students (Marlina Mohamad and Mandi Axmann), I am grateful for their additional advice for the final submission. Marlina is in the final stages of her candidature, contributing to this toolkit in the finer details for the production of the graphical objects. Mandi is setting up her doctoral research plan, while reading the closing chapters. Thank you all.

Authoring this *E-learning Toolkit* has been a team effort. Therefore, in closing my acknowledgements to everyone concerned, I need to further acknowledge the continual support

from Keven Asquith for his tireless reading of the early draft chapters. Similarly for my dear academic colleague, there is a special thank you due to Helene Gerke for sharing her expertise with English grammar – both Keven and Helene know their critiques are appreciated. Proof reading is not such an easy task as I'm quite argumentative while I write. Therefore any mistakes that have escaped our proofing sessions are entirely due to my belligerent stubbornness.

Elsbeth McKay

June 2009

Reading and resources

The key books on e-learning development are mentioned throughout each chapter. For convenience, there is a separate reference list at the end of every chapter. As my academic role is an 'active researcher' in the field of the human dimensions of HCI at RMIT University, School of Business Information Technology, this involves paying close attention to 'what's out there'. Therefore we have taken care to acknowledge the originators of the thoughts and ideas that underpin this *E-learning Toolkit*.