Exploring authentic learning activities for enhanced learning outcomes: Adult learners and their perceptions of learning in a virtual world

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Note to Examiners

This thesis has been written in journal-article format. I have attempted to minimise the duplication of material between chapters. However, some repetition remains. Please excuse this repetition. The visual image (Wordle) of the most used words in specific parts of the text give the reader a better feel for the focus of the discussion in that particular part of the text.

Although efforts have been made to ensure consistency in the format for the purposes of this thesis, I acknowledge that some inconsistencies remain because of the requirements of each of the journals/book/conference in which the separate publications were published. Some conventions may be different across publications as this was how they were published.
Acknowledgements

Keeping in line with an action research study, this thesis would not have been possible without the assistance of many, many people – family, friends, colleagues and organisations. I thank each and every one of you.

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<tr>
<td>ACU</td>
<td>Australian Catholic University</td>
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<tr>
<td>AEST</td>
<td>Australian Eastern Standard Time</td>
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<tr>
<td>AITSL</td>
<td>Australian Institute for Teaching and School Leadership</td>
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<td>ALTC</td>
<td>Australian Learning and Teaching Council</td>
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<td>CSU</td>
<td>Charles Sturt University</td>
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<td>Curtin</td>
<td>Curtin University</td>
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<td>DEHub</td>
<td>Distance Education HUB</td>
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<tr>
<td>HSIE</td>
<td>Human Society and Its Environment</td>
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<td>HTML</td>
<td>Hypertext Markup Language</td>
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<tr>
<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IM</td>
<td>Instant Message</td>
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<td>JISC</td>
<td>Joint Information System Committee</td>
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<td>KLA</td>
<td>Key Learning Area</td>
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<td>LMS</td>
<td>Learning Management System</td>
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<td>LSL</td>
<td>Linden Script Language</td>
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<td>OLT</td>
<td>Office of Learning and Teaching</td>
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<td>MPML3D</td>
<td>Multimodal Presentation Markup Language 3D</td>
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<td>PDF</td>
<td>Portable Document Format</td>
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<tr>
<td>PREX</td>
<td>Professional Experience</td>
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<td>RAM</td>
<td>Random Access Memory</td>
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<td>RMIT</td>
<td>Royal Melbourne Institute of Technology University</td>
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<td>RPGs</td>
<td>Role-playing games</td>
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<td>SL</td>
<td>Second Life</td>
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<td>UNE</td>
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<td>VirtualPREX</td>
<td>Virtual Professional Experience</td>
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<td>VW</td>
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Abstract

The researcher sought to find out whether virtual worlds provided authentic, engaging and immersive learning experiences for students and whether these experiences had an impact on learning. The research reported in this thesis by journal-article format investigated student perceptions of their learning in a virtual world over a four-year period.

Virtual world education has been a “hot” topic in recent years, however very little has been published relating to authentic learning activities, student perceptions of their engagement in learning activities and what, if any, impact this has on student learning outcomes. Five hundred and twenty-three off-campus and on-campus Education students at an Australian regional university participated in learning activities in a virtual world. An action research methodology was used, involving the analysis of qualitative and quantitative data. Fifty-two thousand lines of inworld conversation (in Second Life), surveys, observations and student feedback were analysed to address the three main research questions that emerged from the literature. At all times, students’ perceptions of their learning were a focus of the research, underpinned by adult learning theories and guided by action research methodology.

This thesis is structured as an introduction, eleven peer reviewed publications and a conclusion, divided in to six chapters. The first chapter introduces the thesis and methodology undertaken, the second discusses adult learning theories and provides the context and background for the research. The third chapter outlines the impact that virtual worlds have on student learning outcomes. The fourth chapter discusses student perceptions of their engagement in virtual world learning activities. The fifth chapter explores student immersion in authentic virtual world learning activities. The final chapter concludes the thesis with an overview of the outcomes of the research and discusses future directions and areas for further research.

Second Life, a virtual world, was used for the research and activities took place on the island of “Australis 4 Learning”. The context of this research is provided to give a sense of learning and teaching in a virtual world. Comparisons are made of the different types of learning undertaken by the students through three action research cycles.

There were three key findings. First, impact on learning – students who voluntarily participated in virtual world activities significantly outperformed those students who chose not to or for whom it was a compulsory activity. Second, engagement with learning – virtual worlds are an engaging format in which to learn, as perceived by the students. Finally,
immersion in authentic learning activities – virtual worlds provide immersive and authentic learning experiences for those who participate.

This research contends that a virtual world provides a unique learning experience for students. They are able to outperform their peers who choose not to use a virtual world for their learning activities, they are engaged in their learning and they are immersed in authentic learning that feels like a face-to-face experience. It remains unresolved as to why students who use a virtual world for their learning outperform their peers and more research must be undertaken to resolve this issue. However, the evidence presented in this thesis argues that students are engaged when participating in immersive and authentic learning activities in a virtual world.