



# **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.





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# Table of Contents

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<b>Acknowledgements .....</b>	<b>vii</b>
<b>Tables and Figures.....</b>	<b>xiv</b>
Tables.....	xiv
Figures .....	xv
<b>Abbreviations .....</b>	<b>xix</b>
<b>Abstract .....</b>	<b>xxi</b>
<b>Chapter 1: Introduction .....</b>	<b>1</b>
Background .....	4
Research Approach Overview.....	5
Research Aims and Objectives.....	6
Conceptual Framework .....	7
Research Questions .....	8
Methodology .....	9
Data Collection.....	13
Analysis Techniques .....	16
Overview of Research Phases .....	17
Overview of the Publications .....	20
Introducing the Publications .....	21
Impact of the Research.....	32
Summary .....	32
<b>Chapter 2: Context and Background.....</b>	<b>33</b>
<b>Publication 1:</b> Introducing Jass Easterman: My Second Life Learning Space.....	35
<b>Publication 2:</b> Teaching Higher Education Students with Diverse Learning Outcomes in the Virtual World of Second Life .....	55
<b>Publication 3:</b> Adults Learning in a Virtual World .....	83
<b>Chapter 3: Impact on Learning .....</b>	<b>99</b>
<b>Publication 4:</b> Taking the Distance out of Learning for Students through a Virtual World .....	101
<b>Publication 5:</b> Do Virtual Worlds have a Role in Increasing Student Engagement as Measured by their Higher Academic Grades?.....	129

<b>Chapter 4: Engagement with Learning .....</b>	<b>147</b>
<b>Publication 6:</b> Engaging Classes in a Virtual World.....	149
<b>Publication 7:</b> Learning in a Virtual World: Student Perceptions and Outcomes .....	173
<b>Chapter 5: Immersion in Authentic Learning Activities .....</b>	<b>209</b>
<b>Publication 8:</b> Real Thinking with Virtual Hats: A Role-Playing Activity for Pre-Service Teachers in Second Life.....	211
<b>Publication 9:</b> Second Life: A Novice/Expert Teaching and Learning Tale .....	235
<b>Publication 10:</b> Changing Directions through VirtualPREX: Engaging Pre-Service Teachers in Virtual Professional Experience .....	257
<b>Publication 11:</b> Comparison of Role-Play in a Virtual World .....	277
<b>Chapter 6: Conclusion .....</b>	<b>289</b>
Introduction .....	291
Recap of Research Aims and Objectives.....	291
Key Issues.....	292
Research Findings.....	293
Discussion.....	297
Limitations of the Overall Study .....	301
Strength of the Overall Study .....	302
Implications for Policy and Practice.....	303
Impact on the Sector .....	304
Future Research Directions .....	304
Summary.....	305
<b>References .....</b>	<b>307</b>
<b>Appendices.....</b>	<b>333</b>
Appendix A – Survey 1 .....	335
Online Survey – pre semester – Publications 1 and 5 .....	335
Appendix B – Survey 2 .....	337
Online Survey – post semester – Publications 1 and 5 .....	337
Appendix C – Survey 3 .....	345
Online Survey – Publications 4, 6 and 7 .....	345
Appendix D – Survey 4 .....	350
Online Survey – Publications 2, 8, 9 and 11 .....	350

Appendix E – Survey 5 .....	352
Online Survey – Publications 10 and 11 .....	352
<b>Glossary of Terminology.....</b>	<b>361</b>

## Tables and Figures

### Tables

Table 1.1: Number of students enrolled in each unit – 2008 to 2011 .....	15
Table 1.2: Number of students who attended Second Life learning activities – 2008 to 2011.....	15
Table 1.3: Overview of publications 1 to 3.....	21
Table 1.4: Overview of publications 4 and 5 .....	24
Table 1.5: Overview of publications 6 and 7 .....	26
Table 1.6: Overview of publications 8 to 11.....	29
Table 2.1: 16 ways to use virtual worlds in the classroom (Ryan, 2008) .....	43
Table 2.2: Overview of results (Total students n=12) .....	47
Table 2.3: Synchronous and asynchronous uses of the virtual world .....	75
Table 3.1: 16 ways to use virtual worlds in the classroom (Ryan, 2008) .....	115
Table 3.2: Student attendance in Second Life sessions .....	118
Table 3.3: Tools used for synchronous online discussions (n=59).....	121
Table 3.4: Inworld discussions (pages).....	123
Table 3.5: Number of students attending Second Life sessions .....	138
Table 3.6: Dialogue and time spent inworld by students (2008-2011).....	140
Table 4.1: Statistical comparison of student attendance in Second Life sessions .....	165
Table 5.1: Pilot study sample .....	220
Table 5.2: Student perceptions of the real-life and virtual-world versions of the role-playing activity.....	226
Table 5.3: Comparison of selected students' comments about the real-life and virtual world- based versions of the role-playing activity.....	229
Table 5.4: VirtualPREX role-play characters .....	267
Table 5.5: Overall perspectives on the role-play activity .....	269
Table 5.6: Distribution of student numbers and gender – 2009–2012 .....	283
Table 5.7: Student perceptions of their learning in a virtual world after de Bono role-play .	284
Table 5.8: Student perception of learning in a virtual world after VirtualPREX role-play ...	284
Table 6.1: Phase, chapter and publication summary.....	291

## Figures

Figure 1.1: (a) Kemmis and McTaggart (1988, p. 11) Action research spiral, (b) Action research spiral undertaken in this research .....	10
Figure 1.2: Action research spiral over four years of research, 2008 to 2011.....	11
Figure 1.3: Action research spiral diagram of two phases linked to the portfolio publications .....	20
Figure 1.4: Phase 1: Context, background and adult learning theories of the research and publications relating to each question .....	21
Figure 1.5: Phase 2: Action research cycle impact on learning, student perceptions and publications relating to each question through action research.....	23
Figure 1.6: Phase 2: Action research cycle engagement, and publications relating to each question through action research .....	26
Figure 2.1: Jass Easterman .....	43
Figure 2.2: General themes of online dialogue.....	48
Figure 2.3: The author's avatar, Jass Easterman .....	59
Figure 2.4: Education Online Headquarters in Second Life.....	61
Figure 2.5: Second Life classroom and playground .....	61
Figure 2.6: NASA, Collab .....	70
Figure 2.7: Demonstration of andragogy through role-plays in Second Life (1a VirtualPREX; 1b de Bono's Six (1985) Thinking Hats).....	89
Figure 2.8: Demonstration of constructivism through knowledge building in Second Life (2.8a experimentation through building; 2.8b undertaking a conversation with "Bill the Bot") .....	90
Figure 2.9: Demonstration of transformative learning through simulations in Second Life (2.9a bottle factory production line; 2.9b fire and car accident) .....	91
Figure 2.10: Adults learning in a virtual world through three case studies underpinned by adult learning theories .....	94
Figure 3.1: Jass Easterman: the author's avatar .....	108
Figure 3.2: Activities in Second Life: (1) discussions underway in the virtual world, (2) virtual guest lecture, (3) role-play activity, (4) students undertaking a web quest, (5) virtual excursion to Sistine Chapel, (6) virtual excursion to Collab, National Science Museum .....	113

Figure 3.3: Age of off-campus students 2010 who were studying Second Life as a component of one assessment task. These results were only available from those students who completed end-of-semester surveys .....	119
Figure 3.4: Comparison of grades in 2010 in seven Education subjects between students who chose to study using Second Life and those who did not (n=1622) .....	120
Figure 3.5: Comparison of undergraduate and postgraduate results in 2010 across seven Education subjects: Those who chose to use Second Life as part of their studies vs those who did not.....	121
Figure 3.6: The authors' avatars .....	135
Figure 3.7: Grade comparison across four years from 2008 to 2011 between students who chose to study using Second Life as a learning tool and those who chose not to.....	139
Figure 4.1: Jass Easterman. The researcher's avatar .....	157
Figure 4.2: Jass in discussions with students .....	158
Figure 4.3: Age distribution of students who completed surveys and attended Second Life Sessions with Jass on a voluntary basis (2008/2009 n= 21, 2010/2011 n=77).....	161
Figure 4.4: Themes occurring from the inworld discussions using Leximancer for theme analysis.....	162
Figure 4.5: Meditation being undertaken in world .....	163
Figure 4.6: Students engaged in conversations with guest academics (6a) University of Torino, Italy, (6b) St Josephs School, Australia, (6c) Griffith University, Australia .....	164
Figure 4.7: Discussions at Education Online Headquarters.....	167
Figure 4.8: Student performing in Second Life .....	167
Figure 5.1: Virtual school classroom .....	221
Figure 5.2: Virtual school playground .....	221
Figure 5.3: Six Thinking Hats questions.....	223
Figure 5.4: The authors' avatars – Jass Easterman (left) and Tamsyn Lexenstar (right) .....	224
Figure 5.6: Jass Easterman and Tamsyn Lexenstar at Australis4Learning (Second Life Classroom and Playground) .....	238
Figure 5.7: Questions to be asked of each of the six de Bono Thinking Hats .....	240
Figure 5.8: Second Life role-play activity – de Bono's Six Thinking Hats.....	241
Figure 5.9: Pre-service teachers undertaking VirtualPREX role-play activities .....	265
Figure 5.10: Schematic framework of in-world and external components of bot creation ...	271
Figure 5.11: Example for event with teacher avatar and student bot.....	272
Figure G1. An example of an avatar, the researcher's avatar, Jass Easterman.....	364

Figure G2. Online elearning tools being utilised in Higher Education Institutions .....	366
Figure G3. An example of a virtual world.....	370



# Abbreviations

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



# Abstract

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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.