

# **AN EXPLORATION OF TEACHING AND LEARNING IN A VIRTUAL WORLD IN THE CONTEXT OF HIGHER EDUCATION**

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**Thesis submitted for the Degree of Doctor of Philosophy**

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## DECLARATION

*I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.*

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## CONTENTS

INTRODUCTION .....	2
Research Focus.....	2
Data Collection Methods.....	2
Professional Context .....	2
Rationale .....	3
Student Teachers .....	4
Initial Teacher Education and ICT.....	8
Summary .....	10
Chapter Organisation .....	11
CHAPTER ONE: SECOND LIFE.....	13
Introduction .....	14
Play.....	14
Computer Gaming.....	15
Second Life .....	19
Technical Access Requirements .....	22
Identity.....	23
Community.....	28
Topography .....	29
Economy within SL .....	33
Summary .....	34
CHAPTER TWO: A REVIEW OF SECOND LIFE USE IN SEVEN HIGHER EDUCATION SETTINGS .....	35
Introduction.....	36
Purpose.....	36
Method .....	36
Communal Constructivism .....	40
Experiential Learning.....	44
Simulation .....	47
Role-Play.....	51
Collaborative Learning.....	52
Summary of Pedagogic Approaches .....	56



Research Methods .....	57
Summary .....	59
CHAPTER THREE: RESEARCH PARADIGM .....	60
Introduction .....	61
SECTION ONE.....	62
Defining the Research Purpose .....	62
Defining the Research Setting: ‘Identifying the Field’ .....	62
Research Paradigm.....	65
Ontology.....	66
Epistemology .....	66
Methodology .....	67
Literature .....	69
Data Collection Techniques .....	70
(1)Participant Observation .....	70
(2) The Use of Written and Non-Written Sources .....	74
(3)Interview .....	75
(4)Data Analysis.....	76
(5)Reflexivity .....	76
Neutrality.....	76
Addressing Researcher Bias.....	77
Voices in Concert.....	78
Reflections.....	79
Fallor Ergo Sum .....	81
Ethics.....	82
Quality of this Research Inquiry .....	84
Appropriateness of Research Design .....	84
Demonstration of Trustworthiness and Rigour .....	84
Generalisability .....	86
The Usefulness of the Research to the Research Community .....	87
SECTION TWO.....	88
Thematic Analysis.....	88
Data Organization, Tracking and Management .....	88
Initial Recording: Memos and Coding.....	90

Selection of Themes .....	91
Checking for Credibility .....	91
The Presentation of Data Analysis .....	93
Summary .....	94
<b>CHAPTER FOUR: GETTING STARTED .....</b>	<b>95</b>
Beginning the Journey.....	97
Stage One: Separation .....	98
Boundary Crossing .....	98
Life as a ‘Newbie’ .....	99
Stage Two: Transition .....	100
Learning Second Life Skills.....	100
Liminal Moments .....	101
Gaining Access.....	103
Establishing Persistent Identity .....	106
Establishing a Sense of Place .....	108
Stage Three: Transformation .....	113
Becoming an SL Teacher .....	113
Religion in Cyberspace .....	113
Reviewing the Learning Space.....	116
Are We There Yet? .....	119
<b>CHAPTER FIVE: TALES FROM THE VIRTUAL FIELD .....</b>	<b>120</b>
Theme One: The Virtual Teacher .....	122
Theme Two: Learner Engagement in the Virtual World .....	133
Theme Three: The Fear Factor.....	144
Theme Four: Getting to Grips with Methodology .....	151
Theme Five: Virtual World Place Based Education .....	162
Chapter Summary.....	167
<b>CHAPTER SIX: DISCUSSION AND THEORIZATION .....</b>	<b>168</b>
Introduction .....	169
Rationale .....	169
Phase One: Orientation .....	172
Phase Two: Euphoria .....	175
Phase Three: Crisis.....	176

1. Affective Struggles .....	177
2. Behavioural Struggles.....	179
3. Cognitive Struggles.....	180
Phase Four: Survival .....	182
1. Affective Survival.....	183
2. Behavioural Survival .....	188
3. Cognitive Survival .....	191
Phase Five: Transformative Learning .....	194
Summary .....	199
CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS .....	200
Recommendations .....	203
Limitations of the Research .....	208
Further Areas of Research.....	208
Summary .....	209
REFERENCE LIST .....	210
APPENDICES .....	246

## List of Figures

Figure 1: World of Warcraft .....	16
Figure 2: EverQuest .....	17
Figure 3: The Sims .....	17
Figure 4: Second Life Logo .....	19
Figure 5: Screenshot of Second Life Front Page .....	20
Figure 6: Aldrich's HIVE Continuum .....	21
Figure 7: Initial Avatar Selection Process.....	23
Figure 8: Interface for Editing Avatar Appearance.....	24
Figure 9: Mad Hatter Avatar .....	24
Figure 10: Female Avatar in Muslim Dress.....	25
Figure 11: Robot Avatar.....	25
Figure 12: Animal Avatar .....	26
Figure 13: Virtual Worlds Educators Round Table Meeting.....	26
Figure 14: Mini-Map View of Dublin 2 in SL.....	29
Figure 15: Teleportation.....	30
Figure 16: Virtual Ireland Replica Trinity College Dublin.....	31
Figure 17: Second Health Operating Space (Imperial College London) .....	32
Figure 18: Virtual Poster Display Example .....	32
Figure 19: Project Murias (Girvan and Savage 2010) .....	41
Figure 20: Alley Flats Project .....	45
Figure 21: Alley Flats Project .....	46
Figure 22: Research Paradigm .....	65
Figure 23: The Analytic Process .....	88
Figure 24: Credibility Framework .....	92
Figure 25: Excerpt-Commentary Unit .....	93
Figure 26: Beginning the Journey .....	97
Figure 27: Separation .....	98

Figure 28: Transition.....	100
Figure 29: Liminal Moments .....	101
Figure 30: 'Is One Life Enough' Module.....	105
Figure 31: Establishing Identity .....	107
Figure 32: Ithaca Phase One .....	110
Figure 33: Ithaca Phase Two.....	110
Figure 34: Ithaca Initial Classroom Layout .....	111
Figure 35: Ithaca Classroom .....	112
Figure 36: Dublin Virtually Live Amphitheatre .....	117
Figure 37: Lecture Space in Dublin Virtually Live .....	117
Figure 38: Exterior of MDI in DVL.....	118
Figure 39: Interior of MDI in DVL.....	119
Figure 40: The Virtual Teacher.....	122
Figure 41: The MDI Learning Space .....	127
Figure 42: MDI Classroom – Phase One .....	127
Figure 43: MDI Classroom – Phase Two.....	128
Figure 44: Learner Engagement in the Virtual World .....	133
Figure 45: Icon Gallery in St. Catherine's Monastery SL .....	136
Figure 46: Being There Together .....	137
Figure 47: St. Michael the Archangel Monastery .....	138
Figure 48: Meditation in the Buddha Centre .....	140
Figure 49: Lesson Six Class Discuss .....	140
Figure 50: Engaging in The Movements of Ra'kah.....	152
Figure 51: The Investigation Room .....	156
Figure 52: Interactive Objects in The 'Night of Broken Glass' Simulation .....	156
Figure 53: Student Led Discussion at The Church of Latter Day Saints in SL .....	159
Figure 54: Place-Based Education .....	162
Figure 55: Virtual Place-Based Education Model .....	163

Figure 56: Virtual World Adjustment Theory .....	172
Figure 57: Phase One Orientation .....	173
Figure 58: Phase Two Euphoria .....	175
Figure 59: Phase Three Crisis .....	176
Figure 60: Phase Four Survival.....	182
Figure 61: Virtual World ABC Model (Adapted from Ward et al.2001) .....	183
Figure 62: Final Orientation Activity.....	186
Figure 63: Phase Five Transformative Learning.....	194

### **List of Tables**

Table 1: Suggestions for Future Research .....	58
Table 2: Issue and Approach to Designing SL Module .....	116

### **List of Appendices**

Appendix 1: ICT Policy Ireland.....	247
Appendix 2: Cases of Higher Education Pedagogic Use of SL.....	248
Appendix 3: Field Note Template.....	251
Appendix 4: Religion in Cyberspace Module Outline.....	253
Appendix 5: Approach to Coding .....	260
Appendix 6: Thematic Map .....	261
Appendix 7: Sample Coding .....	262

## List of Abbreviations

BRELED	Bachelor of Religious Education
DES	Department of Education and Skills
DCU	Dublin City University
EA	Electronic Arts
ESA	Entertainment Software Industry
FTP	Foundation Teaching Practice
HD	High Definition
HE	Higher Education
HEA	Higher Education Authority
ICT	Information Communication Technology
ITE	Initial Teacher Education
MDI	Mater Dei Institute of Education
METIS	Mater Dei Teaching for Information System
MKO	More Knowledgeable Other
MMORPG	Massively Multiplayer Online Role playing Games
MUVE	Multi User Virtual Environment
NCCA	National Council for Curriculum and Assessment
NCTE	National Centre for Technology in Education
OECD	Organisation of Economic Cooperation and Development
SL	Second Life
SLLA	Second Life Liberation Army
SLURL	SL Location Based Linking

UNSECO

United Nations Educational, Scientific and Cultural Organization

ZPD

Zone of Proximal Development

3D

Three Dimensional



## **ABSTRACT**

### **AN EXPLORATION OF TEACHING AND LEARNING IN A VIRTUAL WORLD IN THE CONTEXT OF HIGHER EDUCATION**

**Sabrina Fitzsimons**

This research provides an account of one third level educator's experience of teaching and learning within the three dimensional multi-user virtual world Second Life. An ethnographic methodology is employed. First, a narrative of my journey of immersion into the field is provided. Three stages in this journey are identified: separation, transition and transformation. Within each stage are distinct sub-stages and each stage is explored in detail. Second, the findings from the data analysis are presented in terms of five key themes: the virtual teacher, learner engagement in the virtual world, the fear factor, getting to grips with methodology and finally, place based education in a virtual space. In the third part, the contribution to new knowledge of the thesis is explained through a virtual world adjustment theory comprising five phases; orientation, euphoria, crisis, survival and transformation. Each phase of the theory represents a movement toward new knowledge and understanding. The overall conclusion is followed by recommendations derived from the research and the implications of these recommendations for potential virtual world educators are analysed.

## **Conference Presentations**

Crotty, Y., Deane, C., Farren, M. and Fitzsimons, S. 2012. The Spirit and Vision of Learning: The impact of our educational research in higher education in Ireland and Kenya. *Values and virtues in practice-based research: Articulating our values and virtues*, York St. John University, UK, 11-12 July.

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*Change is the process by which the future invades our lives, and it is important to look at it closely, not merely from the vantage point of grand perspectives of history, but also from the vantage point of the living, breathing individuals who experience it.*

*(Toffler 1971 p. 11)*

## INTRODUCTION

### **Research Focus**

This research is an exploration of teaching and learning in one virtual world, Second Life in the context of Higher Education. The research data presented in this thesis are drawn from an optional module, Religion and Cyberspace, delivered through the medium of Second Life. The module was offered to third year students on an Initial Teacher Education Programme (ITE).

### **Methodology**

This research is exploratory and interpretive in nature and adopts an ethnographic methodology. Simply put, ethnography focuses on a discrete location and cultural group and is concerned with a range of actions within that setting. In essence, ethnography attempts to explain and answer ‘*what is going on here?*’. The process of understanding ‘first-hand’ the virtual world of SL involved extended participant observation. *Being there* entailed an extensive journey of immersion into the virtual world, which can be described as a rite of passage. This journey had distinct stages of immersion comprising separation, transition and transformation. Subsequently, I designed and taught an undergraduate ITE module, Religion in Cyberspace, entirely through the medium of SL. In contrast to prior literature on teaching on Second Life, this thesis contributes by addressing a methodological gap, providing rich descriptions of practice that were previously lacking.

### **Data Collection Methods**

A variety of data collection methods was employed to contribute to a comprehensive description of the actions within the virtual world setting. The data collection techniques employed included participant observation, textual chat log transcript collection, field notes, unstructured interviews, teacher reflective journals, student reflections on lesson activities and in-world photography.

### **Professional Context**

I am coordinator of teaching practice in Mater Dei Institute of Education (MDI), a College of Dublin City University (DCU). MDI was established in 1966 as a third-level Catholic College of Education that traditionally specialized in the academic and professional formation of Religious Education teachers for post-primary schools in

Ireland (MDI 2012). Today, while MDI offers a variety of postgraduate and undergraduate programmes, it is most recognised for its concurrent model of teacher education. The Bachelor of Religious Education (BRelEd) provides the academic and professional formation required to become a teacher of Religious Education and an elective subject (English or History or Music). It is a four-year degree programme comprising Religious Studies, Education, the elective subject, and school placement (MDI 2012). MDI supports Religious Education as a significant subject in preparing young people from a variety of religious traditions and world views for active citizenship and dialogue in contemporary Ireland. The Institute seeks to help student teachers in their journey 'to contribute to the spiritual and moral development' of pupils in their care (DES 2005, p. 3).

Within my current role in the School of Education, I have responsibility for the coordination and management of all aspects of the teaching placement component of the BRelEd programme. In addition, I teach on a number of undergraduate modules in the areas of Education and Religious Education. Without a doubt, a great deal of flexibility is demanded of those who work in an ITE context. While this can be a challenge I have also found that it allows me the opportunity to develop my teaching, learning and professional skills in a practical, as well as a reflective context.

### **Rationale**

While working in the post-primary sector, I explored the potential of the commercial computer game, *The Sims*, for the teaching of topics on the Junior Certificate Religious Education syllabus (Fitzsimons 2007). Following the move into tertiary level teaching, I considered how technology, in particular, virtual worlds might contribute to pedagogic practice within ITE. Wider contextual factors also contribute to my rationale for undertaking this research. In particular, I am conscious that we are in a time of profound change. A paradigmatic shift is taking place in Higher Education (HE), most evident in the review of the structure of ITE provision (HEA 2012; Hyland 2012). In order to improve the provision of ITE, there are calls for innovative use of technology and research-driven teaching (HEA 2011a). In this context, the role and function of academia is evolving, 'education paradigms are shifting to include online learning, hybrid learning and collaborative models' (Johnson et al. 2012, p. 4). Technology saturation adds a further challenge to all concerned 'as students gain more access to information the academic is no longer the gate keeper of knowledge but is moving to be

a facilitator of learning' (HEA 2011b, p. 6). As a teacher educator, I am conscious of working within this significant period of change, and aware that programmes of ITE have a vital contribution to make to enhance student teachers' constructive and reflective use of technology in the classroom.

### **Student Teachers**

The question of technology use within tertiary level programmes cannot be addressed without presenting the debate concerning the skills, identity and competencies of this generation. The student teachers who participated in this research were born after 1990. They have witnessed Negroponte's (1984) predictions for 'a high-tech, high-touch' society come to fruition. The terms screenager, digital native, N-gener, Homo Zappien, and Millennial have been employed to describe them (Rushkoff 1996; Tapscott 1998; Howe and Strauss 2000; Prensky 2001; Veen and Vrakking 2006). More recently, this generation is referred to as the Google and the I-Generation (Rowland et al. 2008; Rosen 2010). Regardless of the proposed title, the aforementioned authors argue that technology is woven into the fabric of this generations being; 'it is thought-intensive, interactive and quite deliberate' (Llewellyn Graham 2011, n.p.). For the remainder of this thesis, the title 'Millennial' is employed to refer to the undergraduate student teacher who employs technology to work, to play, and to socialise.

As a group, Millennials are unlike any other youth generation in living memory. They are more numerous, more affluent, better educated, and more ethnically diverse.... Over the next decade, the Millennial Generation will entirely recast the image of youth from downbeat and alienated to upbeat and engaged — with potentially seismic consequences (Howe and Strauss 2000, p. 4).

Without a doubt, such authors advocate for the considered integration of technology in the classroom and their theories have gained much currency in the public domain. However, the generational divide debate, from which the Millennial learner title emerges, is described in terms of 'gross oversimplification' (Jones 2010, p. 317) based on 'anecdotal evidence' (Jones 2012, p. 3). While it was once considered ground-breaking, it is now widely contested by empirical research (Bennett et al. 2008; Bennett and Mahon 2010; Hosein et al. 2010; Jones et al. 2010; Jones and Healing 2010). The presentation of the discourse on the Millennial Learner skill set takes due cognisance of its critics.

The most vocal proponent of the Millennial learner theory is Marc Prensky (2001). In his classic study of the Millennial generation, Prensky argues that as a consequence of their daily use of technology Millennials 'think and process information fundamentally

differently from their predecessors' (Prensky 2001, p. 1). In essence, the argument suggests that sustained interaction with technology changes how the Millennial learner's mind works and consequently affects how they learn. There are two implications of this argument. The first is that the present generation has a set of 'modern' cognitive abilities which are markedly different from the 'traditional' cognitive abilities of the previous generation (Prensky 2001). The second is that Millennials' predecessors are digital immigrants, and 'they always retain, to some degree, their 'accent,' that is, their foot in the past' (2001, p. 1). Through the lens of this generational argument, teacher educators, and some school-based teachers, are digital immigrants who struggle to keep up to date, understand, learn and speak the language of today's culture. In the literature, four modern cognitive abilities are identified (Toffler 1980; Prensky 2001; Oblinger and Oblinger 2005; Johnson et al. 2010). Each 'new' ability, however, is regularly challenged (Czerniewicz and Brown 2009; Hosein et al. 2010; Jones and Healing 2010; Turkle 2011, Jones 2012).

Firstly, it is reported that Millennials are 'prosumers', purveyors and creators of digital content (Toffler 1980, p. 11). They produce and consume technology, saving and sharing their photographs, videos and stories in centralized public online repositories including Youtube, Flickr and Facebook. They adopt a DIY approach to technology and entertainment.

They create –and re-create – it. With a do-it-yourself, open source approach to material, students often take existing material, add their own touches, and republish it. Bypassing traditional authority channels, self-publishing – in print, image, video, or audio – is common (Lorenzo et al. 2007, p. 6).

Becoming a prosumer, however, is not necessarily a skill unique to the Millennial learner. Hosein et al. (2010) argue that technical competency is closely linked to frequent technology use. We can deduce therefore that 'silver surfers' are not prohibited from joining the prosumer movement.

Secondly, as a result of their life online we are told Millennials are accustomed to immediate access to information. Millennials expect 'to be able to work, learn and study whenever and wherever they want to' (Johnson et al. 2012, p. 4). Bradwell argues this has an impact on how Millennials view academia, in that 'knowledge is no longer restricted within the boundaries of universities and higher education facilities' (2009, p. 31). Others suggest the speed of information access has led to decreased tolerance for lengthy lectures (Oblinger and Oblinger 2005; Johnson et al. 2010). Now that students

can access information in a random fashion, there is fluidity to the knowledge they seek and attain. In essence Millennials, it is argued, engage in connected learning (Siemens 2005). This strategy, however, does not necessarily make for a meaningful learning experience. Mason and Rennie (2008) argue it can lead to ‘shorter attention spans, lack of reflection, relatively poor text literacy and a cavalier attitude to quality of sources’ (p. 9). Academia has an obvious role here (JISC 2008; Bradwell 2009; JISC 2009c). Moreover, while acknowledging access to technology has increased, it is not equitable (Czerniewicz and Brown 2009; JISC 2009c). In this regard, immediate access to information is not a luxury shared by all. This raises questions about the validity of a one size fits-all claim for new cognitive abilities of a single generation.

Thirdly, it is argued that Millennials construct and manage their online personas in a deliberate manner (Turkle 2011). In short, they are engaged in branding their identity (Muzellec 2012). Engagement with peers is demonstrated through online communities, facilitated by social networking technologies. Social networks ‘provide visual evidence’ (p. 270) of one’s membership to a culture, described by Mendelson and Papacharissi in their empirical research on the topic as ‘collective narcissism’ (2011, p. 251).

Connectedness is also illustrated through crowd sourcing, and collaboration with virtual teams. This is evident, for example, in the rise of smart mobs and pro-am clusters (Rheingold 2002; Leadbeater and Miller 2004). As a result, it is argued that the tech savvy cohort is ‘light years ahead of their parents and grandparents with respect to the possibilities of information and communication technologies’ (Kirschner and Selinger 2003, p. 5). Although it is argued that technology permits connectivity, it is also reported that technology can disconnect one from physical human contact. Turkle (2011) describes this as being ‘alone together’. She further argues ‘we have reached a point of inflection, where we can see the costs and start to take action’ (2011, p. 296). In contrast, Prensky proposes we should strive to exploit connectedness and related capabilities (2001).

Fourthly, multi-tasking is considered ‘standard’ for this generation (Postman 2006, p. IX). In essence, multi-tasking is ‘a person’s consumption of more than one item or stream of content at the same time’ (Ophir et al. 2009, p. 1). Undoubtedly, Millennials engage in multi-tasking; however, critics argue there is no evidence that this capability is ‘a new phenomenon exclusive to digital natives’ (Bennett et al. 2008, p. 779).

Moreover, others propose that multi-tasking capabilities are not necessarily conducive



to reflexive learning. In their review of the research, Ophir et al. (2009) found that 'heavy media multi-taskers are distracted by the multi streams of media they are consuming' (p. 3). Consequently, cognitive processing skills can be adversely affected. They conclude that solid evidence is required to prove parallel processing can increase cognitive performance. Despite the potential for distraction and information overload, parallel processing is exploited in popular media culture. Prensky (2001), however, claims the exploitation of parallel processing has not occurred to the extent that it could within academia.

Finally, it is argued that the most significant difference between the Millennial generation and the former generation is how they view technology. Prensky proposes the Millennial learner has a symbiotic relationship with technology. This mutually beneficial relationship is evident in social networking. Students employ technology to stay connected, and companies are economically driven to diversify according to student needs. Prensky argues that the previous 'digital immigrant' generation view technology as foe, a sinister force that might one day replace them (Prensky 2001), described by one colleague as 'digital terror' (Donlon 2012, n.p.). Through this lens, technology is 'a means of commoditizing education, deprofessionalizing the educator and commercializing universities' (Weller 2007, p. 6). As Weller rightly points out, such arguments reinforce negative stereotypes. The older generation has the capacity to become adept with the use of technology (Broady et al. 2010). It is now reported that the digital native/digital immigrant line, if it does indeed exist, is blurring; 'the gap between students and their teachers is not fixed' (Jones and Shao 2011, p. 1), while others go further to argue the divide is 'dead or at least dying' (Holton 2010, n.p.). Most recently, Prensky himself has suggested we begin to think in broader terms of the acquisition of digital wisdom (2009). However, this move is regarded as 'a softer form of determinism in which digital enhancement is necessary for everyone if they are to succeed' (Jones and Shao 2011, p. 11).

While undoubtedly generalising in nature, 'policy-makers continue to adopt generational arguments' (Jones 2010, p. 266). In so doing, the argument has fuelled broader questions about pedagogic practice and, indeed, the role of the Institution in the 21<sup>st</sup> century (HEA 2012). Bennett et al. (2008) propose that the argument has led commentators to question 'whether education is currently sufficiently equipped to meet the needs of this new cohort of students' (p. 776). In some cases, the debate has 'led educators into a self-reflective mode of thought, believing they had been left behind,

having ignored the opportunity of integrating new technology' into their practice (Rourke and Coleman 2011, p. 3). Most are in agreement though that it is futile 'to propel the discourse around technology usage to emergency status or engage in academic moral panic' (Bennett et al. 2008, p. 782; Underwood and Dillon 2011). Attempts to overhaul the HE and ITE sector based on the digital native debate should be treated with caution (Bennett et al. 2008; Bennett and Mahon 2010). In summary, the Millennial learner debate suggests the considered adoption of technology to improve ITE pedagogy and the learner experience should be informed by empirical research. In this regard, this research is also timely.

### **Initial Teacher Education and ICT**

Ubiquitous technology presents a specific challenge to those working within ITE contexts. That is, to facilitate the creation of 'technology-proficient teachers, practitioners who can utilize existing technology, learn to work with emerging technology and adapt as needed when confronted with technological issues' (Shoffner 2009, p. 143). In their recent guidelines on ITE, the Teaching Council of Ireland (2011) now require all programmes to provide compulsory modules, which include the provision of ICT in teaching and learning. Institutional autonomy is respected with regard to the content and delivery of such modules. Currently many pockets of highly innovative use of technology in ITE are evident in the Irish context (Crotty 2011; Crotty and Farren 2012; Donlon 2012). On a broader scale, however, technology and ICT professional development is not systematically embedded in programmes of ITE (OECD 2011). This is not, however, to suggest teacher educators are laggards (Rogers 1983) with respect to innovation. There are many complex factors that affect the integration of technology into pedagogy. Factors include, but are not limited to, resource deficits, increased student numbers, increased workload with declining staff numbers, and associated administrative implications (HEA 2011a, OECD 2011).

Nonetheless, how technology is employed during the education of student teachers will surely have an impact on those student teachers' future teaching practicum. In order to understand this further, a brief overview of 'The ICT in Initial Teacher Education: Research Review' is provided. The review attempted to answer 'why technology is not used to the extent that could be expected' within programmes of ITE (Enochsson and Rizza 2009, p. 6). While the review addressed programmes of ITE across the OECD

sector, it is useful for furthering an understanding of student teacher and teacher educators ICT competency.

Enochsson and Rizza found that student teachers, despite their Millennial learner status, felt they did not have the required skills to competently employ technology in their classroom practice. Student teachers directly related this to insufficient 'hands-on' experience and access to technology during their programme of ITE (p. 9). The review found that student teachers use of technology in the classroom remained 'constant' (p. 10). In attempting to address this, teacher educators should aim to influence student teachers use of technology by modelling best practice. That is, creatively and effectively integrate technology within their day to day pedagogic practice. In order to do so, teacher educators 'need to feel confident in using ICT' (Enochsson and Rizza 2009, p. 13). Nonetheless, despite acknowledging ICT confidence as a pre-requisite for ICT implementation, the challenge 'to adapt teaching and learning practices to meet the needs of today's learner' continues (Johnson et al. 2010, p. 4).

Next, Enochsson and Rizza (2009) identify three reasons why teacher educators utilize technology in their practice. Firstly, they have colleagues with an interest in technology and its promotion in the curriculum. Secondly, they personally recognise the value of using technology to enhance teaching and learning. Thirdly, they have a desire to enhance their own professional development. In sum, 'innovations are more likely to be adopted if the perceived value of the innovation and the likelihood (or expectancy) of success are high' (Meyer et al. 2011, p. 193). In cases where technology is evident in ITE practice, Enochsson and Rizza identify an evolution from teaching how to use technology, to demonstrating how to creatively and appropriately employ technology within the classroom (Crotty and Farren 2012; Donlon 2008; Donlon 2010; Donlon 2011). In addition, they report that educators themselves are considering appropriate ways to employ technology within their tried and tested practices, rather than 'creating pedagogy anew' (Beetham and Sharpe 2007, p. 3). In essence, the integration of technology into ITE pedagogy might be better considered a case of 'stretching the mould' rather than recasting the die (Holley and Oliver 2010, p. 694).

Finally, student teachers' encounter, and use of technology during school placement is likely to have consequences for their practice. The teaching placement components of programmes of ITE vary from country to country. Subsequently, the role and expectations of the student teacher and cooperating teacher(s) can vary dramatically.

From an Irish perspective, despite policies on ICT (Appendix 1), limited ICT infrastructure is available in the average post-primary classroom. The report indicates that the student teachers' 'use of ICT in their future teaching is strongly dependent on representations and practices of teachers they meet during their field placement and training' (Enochsson and Rizza 2009, p. 14). In particular, student teachers use of technology during their school placement is dependent upon physical, human and cultural factors. Financial resources are central to the debate. If funding is not available, technology cannot be implemented in the school setting. Where technology is available, the class teacher plays a pivotal role. They may excite or quell the student teacher's enthusiasm for technology. At this point, it should be acknowledged, that early stage student teachers are perhaps better focused on mastering the key skills of communication, and content preparation in advance of trying to integrate technology into their classroom practice.

Enochsson and Rizza's findings indicate several disparities with regard to the implementation of ICT within programmes of ITE. First, disparity is evident in the level of student teachers ICT ability, and indeed their attitude toward ICT. This report demonstrates the 'digital native' may not be eager to employ technology in their practice. Second, disparity is evident in teacher educators' attitude towards ICT, and subsequently their use of ICT within their own educational practice. Third, disparity is evident in the student teachers use of technology whilst on their school placement. Approaches to enhancing student teachers' use of technology should comprise the student teacher, the teacher educator and school placement personnel. Fundamentally, however, the teacher educator is in a prime position to influence student teachers' creative and considered use of technology in the classroom.

### **Summary**

This introductory chapter presents the research focus, methodology, data collection methods and the professional context for this research. The chapter highlights three issues relevant to the research rationale. Firstly, significant changes are afoot in Higher Education in Ireland today, most noticeable in review of the provision of Initial Teacher Education. To improve the quality of teacher education, there is a recurring call to transform pedagogy through innovative curriculum design and delivery. It is reported that technology is pivotal in assisting 'universities to move from where they are now to where they need to be' (Bradwell 2009, p. 11). Secondly, through a review of the

literature, this opening chapter presents the debate on the skills, identity, and competencies of the Millennial learner, the current generation of student teachers. The Millennial learner debate and the call to innovate through technology are inextricably linked (Jones 2010). Thirdly, the findings of the ICT in Initial Teacher Education: Research Review (2009) is outlined. The review highlights a number of factors that contribute to the student teacher and teacher educators' use of technology in their practicum. Indeed it highlights the complexities involved in facilitating technology integration into pedagogy and the related challenges to the development of digitally literate teachers. This introductory chapter identifies a key consideration that commitment to improvement of tertiary level pedagogy through technology and innovation must be research driven. It is timely that this research will provide practice-based evidence on tertiary level teaching and learning in the virtual world Second Life. In so doing, this research also contributes to the wider discourse of online learner *experiences* (Sharpe 2010).

### **Chapter Organisation**

The structure of this thesis is as follows:

Chapter 1 introduces Second Life (SL). First, the chapter presents an understanding of virtual worlds by exploring its precursors of play and computer gaming. Second, the chapter identifies play, computer gaming and virtual worlds as similar but not synonymous spaces. Third, the chapter introduces identity, community, topography and economy within SL.

Chapter 2 discusses seven cases where SL is employed to assist in the teaching of modules across a range of HE sectors and subject disciplines. Three questions guided this review:

- (1) How is SL employed by HE teachers in their pedagogic practice?
- (2) Which research methods are employed by researchers who are conducting research on the use of SL in pedagogic practice?
- (3) What suggestions for future research are made by the researchers?

Chapter 3 is a comprehensive outline of the research paradigm that frames this study. First, the study is situated by defining the research focus and research field. I discuss how the inquiry is consistent with the ontology, epistemology, methodology and ethics of a constructivist paradigm. The approach to reflexivity and addressing bias are presented. The quality of the inquiry is evaluated under three headings: the

appropriateness of research design, demonstration of truthfulness and rigor and the usefulness of the research to the research community. Finally, Chapter 3 outlines the process of thematic analysis adopted in this research.

Chapter 4 presents a narrative of my journey of immersion into the virtual field. Three stages in this journey are identified, separation, transition and transformation. Within each stage, distinct sub-stages are explored.

In Chapter 5, the findings from the data analysis are presented. Five themes are identified:

- (1) The virtual teacher
- (2) Learner engagement in the virtual world
- (3) The fear factor
- (4) Getting to grips with methodology
- (5) Virtual world place based education

In Chapter 6, Discussion and Theorization, I present my contribution to new knowledge through a virtual world adjustment theory comprising five phases; orientation, euphoria, crisis, survival and transformative learning. Each phase of the theory represents a movement toward new knowledge and understanding.

In Chapter 7, the overall conclusion is followed by recommendations derived from the research.

## **CHAPTER ONE: SECOND LIFE**

## **Introduction**

Chapter 1 introduces the field of this research, the virtual world Second Life (SL). First, an understanding of virtual worlds is presented by exploring its precursors, play and computer gaming. Second, play, computer gaming and virtual worlds are identified as similar but not synonymous spaces that are best considered as points along a continuum of highly interactive worlds (Aldrich 2009). Third, identity, community, topography and economy within SL are introduced. Subsequently, Chapter 2 reviews the use of SL in seven higher education settings.

## **Play**

It is argued that computer generated virtual worlds have existed since the early 1980s, 'but their absolute definition remains contested' (Warburton 2009, p. 415). The proclivity, however, for engagement in virtuality far precedes the 1980s. Humans have always participated in virtual worlds (Boellstorff 2008). It is the medium for participation in the virtual, however, that has evolved and adapted: from ancient cave drawings to Renaissance paintings to Banksy street art; Aboriginal dance to whirling dervish meditative dance to Capoeira Brazilian martial art dance; drama in the Globe theatre to dramatic Harajuku Japanese street fashion; from painted bodies to painted face masks to personalized virtual world avatars. A variety of media facilitate ease of movement 'from one reality to the other' (Bittarello 2008, p. 9). Today, the medium for 'losing ourselves in another world' is technology-enabled (Boellstorff 2008, p. 33).

Play and computer gaming can provide context for understanding the virtual world of SL. Play is the precursor to computer gaming and computer gaming is arguably the precursor to virtual worlds. Play is a complex phenomenon to define. In a general sense, play is considered 'a metaphor for the ephemerality of life, what quickly passes, or for what is innocent, infantile or foolish' (Sutton-Smith 2001, p. 2). Additionally, play is described in terms of frivolity, 'an attitude of throwing off constraint' (Millar 1968, p. 21). Play involves, to varying degrees, activity, spontaneity, imagination, experience, innovation, laughter, fun, enthusiasm and collaboration. Yet, while children engage in play for fun, pure enjoyment and to 'let off' a surplus of energy, play 'has also been thought of as a rehearsal for adult roles in which life is played out in miniature' (Child 1997, p. 63). It is through play that children gain experience, and it is this experience that facilitates abstract thinking and decision making. In essence, play facilitates children to become autonomous individuals (McMahon 1992). An abundance of literature concurs with Child who argues 'play can be of significance in the intellectual,



physical, social and moral development of children' (1997, p. 63). In addition, play can have therapeutic benefits (McMahon 1992; Oppenheim-Leaf et al. 2012). Importantly, play is self-motivated, and self-motivation is implicit to effective learning. It is argued that 'there are no preschool children with motivational deficits' (Cordova and Lepper 1996, p. 715). Yet, play is considered less appropriate as a pedagogic tool as the child progresses through the school system. In addition, the immediate educational benefits of play are thought to be less relevant as the child progresses through adolescence and into adulthood. Play, however, is not limited to the confines of childhood. Play is edgeless, it never ceases. This is illustrated in the revival of 'old-fashioned' board games, the popularity of card games and the continuing appeal of athletic games. Voluntary play is most apparent in the field of computer gaming.

### **Computer Gaming**

A culture of 'ubiquitous gaming' exists (Castronova 2006, p. 25), which generates a \$25.1 billion dollar industry (ESA 2011, p. 11). Demographics suggest that computer gaming is not exclusively the domain of solitary teenagers. The average age of a gamer is a world-wise 37. According to ESA research, 18% of players are under the age of 18, with 53% aged between 18 and 49. The remaining 29% are aged 50 plus (2011, p. 2). Popular culture would have us believe gaming is a predominantly male past-time. Girl gamers, however, are continually on the rise, and the gap between male and female gamers is closing (Meloni 2012).

Smed and Hakonen propose a usefully broad definition of a computer game as a 'game that is carried out with the *help* of a computer program' (2003, p. 3). A computer game:

- provides some visual digital information or substance to one or more players;
- takes some input from the players;
- processes the input according to a set of programmed game rules;
- alters the digital information provided to the players.

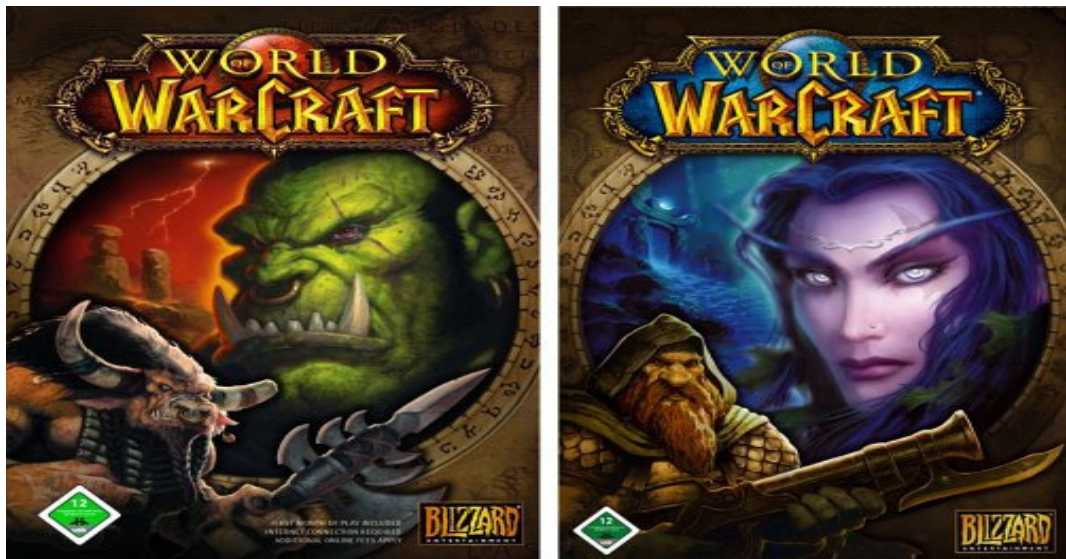
(Kirriemuir and McFarlane 2004, p. 6)

A screen display is employed as the primary feedback device to the player. Traditionally computer games were played on a personal computer, however, computer games are now streamed and played on a variety of console, handheld, mobile and tablet platforms. Once traditionally located in the child's or teenager's bedroom, computer

gaming devices are now predominately located in a central space in the family home (The Nielsen Company 2012), indicating gaming constitutes an acceptable shared family activity. During game play, players ‘face a challenge and have a specific goal, for the accomplishment of which they must struggle with some kind of opposition’ (Fabriatore 2000, n.p.). The opposition, in human or other form, provides the element of conflict, which engages the player in the gaming activity. Most platforms allow the user to play independently or connect with gamers, through Massively Multiplayer Online Role playing Games (MMORPGs), for global synchronous play. Computer games, both lone player and MMORPGs, provide not only the means (i.e. the platform) and the rules to play, but also an interactive social gaming environment.

To accommodate the sheer number of users, the worlds in MMORPGs are vast and varied (in terms of terrain, flora, fauna, and local inhabitants). In contrast, the worlds of most standalone and local network games are simplistic and can only accommodate fewer than 16 concurrent players in a space that can be traversed in a few minutes (Yee 2006, p. 5).

MMORPG examples include World of Warcraft, Everquest, The Legend of Mir and The Sims (Figure 1, Figure 2, Figure 3). Creators of new virtual worlds, such as SL, are no doubt influenced by the design and aesthetics of MMORPGs. In addition, the potential revenue might also be influential. One such MMORPG, The Sims (The Sims, Sim City, My Sims, Sim Animals) appears to be the precursor to SL.



**Figure 1: World of Warcraft**  
Source: <http://us.battle.net/wow/en/>



**Figure 2: EverQuest**  
Source: [www.everquest.com](http://www.everquest.com)



**Figure 3: The Sims**  
Source: [www.thesims.com](http://www.thesims.com)

The Sims (Figure 3), an MMORPG franchise, was created by Wright and EA Games (2000). In the original design, players completed architectural and building tasks. It later became apparent to Wright, however, that the game was more appealing with the inclusion of characters. The game now opens by asking the player to select a starting look for their personalised in-world character, known as a Sim. Multitudinous identities are available. After the creation of a Sim, the player can ‘do things you might never do in real life – be a scientific genius, a criminal mastermind, or a happily married vampire with six kids’ ([www.thesims.com](http://www.thesims.com) 2012). For the most part, computer games have a definite goal or objective where players ramp up through levels until they reach the point of ‘Game Over’ (Yee 2004). In contrast, the Sims does not. Sims games exclusively focus on simulation through a digital character and are without goals or

objective. In contrast to fixed computer game objectives, the Sims incentive system is created by the player. This puts the player, according to the marketing managers, in complete control of their own 'digital dollhouse'. For this reason, many have referred to the Sims as a 'God Game' (Nutt and Railton 2003, p. 582). The popularity of the game is illustrated in its ranking as one of the top twenty selling computer games of 2010 (ESA 2011).

In his 2007 paper, Lauwaert challenges the understanding of the Sims as a 'borderless playground' where one can do whatever one wants (p. 195). Lauwaert differentiates two practices of play that occur within the game. First, he argues game play occurs at an intended level, 'planned anticipated, hoped for, and capitalized by the game industry'. It might be better described as colouring inside the lines. Second, game play can occur at an unintended level. That is, play 'that goes against the grain of the game and its makers' intentions' (2007, p. 195). This might be better described as colouring outside the lines. Lauwaert argues the majority of game play in the Sims is intended, within the lines. As a result, the player is playing within the borders of the game instead of truly creating their own 'digital dollhouse'. Further to this, Lauwaert points out that rather than thinking 'outside of the box', the gamer is working within a carefully constructed 'closed rule-band system' (2007, p. 209). In addition, games, such as the Sims, have inherent expectations of social norms. Some authors propose this has the effect of restricting players' freedom of interaction within the environment (Martey and Stromer-Galley 2007).

Regardless of how players engage in game play, gaming evangelists highlight the potential of computer games for teaching and learning (Prensky 2001; Aldrich 2009a). Through play, gamers immerse in 'social interaction, collaboration and long-term goals' (Yee 2004, n.p.). Moreover, it is argued gamers engage in 'ethical and moral laboratories' where decision making skills are tried and tested (Puttnam 2010, p. 10). In recent years, numerous practice based studies have explored the redeployment of commercial games, such as the Sims, for educational purposes. This is illustrated across disciplines, from teaching English as a second language (Ranalli 2008) to teaching Religious Education to Junior Certificate pupils (Fitzsimons 2007). Further to this, a large and growing body of literature has explored the pedagogic benefits resulting from game play (Tsikalas 2001; Oliver and Carr 2009; Hämäläinen 2011).

Unsurprisingly, one should proceed with caution when making claims for the educational benefits of computer game play:

Playing *SimCity* will not make someone a better mayor. Some players of, for instance, *World of Warcraft* may learn deep, transferable, even measurable leadership skills but not all players will (Aldrich 2009a, pp. 2-3).

Critics and media pundits frequently argue the potential negative consequences of computer game play. In particular, excessive gaming is thought to lead to addictive behaviour, which might have detrimental effects to academic success and socialisation. More recent arguments against MMORPGs, such as *Call of Duty*, have implicated such games as potential training grounds for serial killers and militant organisations. In addressing such concerns, academic research proposes it is the incentive to play that should be considered ‘as a prime indicator for negative consequences, even more than gaming time’ or the game itself (Hellström et al. 2012, p. 1386). Those who play with ‘obsessive passion’ are most likely to experience negative outcomes (Hellström et al. 2012, p. 1380).

Play and computer gaming provide context for an understanding of SL. The mediums for engaging in play may differ dramatically, from daydream to gaming platform. Both forms of play, however, involve active engagement and interaction within virtuality. Rapid advances in technology mean the media for ‘losing ourselves’ (Boellstorff 2008, p. 33) now finds expression in three dimensional virtual worlds. One such virtual world is Second Life (SL), the field in which this research is situated.

### **Second Life**



**Figure 4: Second Life Logo**  
Source: [www.secondlife.com](http://www.secondlife.com)

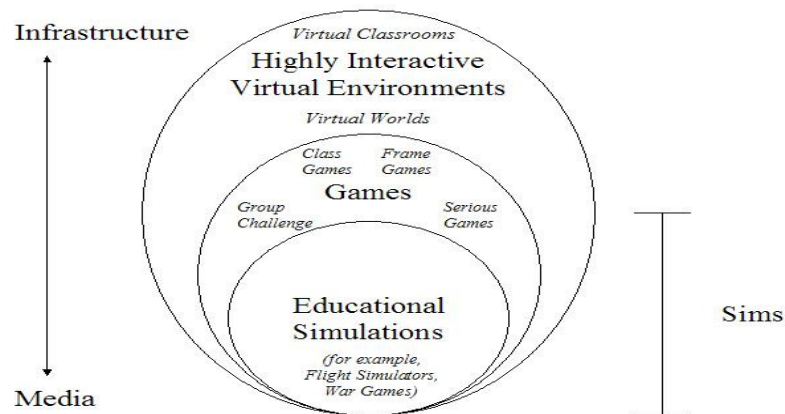




**Figure 5: Screenshot of Second Life Front Page**

Source: [www.seondlife.com](http://www.seondlife.com)

Second Life (SL) is a three dimensional multi-user virtual world, owned and managed by Linden Labs. It was conceived of by Philip Rosendale and went live in 2003 (Figure 3, Figure 4 and Figure 5). Currently, SL has in excess of ‘one million people logging in every month, generating well in excess of \$75 million a year’ (Handrahan 2012, n.p.). To the external observer, the virtual world of SL appears similar to computer games and MMORPGs. All three are ‘three-dimensional worlds that are populated by three-dimensional avatars’ (Aldrich 2009a, p. 1). In addition, all three mediums can involve role-play and collaborative activities. Without a doubt, they are aesthetically similar. The three, however, are not synonymous. SL advocates balk at the reference to SL as a ‘game’ and likewise do not appreciate reference to SL residents as ‘players’ (Boellstorff 2008, p. 22). Games, simulations and virtual worlds are perhaps better understood as ‘points along a continuum’ of highly interactive virtual environments (Aldrich 2009b, p. 8 Figure 6).



**Figure 6: Aldrich's HIVE Continuum**  
Source: Aldrich 2009b, p. 8

A large and growing body of literature attempts to provide a holistic definition of virtual worlds (Castronova 2006; Bell 2008; Boellstorff 2008; Søraker 2009; Aldrich 2009; McKeown-Orwin 2011; Wang 2011). Drawing the literature together, I propose the following definition comprising six generally accepted characteristics: SL may be defined as a *computer-mediated, persistent and synchronous spatially based* world that is *inhabited by people* represented through avatars and is *highly interactive*. First, SL is a computer mediated platform, it is ‘maintained, recorded and rendered by a computer’ (Castronova 2006, p. 11). Next, SL is a persistent virtual world and in this way, the differentiation between computer games and virtual worlds becomes evident. The virtual world cannot be ‘paused’ (Bell 2008, p. 3). SL is always ‘on’, even when the resident is not present. Third, SL is a synchronous world that operates in real time. Fourth, it is spatially-based, existing outside of the physical realm. Fifth, SL is inhabited by people who are represented through three-dimensional avatars. Finally, the virtual world is highly interactive; there must be ‘a human in the loop’ in order for SL to exist and function (Wang 2011, p. 619).

Defining the virtual world of SL is less than straightforward; moreover, understanding the activities which take place in SL can prove equally challenging. Within the context of computer games, players’ actions are categorized as ‘play’ or ‘game play’. Generally within SL, residents do not engage in the type of play that requires the resident to ‘ramp up’ toward a defined end goal (Yee 2004, n.p.). Certainly they engage in role-play activities, however, their actions within the virtual world are not usually referred to as ‘play’ or ‘game play’. Consequently, residents’ interactivity can be challenging to

comprehend. Frequently, those engaged in virtual world activities are questioned about 'reality'. Immediately, the use of the adjective 'real' proposes a black and white dichotomy. By implication, the 'real' world is the physical world and the 'virtual' world is a pale imitation. The world of SL, however, blurs the boundaries between what we understand, in the traditional sense, of 'real' and 'virtual'. Boellstorff et al. propose that Huzinga's play metaphor, the Magic Circle, is useful for clarifying the issue.

Huzinga argued that all play occurs in a marked-off space; a football pitch, a doll's house, a virtual world, a dreamscape. Regardless of the location 'all are temporary worlds within the ordinary world, dedicated to the performance of an act apart' (Huizinga 1955, p. 10). Huizinga's Magic Circle, which cloths the virtual space, is not an impenetrable membrane but rather a porous membrane that allows 'bleed through' (Boellstorff 2008, p. 23). In SL, 'bleed through' is notable in many areas, two are briefly addressed. Firstly, 'bleed through' is most evident in the SL marketplace where the sale of virtual goods generates monetary gain in the offline world. Secondly, 'bleed through' is evident in human relationships; residents' online relationships are real, and consequently have positive or negative emotional responses. We can conclude that within SL 'many states of affairs are just as real as (or no less illusionary than) "real reality"' (Søraker 2009, p. 2). As this is a complex issue, Chapter 5 addresses this topic further. The next section addresses the technical access requirements for SL.

### **Technical Access Requirements**

To use SL the resident must at a minimum have access to a cable or DSL internet connection, an XP, Vista or Windows 7 operating system, 512MB or more of computer memory and a NVIDIA GeForce 6600 or better graphics card ([www.secondlife.com](http://www.secondlife.com) 2012). Technical requirements are most commonly identified as an area of concern for potential SL educators. First, those wishing to use SL in an educational setting have to consider the available IT equipment. Lamont argues 'if you're using a five-year-old laptop and a weak wireless connection, forget it' (2006, n.p.). Further to this, if students are logging in from home, the quality of the visual experience may be inconsistent as not all students have equal access to the correct graphics specification (Kirriemuir 2009). In addition, high speed broadband remains a significant issue in Ireland. Students with dial up or modem internet access may encounter technical difficulties such as sound or visual lag. The unpredictability of internet connection speed indicates the possibility of an inconsistent quality of



experience in SL, which may be detrimental to pedagogic practice within SL (Warburton 2009). Within an era of cutbacks, the specific technical requirements warrant consideration before planning to deliver an SL module.

### **Identity**

Upon joining SL, the resident chooses between two types of membership: basic and premium. Basic membership is free ‘and you can still enjoy all of Second Life’s activities and privileges except for one: you cannot own land in the SL world’ (Rymaszewski et al. 2007, p. 20). In contrast, the premium membership resident can ‘own’ virtual land. After choosing a membership package, the resident begins the process of avatar creation (Figure 7).



**Figure 7: Initial Avatar Selection Process**

Source: [www.secondlife.com](http://www.secondlife.com)

An avatar is a computer generated three dimensional representation of the resident. The avatar is chosen rather than assigned. It is modified and maintained by the resident. As earlier identified, interaction within SL occurs from the position of your avatar, however; ‘you are free to choose if whether you perceive the world from your avatar’s eyes, from behind your avatar’s shoulders or from any “God’s eye” point of view’ (Søraker 2009, p. 17). To begin, the resident is presented with a choice of generic avatar

templates, also known as a ‘cookie cutters’. Avatar identity remains flexible and the resident can choose to modify their avatar at will; from a representation of their actual self to a fantasy image to an animal avatar (See Figure 8, Figure 9, Figure 10, Figure 11, Figure 12). While most residents choose to remain in humanoid form, ‘some choose avatars based on fictional characters from real-life movies, comic strips, or books’ (Rymaszewski et al. 2007, p. 12).



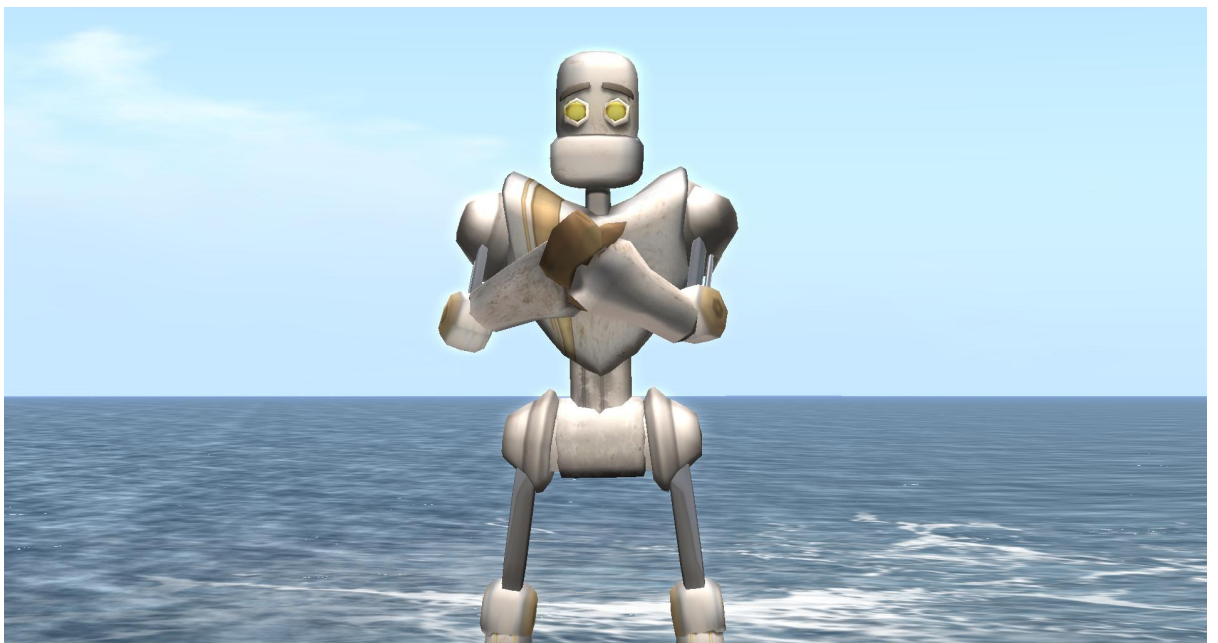
**Figure 8: Interface for Editing Avatar Appearance**



**Figure 9: Mad Hatter Avatar**



**Figure 10: Female Avatar in Muslim Dress**



**Figure 11: Robot Avatar**





**Figure 12: Animal Avatar**



**Figure 13: Virtual Worlds Educators Round Table Meeting**  
Source: [www.vwer.org](http://www.vwer.org) 2010

An SL resident can avail of multiple accounts and, therefore, can create multiple ‘versions’ of their online identity. While identity creation is an attractive feature of SL, it has the potential to be problematic for prospective teachers (Warburton 2009). On a pragmatic level, fluid identity may make recording attendance less straightforward than in the offline classroom. Further to this, when we adopt a virtual body do the social norms taken for granted in the offline world become lost in translation? Most recently,

literature in the field of Christian anthropology has suggested that for some, avatar creation can be a misguided longing for an illusionary life and attempt to ‘escape from reality’ (Prokes 2004, p. 55). Other writers, such as Wellman and Gulia highlight concerns raised that people might become so engulfed in an imitation of life that they will ‘lose contact with real life’ (1999, p. 168). In addition, popular media tends to highlight the opportunities identity concealment presents to malcontents. In particular, writers tend to focus on the activities of military and political groups within SL (McCarthy 2007).

Critics also argue anonymity, or indeed the perception of anonymity, in the virtual world can make it fertile ground for the reformation and renewal of hate-based groups such as neo-Nazis. In their research, *Second Lifers against Hate* (2012) identified and documented such activities. Examples include groups that pay ‘hundreds of USD to upload racist and degrading images, and finally using these images, objects, and scripts to intimidate, harass, and belittle others on the basis of race and religion (*Second Lifers against Hate* 2008, p. 6). This is no doubt a consideration for educators. Nevertheless, the potential affordances of identity construction should not be overlooked.

Through an alternative lens, the creation of identity within SL presents opportunities to ‘walk in another’s shoes’, to learn from a different perspective. Examples include acquiring a virtual experience of living with schizophrenia, and living as male or female within ‘gender bending’ avatars (Wagner 2004; Wagner 2008). Other researchers argue that it is through avatar creation, and the grappling with identity, that interaction is humanized within SL. Fluidity of identity can encourage self-awareness, examination and growth (Hollins and Robbins 2008). Moreover, the choice of identity has been shown to assist the process of community bonding (Nesson and Nesson 2008). The ability to reflect and experiment online with identity can potentially help to foster tolerance and respect for others. In essence, it is through the interactive process of identity creation that one engages with the virtual world of SL.

A considerable amount of literature has been published that present theories to explain why people join virtual worlds. To start, Rheingold offers some basic reasons why individuals go online, these include ‘hanging out, messing around, and geeking out’ (2012, p. 4). Turkle contributes that individuals are drawn to life online because ‘the connections seem low risk and always at hand: Facebook friends, avatars, IRC chat

partners' (2011, p. 295). Friends and information are available on a 24 hour basis. Maslow's hierarchical needs theory (1943) is often a starting point for delving deeper into the rationale for engaging in life online (Bishop 2007). Some individuals engage in online activities for emotional and peer group support (Wellman and Gulia 1999). In contrast, others engage online by 'lurking', essentially hiding in the background. Through this process, they can glean the wisdom of others without offering contribution (Preece, Nonnecke and Andrews 2004). Through Maslow's lens, such individuals could fit at the bottom or top of the hierarchical needs theory; either, lacking in trust or totally self-actualized and focused on gaining knowledge, not friends.

Most recently, Partala (2011) has identified five main psychological reasons to explain why people join virtual worlds, such as SL. These include:

1. Self-therapy
2. Source of instant pleasure
3. Liberation from social norms
4. A tool for self-expression
5. As an exploration and novelty

(Partala 2011, p. 787)

Although it is beyond the scope of this thesis, some of the reasons people engage in life online emerge later in Chapter 5 and Chapter 6. In sum, personal motivation is required to sustain a virtual life. Across the literature, it appears that creating and maintaining an online life augments an individual's offline life in a variety of ways, dependent on the individual's psychosocial needs.

### **Community**

In a related way, much literature explores why individuals join online communities. Most are in agreement with Bishop (2007) who argues that online communities are 'brought about by people who share similar goals, beliefs or values, with such commonality forming the basis of an agreement to form and sustain a virtual existence' (2007, p. 1182). The technology permits users or residents to override the distinctions, physical, gendered, social or religious, 'that may have held them apart' (Dawson 2004, p. 79). The question, however, should be if online communities can sustain 'the socially close, strong, intimate ties that are at the core of community' (Wellman and Gulia 1999, p. 171). Evidently, the technology alone does not make online communities (Søraker 2009, p. 12). In order to sustain strong ties within any form of community, effort is required from the 'human in the loop' (Wang 2011). In sum, community requires

personal commitment and varying degrees of interactivity. This suggests a progression from ‘passive media engagement (spectators), to active media engagement (actors)’ (Guitton 2012, p. 10).

In the world of SL, active community engagement is lightly regulated by community participation guidelines, provided by Linden Labs. It is difficult to attain accurate figures for the number of SL community groups; however, it is evident there are well over 100,000 active groups. Some of the groups have over 10,000 members most (65%), however, have fewer than twenty members (www.metaversebusiness.com). Community affiliation is most often visible through avatar choice. Taylor suggests the choice of digital body and clothing is a new form of the ‘I’m with her’ t-shirt (2002, p. 46). This is demonstrated in SL role play communities. Classic examples include the Star Wars community, the Gorean community and Midian city. All three communities have been successfully studied using ethnographic methods (Bardzell and Odom 2008; Backe 2012; Guitton 2012). Next, the topic of place is addressed.

### Topography

SL can be viewed through imaginary topography expressed in digitised maps (Figure 14).

It consists of interlinked regions that contain land, water and sky. Each region has an area of 65,536 Second Life square meters (Rymaszewski et al.2007, p. 8).

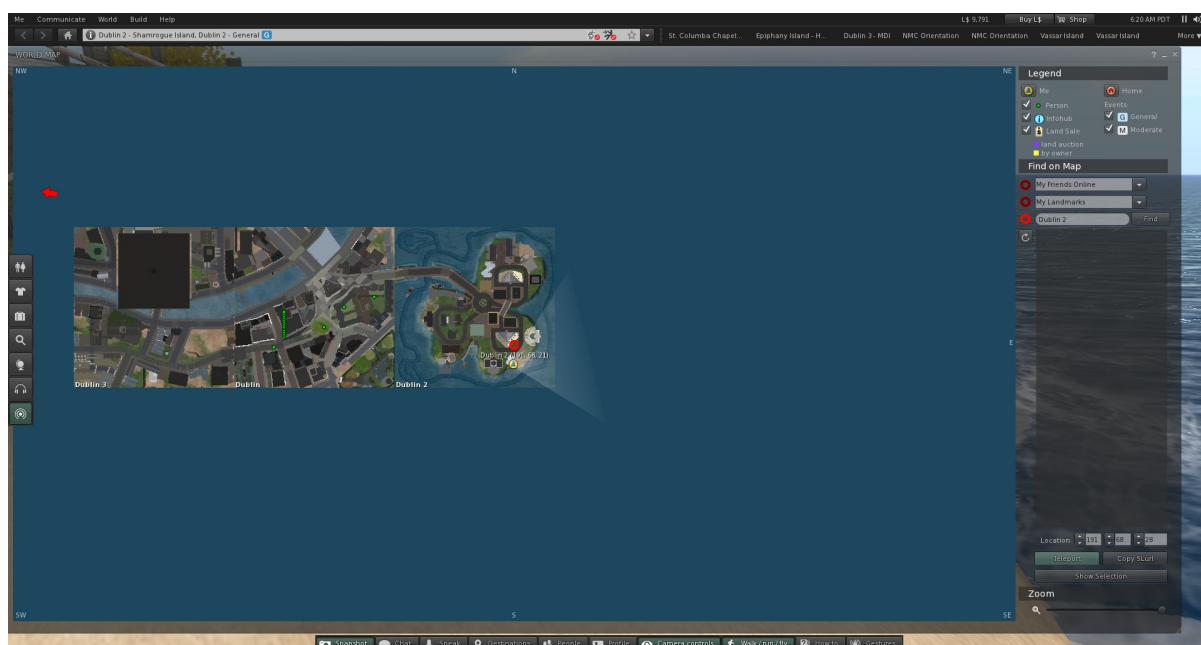
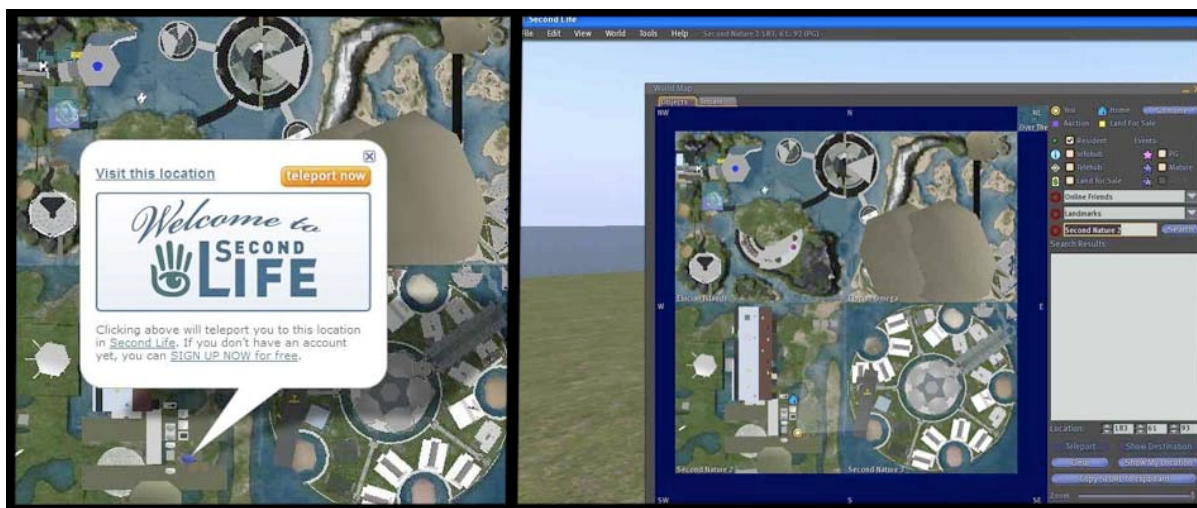


Figure 14: Mini-Map View of Dublin 2 in SL

Each SL region has specific coordinates and an associated SL location based linking system, referred to as SLURL (Figure 15). A SLURL is similar to a web page address identifier. By selecting and clicking on a SLURL the resident ‘teleports’ to their chosen location. Wheeler defines teleportation as ‘the mechanism of travelling large distances in a snap second’ (2009, p. 437). In this way, the SLURL is comparable to Dr. Who’s Tardis, Marty’s Delorean or Captain Kirk’s transporter.



**Figure 15: Teleportation**

SL regions are both ‘geographical and administrative units: they are governed by rules and regulations that may change from region to region’ (Rymaszewski et al. 2007, p. 8). Until recently two distinct SL worlds existed, a separate teen and adult world, which were referred to as ‘grids’. The teen grid, launched in 2005, provided a sheltered SL space, accessible only to those between the ages of 13 and 17 with carefully restricted adult access. While the Teen grid had a vibrant educator presence, it did not generate sufficient income to make it economically viable and the decision to close teen SL was taken in 2010. Currently, the SL ‘adult’ grid restricts access to those over the age of 16, although in practice this is hard to regulate.

Within the world of SL a wealth of visitor destinations exist and are categorised by interest. By way of illustration, destinations include; beaches, bars, fashion, games, haunted, role-play, romance, spirituality and belief, surfing and zombies, to name but a few. A resident can purchase a region and can create whatever they choose on that land. A resident builds through Linden Scripting Language (LSL), a scripting language that is unique to SL. Through use of this script, the resident has the tools to create their environment in a way that is not always possible within a computer game. In addition to standing back to admire the paintwork of others, the resident can also pick up a



paintbrush to create for themselves. Next, *educational* spaces within SL are briefly illustrated.

As a consequence of longevity, SL is considered to offer the most stability for potential virtual world educators (Kirriemuir 2007). In their research, Addison and Hare (2008) identify four categories of educational space in SL. The categories comprise:

- (1) Replica campus
- (2) Virtual workplace
- (3) Poster display space
- (4) Simulation

First, there are many examples of ‘faithful replicas of existing educational buildings, or who campuses’ (Addison and Hare 2008, p. 8). These include, Trinity College Dublin (Dublin Virtually Live) (Figure 16), Harvard College and Texas State University. Several have employed the replica campus, with success, for pre-college orientation activities. Wheeler points out, however, that the replica campus ‘does not take advantage of the wider opportunities the SL technology can offer’ (Wheeler 2009, p. 428).



**Figure 16: Virtual Ireland Replica Trinity College Dublin**

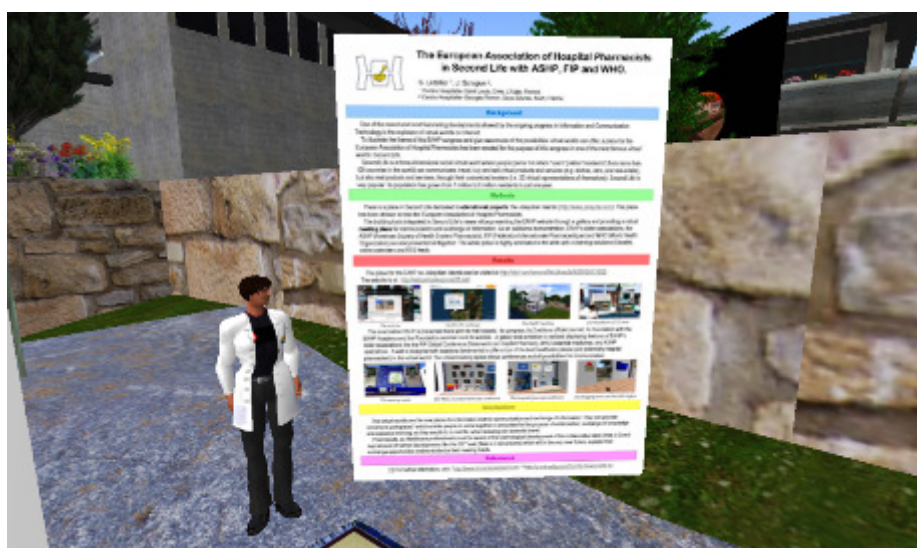
The virtual workplace is identified as a second category of educational space in SL (Figure 17). The virtual work place provides students with an opportunity to engage in activities that they will encounter in their professional context. The virtual workplace is

also referred to as ‘simulations of the actual’ (Søraker 2009, p. 10). Examples include, Second Health (Imperial College London), the Food Factory (Teeside University) and the International Space Flight Museum. Generally, virtual work places are not designed to ‘promote interaction between avatars within the activity’ (Addison and Hare 2008, p. 9). In most cases, the participant engages in the activity at their own pace in a self-directed manner.



**Figure 17: Second Health Operating Space (Imperial College London)**

The third category is the poster display; a space housing research posters (Figure 18). In such spaces, students might be expected to design and display their own posters as a form of module assessment or, alternatively, posters may be employed as a teaching tool. Generally speaking, posters provided limited interactivity, bar a teleport link or web page link. Addison and Hare point out that the content might be ‘delivered just as well, if not better, by traditional website or VLE’ (2009, p. 9).



**Figure 18: Virtual Poster Display Example**

The final category of educational space identified is interactive simulations. Here, the participant is presented with ‘physical simulations, often of molecular or biological structures’ (Addison and Hare 2009, p. 9). A good example of an interactive simulation is Genome Island. Here, the student interacts with the objects in order to learn more. While Addison and Hare’s presentation of educational categories is comprehensive, their paper might also have included task based simulations as a sub-category. Such simulations require the student to take on role and engage with the simulation through that character. Examples include, Storm Troopers simulation and the virtual disability simulation experience. The categories of learning spaces presented in this section are well established within SL. While it is outside the scope of this study to present SL building techniques or to fully explore the wealth of destinations within SL, the topic is returned to in Chapters 4 and 5.

### **Economy within SL**

The economics of SL are not immediately relevant for the SL educator. As a result, this section provides a brief overview. The SL virtual economy (Castronova 2006) is based on Linden Dollars (L\$). At time of writing, the Linden exchange rate is L\$249.0954 / US\$1.00 ([www.secondlife.com](http://www.secondlife.com) 2012). The SL economy has an actual world revenue of ‘\$7 million a month and is approaching \$100 million dollars a year’ (Launch 2012, n.p.). This revenue is generated through virtual land purchase, premium membership accounts and resident trading of commodities, goods or services. The offline property crash has not impacted on SL to a great degree. In contrast to the offline world, high mortgage interest rates and negative equity are not a concern for the SL resident (Launch 2012, n.p.). A resident can have an idealized life within SL by purchasing homes, cars and other commodities for a fraction of the actual offline price. Moreover, ‘virtual goods are also used to signal social distinctions and bonds in the same way as material consumption commodities’ (Lehdonvirta and Ernkvist 2011, p. 7). Residents can start up the business they have always wanted, but may not have been able to in the offline world, because of the ‘real’ overheads. Similarly, the resident can secure a SL job to augment their offline income. SL employment opportunities are diverse, from modelling to acting, from home security to the oldest profession of all, selling sex. Recent figures suggest ‘15% of the SL revenue comes from sex-related services’ (Launch 2012, n.p.). Selling virtual sex, however, might not be the most lucrative SL career choice as too ‘many people are willing to have sex for free’ (Fluffy 2012). At this

point it is important to identify a general criticism of SL, which is the high cost associated with land rental for educational activities.

### **Summary**

Chapter 1 set the scene for this research by introducing and outlining the field, the virtual world Second Life (SL). Firstly, the chapter contextualized an understanding of virtual worlds by illustrating its precursors, play and computer gaming. Secondly, the chapter identified play, computer gaming and virtual worlds as similar but not synonymous spaces. Drawing on the work of Aldrich (2009), the three are best considered as points along a continuum of highly interactive virtual worlds. Thirdly, in an attempt to present a comprehensive picture of SL, its constituent parts were explored. These include identity, community, topography and economics. Next, Chapter 3 identifies and considers seven cases where SL is employed to assist in the teaching of modules across a range of HE sectors and subject disciplines.

**CHAPTER TWO: A REVIEW OF SECOND LIFE USE IN SEVEN HIGHER  
EDUCATION SETTINGS**

## **Introduction**

Teachers excited by and employing innovative technologies in their practice are cautious of the accusation of ‘using them regardless of whether or not they are pedagogically effective’ (Beetham and Sharpe 2007, p. 3). Rather than blindly employ technology for technology’s sake, careful consideration should be given to how the technology is employed, and to what effect, in other contexts. In meeting the demands to innovate practice at Higher Education (HE) level, the identification of the affordances of new technologies is increasingly valuable. In this chapter, seven cases of the use of SL to assist in HE teaching are identified and critiqued. A range of HE sectors and subject disciplines are considered.

Within the reviewed cases, all SL educators employed learner centred pedagogic approaches. The cases, however, provide an incomplete account of the function and role of the teacher during the learning activities. The cases employ qualitative, quantitative and mixed method data collection techniques. However, one criticism is that the cases do not provide thick description (Ryle 1968). Finished accounts, which have employed thick description, are microscopic (Geertz 1973 cited in Jenks 2003, p. 187). Here, the authors favoured the collection and analysis of textual data over visual and aural data, which might have provided a more nuanced account. Nevertheless, the reviewed cases are in agreement that teaching in virtual worlds must be based on perceived educational affordances. Further to this, they argue that a framework for potential SL educators should be developed.

## **Purpose**

The aim of this chapter is to review cases where SL is employed for pedagogic purposes in higher education contexts. Three questions guided this review:

- How is SL employed by HE teachers in their pedagogic practice?
- Which research methods are employed by researchers who are conducting research on the use of SL in pedagogic practice?
- What suggestions for future research are made by the researchers?

## **Method**

A three stage methodology was employed in the search for relevant literature. First, peer-reviewed papers found in electronic journal databases were examined using a

keywords search strategy. The following databases were employed: (1) Academic Search Complete (2) ERIC International (3) Informaworld (4) Taylor and Francis. The keywords included: Second Life, Virtual Worlds, Higher Education, Pedagogy, Teaching, Learning, Initial Teacher Education. The chosen journal databases are highly regarded within the academic world (Waldman 2003). Given the abundance of journal articles, key word searches are considered an effective method of identifying relevant literature (Vakkari and Talja 2006). Second, Mendeley Research Networks ([www.mendeley.com](http://www.mendeley.com)) was employed. This involved keyword searches in combination with date specification. The ‘snowball’ method was then employed. This involved searching for authors cited in some of the papers and news articles studied. Finally, a search through the proceedings of the *Researching Learning in Virtual Environments International Conference* (2008) was conducted.

Seven peer-reviewed papers published between 2008 and 2011 were chosen for this review. Each case reports an example of SL pedagogic practice within a higher education context. The cases were sourced from established journals: The Journal of Computers and Education, Educational Media International, The Journal of Interactive Learning Environments, and The British Journal of Educational Technology. Together, the cases represent a wide geographic spread: Ireland, Portugal, Greece, The United States of America and The United Kingdom. Appendix 2 lists the papers included in this chapter according to (a) author, date (b) title (c) research method (d) data collection method (e) pedagogic approach (f) context.

## **How is SL Employed by HE Teachers in their Pedagogic Practice?**

In the reviewed literature, HE teachers using the SL platform employed a learner-centred pedagogic approach. To varying extents, this approach was supported with collaborative learning activities. Furthermore, whilst modules were delivered within SL, they were also supported by other web-based platforms, such as Moodle and Youtube. To begin a discussion of teaching and learning, we must start with an understanding of both concepts. While this seems a reasonable proposal, teaching and learning are complex matters. Defining learning is particularly challenging. A seemingly straightforward definition of learning is ‘the acquisition of knowledge or skills through study, experience or being taught’ (Oxford Dictionary 2012, n.p.). Illeris builds on this and proposes a usefully broad definition of learning as ‘any process that in living organisms leads to permanent capacity change, and which is not solely due to biological or maturation or ageing’ (2009, p. 7). The rich and diverse range of theories of learning that exist, however, complicate matters. Learning theories are constantly being developed, re-considered and re-formulated in light of new technologies. In the past, learning theories focused specifically on the acquisition of knowledge and skills. Today, learning theories focus on a range of assumptions concerning the ‘emotional, social and societal dimensions’ of learning (Illeris 2009, p. 3). In essence, there are three generally accepted theories of learning: behaviourism, cognitivism and constructivism. Post-modern theories include Transformative Learning Theory (Mezirow 2000; Mezirow 2009), Multiple Intelligence Learning Theory (Gardner 1985; Gardner 2009), Mobile Learning (Sharples, Taylor and Vavoula 2005) and Connectivism (Siemens 2005). Each theory is underpinned by an understanding of what constitutes knowledge, a conception of what learning is, how learning occurs, the role of the environment or society within the learning process, and how learning can be facilitated. However, Farren advises caution as ‘one overarching theory for teaching and learning does not seem appropriate to accommodate the diverse student body now in higher education’ (2005, p. 57).

The role of the teacher is to facilitate learning through the creation of meaningful learning experiences. Teaching tools can include teaching learning strategies, and teaching methodologies. Such tools are employed as a means of organising the classroom interaction in a way that is relevant to the subject area. Teaching strategies are subject specific or general teaching learning strategies. First, general teaching learning strategies can be employed for a variety of subject areas. General teaching learning strategies include discussion, constructive controversy, and interpretation of



data. They can be employed across a range of content areas. Additionally, there are subject-specific strategies, for example, Religious Education content can be best taught using a subject-specific strategy such as inter-religious engagement or shared praxis (Groome 1991). Here, strategies can be employed over one or a number of lessons. In other words, strategies are chosen when they are considered an appropriate means to facilitate effective pedagogy. Next, a teaching methodology is, similarly, a method employed by the teacher to facilitate learning. Teaching methods include role-play, case study, pair work and engaging with symbol. Teaching methods can be employed within a specific teaching learning strategy. For instance, a teacher of Religious Education might choose the subject-specific strategy Shared Praxis, and within that strategy employ a range of teaching methods, such as pair work or group work. In sum, teachers have always sought to test and adopt the best pedagogic approach for their lesson content, students and classroom. In this digital age, teachers are testing and refining their pedagogic approaches in light of new technologies, such as SL. Within this chapter, the pedagogic approaches and, where stated, the underpinning learning theories as adopted by the reviewed research projects are presented.

In the reviewed cases, the following pedagogic approaches were identified as prevalent in SL tertiary level educational practice (a) constructivism: communal and cognitive (b) experiential learning: simulation and role play (c) collaborative learning: computer supported collaborative learning and community of inquiry. Such pedagogic approaches might all justifiably be classified within a constructivist paradigm. Nevertheless, the presentation of the studies in the above categories respects the reviewed researchers' classification of their pedagogic approach. In addition, the pedagogic methods employed are all considered learner-centred. This suggests the learner takes an active role in their own learning process. Learner centred methods 'build on the skills and knowledge of students, enabling them to reason from their own experience' (Sharples et al. 2005). In delivering content in this way, the teacher acts as a facilitator during the learning activities. To varying degrees, the cases agree with Jansson who argues 'what professors do in their class matters far less than what they ask students to do' (2011, p. 49). Next, the pedagogic approaches employed in seven cases of SL usage at HE level are presented and critiqued.

## **Communal Constructivism**

A considerable amount of literature has been published on constructivist learning. Together the literature presents a rich and diverse range of constructivist learning theories. Despite the theoretical underpinnings, constructivism is generally understood as a ‘view that emphasises the active role of the learner in building understanding and making sense of information’ (Woolfolk et al. 2008, p. 411). In addition, the literature conclusively reports that constructivism is the antithesis of didacticism (Duncan et al. 2012, p. 6). Based in experiential learning methods, constructivism is reported to be the most prevalent pedagogic approach adopted by virtual world educators (Duncan et al. 2012, p. 6). A number of principles have been found to apply to most constructivist approaches to learning within a virtual world. They are summarized as follows:

1. Embed learning in complex, realistic and relevant learning environments
2. Provide for social negotiation and shared responsibility as part of learning
3. Support multiple perspectives and use multiple representations of content.
4. Nurture self-awareness and an understanding that knowledge is constructed.
5. Encourage ownership in learning

(Woolfolk et al. 2008, p. 416).

Needless to say, the principles can equally apply within face-to-face contexts. The following case reports that virtual worlds, such as SL, can provide suitable environments for the implementation of communal constructivism (Girvan and Savage 2010).

### **Girvan and Savage (2010)**

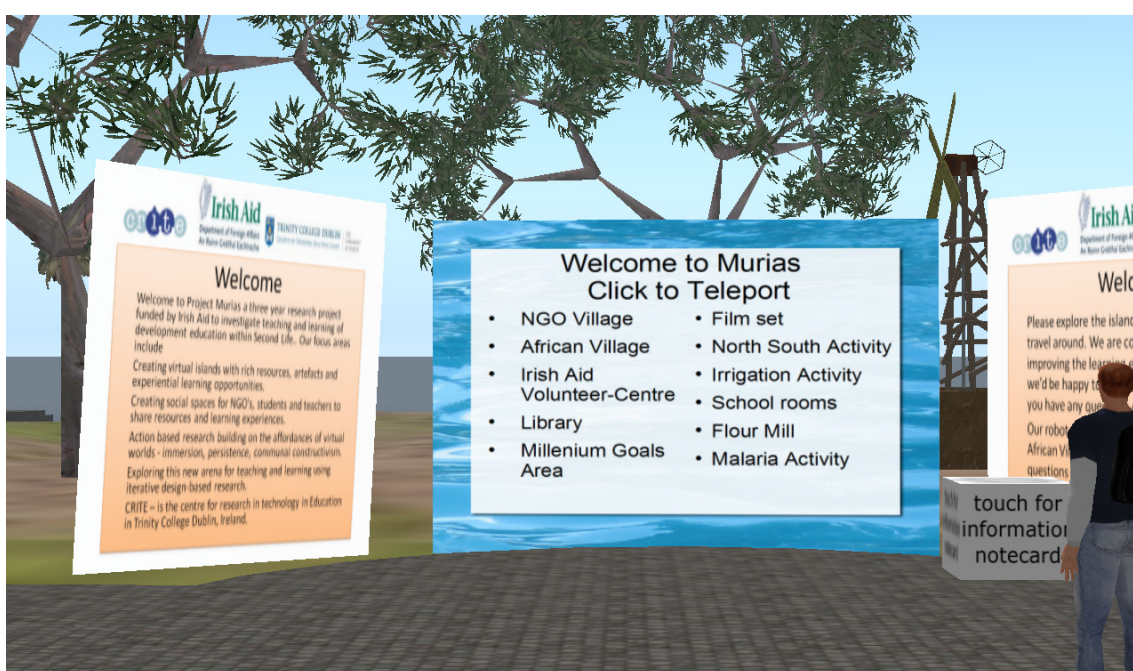
Despite the potential of virtual worlds for educational activity, Girvan and Savage argue that teaching and learning in virtual worlds often lacks solid pedagogical structure (2010). Following their consideration of SL as a platform for education, the researchers identified communal constructivism as an appropriate pedagogic tool for their course.

Girvan and Savage use the term communal constructivism to refer to:

an approach to learning in which students not only construct their own knowledge (constructivism) as a result of interacting with their environment (social constructivism), but are also actively engaged in the process of constructing knowledge **for** their learning community (Holmes et al. 2001, p. 1).

This theory of communal constructivism draws on a range of constructivist approaches, from the cognitive apprenticeship model to the Japanese Han system (Holmes et al.

2001, p. 3). The communal constructivist approach advocates the use of a range of teaching methods including group work, project based learning, portfolio production, peer tutoring, mentoring and apprenticeships (Holmes et al. 2001, p. 5). In their SL learning research, Girvan and Savage provided professional development for qualified teachers in the specific area of Development Education. The lesson activities occurred on Murias (Figure 19), a purpose built SL island designed to complement the training activity. The research inquiry took place over a two day period, during that time the teachers worked in groups of five to complete set tasks. The participants had a solid SL skills base, and the activities were designed to ‘to develop their understanding of North–South interdependence’ (p. 348).



**Figure 19: Project Murias (Girvan and Savage 2010)**

The learning experience followed a communal constructivist pedagogy that involved:

1. Interaction with the environment to construct knowledge
2. Active collaboration
3. Engagement with knowledge construction
4. Publishing of knowledge
5. Transfer of knowledge between groups
6. A dynamic and adaptive course.

(Girvan and Savage 2010, p. 346)

Following analysis of data from the five case-studies, the researchers report that learners perceived communal constructivist activities in SL to be more successful than communal constructivist activities in 'real life'. It is reported, the experience of working within the group added extra pressure, which focused participants. Further to this, learners 'came together' and 'interacted' to complete the given activities. The findings suggest the learning experience was enjoyable as a result of 'discussion', 'cohesion', 'support' and 'creation' involved in the project (p. 347). In addition, learning was found to have occurred at a group level (p. 348). This case demonstrates that communal constructivism can facilitate learning within the virtual world. The researchers, however, also acknowledge that other pedagogies should also be considered and explored.

### **Mayrath, Traphagan, Heikes and Trivedi (2011)**

A more substantial illustration of constructivist learning in SL is illustrated in the work of Mayrath et al. (2011). The researchers conducted a one year pilot study implementing SL into their education practice. Over the course of semester one, freshmen English students were assigned the task of designing and scripting an ideal virtual campus building within SL. Subsequent to this, the students completed a persuasive essay justifying their choice of building, followed by a graded reflective essay. While the Girvan et al. (2010) case demonstrated positive participant feedback, the participants in the Mayrath et al. (2011) case were largely left unsatisfied. 71% of students reported negative experiences and attitudes regarding the use of SL in their course work (Mayrath et al. 2011, p. 132). The reactions reported in their paper suggest student frustration and confusion:

'I think a lot of frustration was just the buildings. No one understood why we were doing it and then it was hard to do'; 'Putting a building together was probably the most difficult thing I have ever done on the computer. The controls were complicated, and you practically had to be an engineer to figure out how to cut/rotate/skew and then fit the pieces together to the structure you wanted' (Mayrath et al. 2011, p. 133).

Both research projects presented the use of an authentic problem, student led inquiry and the building of a relevant learning object within SL as a base for constructivist learning. Girvan et al. (2010) employed co-operative and collaborative tasks to foster positive interdependence. In contrast, Mayrath et al. (2011), report that students worked independently. For Girvan et al. (2010) the learning object represented the advancement

of the knowledge of the group. For Mayrath et al. (2011) the learning object represented the advancement of the knowledge of the individual.

Numerous reasons can be identified for the positive outcome in the Girvan et al. project. First, participants volunteered to participate in the SL activities. In addition, the participants already had an SL skills base. This suggests the participants had an interest in technology and, perhaps, an interest in the employment of SL for educational purposes. As earlier identified, personal motivation is a key factor in the success of any educational endeavour. Motivation can facilitate engagement and, depending on the structure of the learning, can help to promote a positive learning experience. Second, the Girvan et al. SL educational activity occurred over a short time scale: a two day period. During that time the participants collaborated to build the learning artefact. Third, the researchers reported that participants experienced co-presence (Schroeder 2002), which facilitated a feeling of 'being there together' (Dalgarno and Lee 2010, p. 14). Their account illustrates how the use of an appropriate methodology with the SL platform can facilitate self-motivated participants to engage in knowledge construction.

In a similar way, numerous reasons can be identified for the negative experience of participants in the Mayrath et al. project. First, participants were freshman students in semester one of their studies, not voluntary participants as identified in Girvan et al. In addition, the participants worked individually on their building designs. This suggests, the authors did not take into account a key 'multi-user' affordance of the SL world (Warburton 2009). Rather than exploit the affordances of SL for collaborative activities, the researchers requested participants work alone. In essence, they adopted a lone-gamer method within a multi-user environment. This may have contributed to the unsuccessful outcome of the project. Second, while the participants were supported by a team of staff, sufficient time was not given to addressing the activity rationale with the class group (Mayrath et al. 2011, p. 128). The course rationale (development of writing skills) and the building activity therefore did not coalesce for students. Third, constructivist theory argues that knowledge construction is best fostered through social negotiation rather than through competition (Jonassen 1994). In their report, Mayrath et al. (2011) indicate competitiveness contributed to participants negative attitudes. Participants' frustration was levelled at 'perceived unfair competition during the building activity because of some students having more graphic design skills than others' (Mayrath et al. 2011, p. 133). It seems that feelings of frustration may have undermined participant motivation and engagement with the activities. Finally, the

project designers viewed the SL building activity as a tool to facilitate the development of writing skills rather than a worthwhile activity in its own right. Needless to say, as students did not enjoy the SL building activities, a 'dismal picture' emerged (Mayrath et al. 2011, p. 132). The results of the study might have been more favourable if students had been asked to complete newcomer friendly SL activities. By way of illustration, they might have asked students to work in teams to source, photograph and critique five campuses in SL. Such activities might have been enhanced through a blog or wiki platform. Together, the participants could present their findings and an illustration of their ideal campus design either in SL, another web-platform or in their offline classroom. In this way, the participants would still engage with SL technology, achieve their learning outcomes (enhancement of writing) but would not get side-tracked with overly complex tasks. Nevertheless, Mayrath et al. acknowledge the difficulties of 'technology leading pedagogy'. This makes the presentation of their experience valuable to would-be SL educators. A more positive outcome is demonstrated in the work of Jarmon, Traphagon, Mayrath and Trivedi (2009) where students engaged in a comparable SL building project but employed an experiential learning approach.

### **Experiential Learning**

Dalgarno and Lee (2010) identify experiential learning as an affordance of virtual worlds. They argue that virtual worlds, such as SL, can present experiential opportunities 'that would be impractical or impossible to undertake in the real world' (p. 19). Experiential learning is 'the process whereby knowledge is created through the transformation of experience' (Kolb 1984, p. 41). With experiential learning, the instructor-centred model is 'replaced by a more active learning framework in which students take advantage of opportunities to apply their theoretical tools to real life situations' (Farrell 2008, p. 74). As the label suggests, the learner participating in experiential learning immerses into the activity in order to develop their understanding and, subsequent knowledge. The function of the teacher is to facilitate rather than lead, as 'the student's learning is essentially self-directed' (Farrell 2008, p. 75). Consequently, experiential learning challenges the role of the academy and school based curriculum in the learning process (Usher 2009). In this way, experiential learning is considered a 'pedagogy constructed through vocational practices; thus it is both socially constructed and contested' (Usher 2009, p. 175). This method, therefore, might have a place in toppling hierarchical instruction structures and, in effect, produce a more democratic approach to education.

### **Jarmon, Traphagon, Mayrath and Trivedi (2009)**

In their research, Jarmon, Traphagon, Mayrath and Trivedi (2009) employed an experiential approach within an SL based project. The SL Alley Flats project involved graduate students designing and scripting two sustainable urban houses in SL as part of an interdisciplinary year-long communications course. The project draws from Kolb's experiential learning (1984) theory. As the course was interdisciplinary in nature, Jarmon et al. (2009) reported they made connections between content and activities explicit. In semester two of the course, five students worked as an interdisciplinary team to apply the theoretical knowledge (from semester one) to design, script and build two sustainable urban houses (Figure 20).



**Figure 20: Alley Flats Project**

Source: Jarmon et al. 2009

In contrast to the Mayrath et al. (2011) project, Jarmon et al. (2009) reported that students had a positive experience working in SL. Furthermore, SL served as a playground that presented an opportunity for students to enhance their 'creative and imaginative skills' (p. 174). Jarmon et al. (2009) demonstrated the positive outcome of the project was linked to the type of learning the SL environment can facilitate and identified six educational affordances of SL:

1. A capacity to host virtual social interactions and collaborations
2. A capacity to allow users to test hypotheses by applying them in the project before use in real life
3. A capacity to see the relevance of virtual actions for real life scenarios
4. A capacity to allow various types of abilities to be practiced and demonstrated virtually



5. The stimulation of imagination, exploration and creativity
6. Increased sense of personal presence and tangible experience in the virtual world

(Jarmon et al. 2009, p. 179)

In addition, Jarmon et al. (2009) report students perceived SL as instrumental in their learning process, facilitating the cohesion of the course content. The success of the project is demonstrated in the fact that both houses, designed and scripted in SL by the students, were built in 'real life' and became home to two low-income urban families (Figure 21). This research illustrates transferable skills attained through an experiential learning based project within the SL environment.

In summary, although both projects appear similar, an identifiable weakness in the Mayrath et al. (2011) project is its rationale. As suggested, the findings might have been more positive had the building activity been seen as worthwhile in its own right or if the SL activities were more accessible. In contrast, the Jarmon et al. (2009) project drew together interdisciplinary learning. It then funnelled that knowledge into a virtual world learning activity. Subsequently, the virtual world project had tangible consequences. Throughout, the students worked as a team rather than in a competitive manner. Experiential learning is also fostered through simulation, role-play and other student led activities. It is to this topic that we now turn.



**Figure 21: Alley Flats Project**  
Source: Jarmon et al. 2009



## **Simulation**

Simulation provides another tool to engage students in virtual world experiential learning. Simulation is defined as ‘a model of events, items or processes that do or could exist’ (Magee 2006, p. 9). The continuum metaphor, proposed by Aldrich (2009), identifies two categories of simulation. The first is the educational simulation. Examples include a flight or driving simulator. Such simulations are ‘structured environments, abstracted from some specific real-life activity, with stated levels and goals’ (p. 7). For the most part, this category of simulation is pre-packaged, perhaps ‘bought-in’, by educational establishments. A second category of simulations identified are found within virtual worlds. In contrast, these simulations can be created by the teacher and like educational simulations students can also practice key skills through set tasks. Both educational and virtual simulations arise from the same basic principles, the activities are comparable, and both could justifiably be subsumed into the ‘educational’ simulation category. The virtual world, however, presents the educator with an opportunity to design, create and manipulate the simulation as they see fit. Recent evidence suggests that close to half of all educational practice within virtual worlds employs simulation activities (Duncan et al. 2012). Generally, such studies are in agreement that simulations suffer from one obvious drawback; simulations are inherently reductionist. Nevertheless, when it is not viable to participate in the ‘real thing’ simulations provide a unique opportunity for insight into the ‘real thing’ as illustrated in the work of Cheong (2010) and Mahon, Bryant, Brown and Kim (2010).

### **Cheong (2010)**

In a substantial 15 week research project, Cheong (2010) prepared 99 pre-service teachers to practice their teaching skills within SL. Three stages in the project are identified. Firstly, the student teachers engaged in learning basic SL locomotive and communication skills for a period of time. Secondly, student teachers observed models of teaching within SL. Here, the course instructor modelled a didactic teaching approach, which students viewed from two perspectives. First, students viewed the activities from the vantage point of the instructor’s computer screen (projected onto a lecture theatre screen). This provided an opportunity to observe the actions required to make the avatar move, to change slides in SL, in sum ‘the usage of functions needed for teaching in Second Life’ (p. 873). Second, from the vantage point of their avatar, students synchronously observed their instructor teaching within SL. Examples were recorded and made available to students prior to the next stage of the research. In the

third stage of the research, the students engaged in teaching practice in SL with guidance from experienced teaching practice supervisors. As part of the practice phase, the students engaged in two reflective practice activities and related class discussion. Class discussion was structured around the recordings of the student teachers engaged in SL teaching, which was made available to the students via a private Youtube channel. According to the report, the recordings provided focus for the subsequent class discussion.

Cheong found that simulation of teaching within SL did not negatively impact on students' teaching practice in the offline classroom context. In addition, Cheong demonstrated the practice of teaching can be preformed repeatedly and, in fact, more easily than in an offline context. Key concerns, such as duty of care to classroom pupils, were eliminated as students could peer teach within the environment. Cheong reports that participation in simulations through the use of an avatar provided a positive influence on pre-service teachers' personal efficacy. Cheong concludes by highlighting:

The important finding from this study is that practice teaching in Second Life affects pre-service teachers' personal teaching expectancy, and the collaborative practice of teaching has more of a positive impact on their personal teaching expectancy (Cheong 2010, p. 878).

The highly structured nature of the module demonstrate the effectiveness of a staggered approach from an introduction to SL skills, observation of others teaching within SL, to finally permitting students to engage in a teaching activity within SL. Whereas previous cases outlined in this chapter identify a limited role for the SL teacher, Cheong clearly delineates the instructor's role. In Cheong's report, the instructor models the teaching activity within SL for the students. Students are made aware of the preparation, the skills to deliver a lesson in SL. Additionally, they are provided with support while they practice those skills. Cheong's extensive research is highly unique and illustrates the structure required to assist student teachers accomplish learning tasks within SL. It provides a useful template for those wishing to engage their students in teaching practice in virtual worlds.

### **Mahon, Bryant, Brown and Kim (2010)**

A further illustration of an SL classroom based simulation activity is presented by Mahon, Bryant, Brown and Kim (2010). Mahon et al. (2010) investigated the potential of SL to provide 'an authentic environment for the learning of strategic decision making in regard to classroom management for teacher candidates' (p. 128). In this highly

innovative research, Mahon et al. created a classroom scenario on a private SL island. During the lesson simulation, 30 pre-designed pupils engaged in an assessment activity under the direction of their class teacher. Each 'pupil' had a behavioural difficulty profile, which was made available to the student teachers prior to the lesson. The 'pupils' were avatars controlled by class members and 'bots' (robots), scripted to misbehave during the lesson. As a result, the class teacher a pre-service student teacher, (seven male, thirteen female) had an opportunity to practice their classroom management skills. During the lesson, the student teachers switched between roles, acting as either a 'pupil' during the lesson or taking on the role of the class teacher. During 'pupil' mode, the student teachers misbehaved according to the assigned behavioural profile. At this stage in their studies, the student teachers had completed educational psychology modules. Therefore, this activity enabled students to draw from their theoretical knowledge base.

Mahon et al. (2010) reported that the simulation activity provided a personalized learning experience for students. The efficacy of the simulation, however, was challenged on two levels. First, it was challenged by the technology. Secondly, and more surprisingly, it was challenged by the student teacher cohort. First, the researchers found the technology 'clunky'. They experienced numerous 'crashes' and lag as a result of the number of avatars present in their SL classroom. Moreover, the account of the preparation for the simulation suggests it was immense, requiring a high level of SL expertise. Additionally, the cost of setting up the simulation was quite expensive (p. 131). They also reported that the generic avatars employed as 'pupils' lacked visual diversity and therefore created an unnaturally homogenous class group. The second challenge identified came unexpectedly as a result of student teacher behaviour during the simulation. Despite clear directions from their instructors on how to control their 'pupil' during the lesson (in line with their 'pupil's' behavioural profile) the student teachers engaged in more misbehaviour than warranted. The researchers report, the students felt 'It was fun to misbehave for a change' (p. 130). As a result, the class teacher was inundated with misbehaviours. In effect, the class teacher found it challenging to differentiate behavioural difficulties exhibited by individual pupils and, consequently, did not know how to respond appropriately. Nevertheless, the simulation provided students with an opportunity to observe other student teachers manage unruly classroom behaviour. Mahon et al. (2010) propose the simulation assisted students with the identification of appropriate classroom management skills and associated teacher

interpersonal skills. As with previously mentioned cases, the role of the HE instructor during the lesson was not explicitly addressed in the article. An account of the role of HE instructor during the process would have enhanced this study.

In critiquing their studies it is clear that Cheong (2010) and Mahon et al. (2010) demonstrate two ways in which simulation can be employed in SL for pre-service teachers' professional development. While Cheong focused on the teaching of a lesson within SL, Mahon et al. (2010) focused on the simulation of classroom management skills. Cheong's SL pedagogic study was conducted over a substantial time period. In contrast, Mahon et al's (2010) study seems to have been a once off lesson. Despite the length of time spent engaged in the activities, both cases report the SL activities successfully fostered student reflection on key classroom skill sets that will be required by the student teacher during their practicum. Cheong's study, however, presents a structured approach to reflection. Cheong reports that where students followed their instructors' directions, self-efficacy was noted. Mahon et al. report, however, that the students disregarded the instructor's directions, and as a result the quality of the experience was compromised. In addition, the authenticity of the simulation was undermined as students moved too far into 'play' mode, creating unrealistic class scenarios. For instance, Mahon et al. note students took to flying around the room during the activities.

Both accounts stress the importance of class peers. A collegial atmosphere was reported in Cheong's study. Mahon et al. do not report that students felt others were working against them by behaving in an overly disruptive manner; however the findings suggest the inclusion of students as 'disruptive pupils' actually undermined the quality of the experience. One criticism is that the simulation was played out too strongly by those acting as 'pupils'. Rather than work within the set guidelines they overplayed their disruptive role. I would argue that if students had followed the set instructions the research results might have been more positive. If asked to offer constructive advice, I would suggest three things. Firstly, the activities might have been more useful if the instructor had modelled how to appropriately respond to specific behavioural difficulties at an individual and class group level. Secondly, I would recommend the students engage in team teaching the class with the instructors in full control of the misbehaving 'pupils'. Thirdly, it might have been more productive to focus on one behavioural difficulty at a time and record the lessons for reflection, as occurred with

Cheong (2010). As with Mayrath et al. (2011), the Mahon et al. case honestly presents the challenges that arose during their pedagogic use of SL. As a result, their reports are of practical value for the virtual world teacher.

### **Role-Play**

The distinction between simulation and role play can be blurred at times. Although role-play and simulation are both performative activities, role-play implicitly involves the user adopting a character or persona, other than oneself, in order to participate in an activity (Ryan 2008). Bell (2001) reports role-play activities include structures that promote the development of attitudinal skills such as empathy, insight, responsibility and the related fostering of autonomy. Additionally, role-play is ‘in all cases, inextricably linked to identity and to language’ (Brash and Warnecke 2009, p. 100). Consequently, role-play has long been employed as a pedagogic tool across the education continuum. Role-play within a face-to-face context, however, can be challenging. In particular, older students are more likely to experience self-consciousness and, as a result, are unlikely to engage wholeheartedly in the activities (Addison and Hare 2008, p. 11). In recent years, there has been a significant amount of literature on the potential of virtual worlds for educational role-play activities. The literature identifies new technologies as ‘an alternative’ performative stage upon which teachers can produce complex role-play activities (Bell 2001; Ryan 2008; Jamaludin et al. 2009). In semester two of their study, Mayrath et al. (2011) included role-play activities in their coursework activities.

### **Mayrath, Traphagan, Heikes and Trivedi (2011)**

Subsequent to their findings from semester one, Mayrath et al. (2011), redesigned the instructional approach of their freshman English course. As previously outlined, the first semester module involved a building activity. Semester two involved an experiential role model activity. This phase of the project capitalised on the SL skills the students had attained in semester one. The aim of this project was to understand ‘literature and world from a variety of perspectives’ (Mayrath et al. 2011, p. 129). First, students completed a writing assignment on a role model of their choice. Next, students completed a role model activity in SL. In this activity, students customised their avatars to represent their chosen role model, for example, Mother Teresa, Malcolm X, Shakespeare and others. Following this, students met to discuss issues from the perspective of their role model. Each session took place in four pre-developed meeting

places. Students rotated to relevant locations for each discussion session. The class discussions were logged, and subsequently made available to students. The text file and experiential activity served as a base for a reflection paper completed upon the module conclusion.

In contrast to the feedback from semester one, students found the role-play activity agreeable and motivating, for example, 89% of students 'reported that they liked the social interaction with other avatars more than the individual building activity' (Mayrath et al. 2011, p. 135). In addition, the authenticity of the activity was considered an important factor in the quality of the learning experience:

I think the difference was that the role playing activity seemed to relate a lot more to our class so you could actually have a real purpose. Whereas in the first semester [building activity] it was like we're just kind of throwing this SL thing in, but it didn't really fit with the purpose of our class (Mayrath et al. 2011, p. 135).

Although the results were positive, the findings also suggest students were not entirely convinced of the use of SL for their course work: 'a few students agreed SL is a better environment than a classroom' (Mayrath et al. 2011, p. 135). In contrast, the findings from the Jarmon et al. (2009) and Cheong (2010) are confident about the potential of experiential learning within the SL environment. Both report rehearsal of activities through experiential methods in a virtual environment can have positive 'real life' effects. These findings are consistent with the findings of others, such as, Jamaludin et al. (2009).

In sum, the success of the Jarmon et al. (2009) and Cheong (2010) projects might be attributed to the students' perception of the real-world value of the activities, which resulted in higher levels of student motivation and engagement. In contrast, the findings of Mayrath et al. (2011) indicate that while the course designers found SL motivating, the students did not 'see the excitement to them anymore' (p.10). It could be argued that the students' lack of motivation weakened the potential affordances of the experiential activities. Within the cases identified and in reviewing wider literature, the peer group is reported to have an impact on the quality of the overall learning experience.

### **Collaborative Learning**

One structured way to include the peer group in the learning process is through collaborative learning activities. It has been suggested that we are experiencing the

'biggest media petri-dish in four centuries' (Lohr 2010, n.p.). New technologies present us with new means and methods of collaboration. Web 2.0 tools, Blogs, Wikis, Twitter are fostering 'heightened connectivity' where students are 'hunter-gatherers' of information (Rheingold 2012, p. 53). In the process of hunting and gathering, students are self-directing their learning in packs or 'smart mobs' (Rheingold 2002). This form of collaborative learning is 'concerned with constructing meaning through interaction with others', and as such, 'it is considered an effective teaching and learning strategy for encouraging the sharing of ideas and discussion' (Woolfolk et al. 2008, p. 410). In his study, Roberts (2005) identifies three inter-related benefits of collaborative learning: academic, social and psychological.

First, Roberts proposes the academic benefits of collaboration include the promotion of critical thinking, active student engagement in the learning process, and modelling of problem-solving techniques. Second, he identifies the social benefits of collaboration that include the creation of a support system for the learning, building diversity among staff and students, and the establishment of a positive atmosphere for cooperation. Finally, Roberts suggests a number of psychological benefits that occur as a result of collaboration. These include, increasing self-esteem and the development of positive attitudes towards teachers (2005, pp. 2-4). Findings from across a range of technology-enabled collaborative practices corroborate Roberts' theory, for example, blogging and wiki-creation (Scott-Martin 2011), video production (Wesch 2008), and twitter (Tyma 2011). In addition, literature suggests three dimensional virtual worlds, such as SL, have considerably more potential than text-based technologies for collaborative practices (Leonard et al. 2011). The following section identifies two collaborative learning pedagogic approaches in SL. The approaches identified are collaborative problem based learning, and computer supported collaborative learning.

### **Collaborative Problem Based Learning: Esteves, Fonseca, Morgado and Martins (2011)**

Esteves et al. (2011) provide one example of collaborative problem based learning pedagogy in SL. The researchers understand problem based learning (PBL) as essential to 'effective, high-quality learning, such as self-directed or autonomous learning, critical and reflective thinking skills and the integration of disciplines' (Esteves et al. 2011, p. 634). In this case, the authors report that PBL in combination with collaborative pair work and a suitable project 'provides each student with the freedom to think for themselves, activate their prior knowledge and acquire new knowledge in an

explorative and creative way' (Esteves et al. 2011, p. 634). Participants in the computer programming module were geographically separate, based in two Higher Education Institutes: University of Trás-os-Montes e Alto Douro and the Polytechnic Institute of Leiria, Portugal. The researchers chose SL to host the distance education module because it has its own programming language: Linden Scripting Language (LSL). In pairs, students developed a project within SL through the use of LSL. Although there were no formal lectures, tutors met in-world with students once a week for a period of two hours. Students submitted an algorithm design of their project for approval prior to commencing scripting. This initial activity served as the catalyst for the learning process. Next, working with a tutor, students critically reviewed the submitted design in light of their knowledge of design theory.

Esteves et al. reported that students with limited knowledge of LSL found the initial scripting tasks difficult, and consequently they presented algorithms with numerous faults. The report indicated some students only learned at surface level. As a result, 'they were not able to put that knowledge into practice when developing the project' (Esteves et al. 2011, p. 632). Nevertheless, the collaborative nature of the experience fostered continued motivation to improve their practice. In addition, collaboration in the group strengthened as a result of two events. First, an external agent requested to purchase one student's programming assignment. Second, a company contacted another student with an offer to programme professionally for their business. Despite being positive, these events might have had a detrimental effect on the group. The events, however, promoted further cohesion within the group. For instance, students were highly self-motivated and continued to work 'outside of class time, collaborating for long hours with each other and with the teacher' (Esteves et al. 2011, p. 634).

The findings in this SL HE case conceded the collaborative PBL methodology adopted during the module might have been enhanced with the use of an additional platform, for example, Moodle or another VLE to store learning material, as exemplified in Cheong (2010). In addressing the role of the teacher in the PBL model, the researchers point out the teacher acts as a facilitator rather than instructor. Nonetheless, while they acknowledge the teacher can take a back seat during lesson delivery, they report the module required 'intense' preparation:

The teacher had not only to predict the students' potential difficulties and the possible questions that could arise but also to prepare in advance the text of his



or her response to those difficult questions in order to be able to provide quick feedback to the students (Esteves et al. 2011, p. 633).

Overall, Esteves et al. demonstrate that their use of collaborative PBL within the virtual world enhanced their lesson delivery and subsequently the attainment of module aims. The work of Andreas, Tsiatsos, Terzidou and Pomportsis (2010) provide another example of collaborative learning pedagogy within SL.

### **Computer Supported Collaborative Learning: Andreas, Tsiatsos, Terzidou and Pomportsis (2010)**

In their study, Andreas et al. (2010) employed computer supported collaborative learning (CSCL) for a postgraduate distance education module in the University of Thessaloniki, Greece. The purpose of the research was 'to examine the transferability of the Jigsaw and Fishbowl collaborative learning techniques to the SL platform' (Andreas et al. 2010, p. 603). Jigsaw and Fishbowl are collaborative learning techniques normally applied in the area of social sciences. Both techniques can enhance learning through team work, encouragement, engagement, empathy and interactivity (Ewing and Miller 2002). In their report, Andreas et al. refer to the combination of collaborative learning with SL as computer supported collaborative learning (CSCL).

In their analysis of the data, 87% of students found the Jigsaw and Fishbowl techniques much more easy in the offline setting than the virtual world context. The same percentage of students, however, also reported they found the CSCL approach within the virtual environment much more interesting than the same approach in an offline context. In addition, 40% of students found it challenging to collaborate within the SL environment in contrast to offline collaboration. The report suggests the negative results might be attributed to the steep learning curve encountered by the participants. Additionally, the results indicate that the course content might have been taught in the offline context with more ease and perhaps with better results. The report concludes, however, by proposing CSCL within SL improves upon 'performance levels set by other online learning methods' (Andreas et al. 2010, p. 615).

The work of Esteves et al. (2011) and Andreas et al. (2010) offer an insight into CSCL in SL. Esteves et al. (2011) clearly demonstrate SL provided a superior context to teach programming, while Andreas et al. offer insight into the complexity of testing traditional class room methods in a virtual context. The findings from Andreas et al. provide a comprehensive outline of the design of the virtual world educational space, which is of great use for those interested in virtual world pedagogy. Finally, earlier

examples from Cheong (2010) and Mahon et al. (2010) also highlight the potential affordances and challenges of adopting collaborative learning activities within SL.

### **Summary of Pedagogic Approaches**

From the review of the literature, six key points contribute to understanding how SL is employed by teachers in their HE pedagogic practice. Firstly, the literature confirms higher education teachers are employing pedagogic approaches which require minimum teacher guidance. The cases situate the learner as an active agent in the learning process. Unsurprisingly the role of the teacher receives limited attention. The data, however, also suggest that the pedagogic activity was least successful when the teacher played a lesser role in the SL activities (Mahon et al. 2010). Where the teacher had a noticeable function, however, the results were successful (Cheong 2010). Additionally, all of the researchers note the immense preparation required for an SL module, with Andreas et al. (2010) providing a comprehensive description of the preparation of the virtual classroom. It should be noted that most worked within a team, and had the appropriate technical assistance. Secondly, the employment of an additional web platform for module support contributed to successful results (Cheong 2010). Thirdly, authenticity played a vital role in the learning experience. Students who made the connection between SL activities and their personal or professional context engaged more wholeheartedly (Girvan et al. 2010; Jarmon et al. 2009; Cheong 2010; Esteves et al. 2011). In contrast, negative feedback resulted from an inadequate understanding of the rationale and value of the SL activities (Mayrath et al. 2011a). Fourthly, the cases illustrate the critical role of peers in the SL learning process. The peer group facilitated learning and critical reflection or undermined the learning activities (Cheong 2010; Mahon et al. 2010). Fifthly, all of the cases identify their educational activity took place on a private SL island, which suggests they did not make use of the resources available in the wider SL community. Finally, in combination, the cases demonstrate the complexities of practice based research. Here the virtual world is employed as an alternative to what one would normally do 'in order to first explore the feasibility of using them, before using virtual worlds as technology for transformation' (Hew and Cheung 2010, p. 39). As a result of the dissemination of their work, the cases add substantially to understanding the implementation of SL into HE pedagogy. The choice of data collection methods is now considered.

## **Research Methods**

The cases presented in this chapter employed quantitative, qualitative and mixed-method research designs (See Appendix 2). The researchers worked with class groups therefore an ideal sample size was not a prerequisite. The largest sample size was 99 (Cheong 2010), while the smallest was 5 (Jarmon et al. 2009). In Burton and Wang's recent study of 107 papers on teaching and learning in Second Life, they found that 54% of researchers employed a medium sample size (21-50) while the remainder had a small sample size (1-10). The data collection methods employed by the cases presented in this chapter included: likert style surveys, chat log collection, semi-structured interviews, questionnaires, student observation and collection of learning artefacts. Despite the multimodal nature of the SL medium, it is surprising that data collection did not include visual and aural data. Visual data are data associated with the avatar, for example, avatar movements, gestures and visual behaviour. Visual data also includes the learning space (Wheeler 2009). This data can be captured through in-world photography or video. In addition, aural data can be gathered from voice chat captured through in-world recording.

An identifiable limitation of the cases presented in this chapter is that visual and aural data were not included in their data collection and analysis. The collection of such data may have helped to provide a thick descriptive account. Apart from Girvan and Savage (2010), the reviewed studies relied solely on textual communication for data collection and data analysis. This is interesting, as Cheong (2010) recorded in-world classes in order to facilitate student reflection and others highlighted substantial technical support was available. Admittedly, given the wealth of data that can be generated from a short interaction within SL there may be pragmatic reasons for not recording such data. Moreover, research in a virtual space has its share of ethical challenges. In addition, researchers are also cognisant of finding appropriate means to represent their research to a readership unfamiliar with the virtual space (Garcia et al. 2009). In sum, the reviewed cases demonstrate researchers were willing to explore the usability of SL as an educational space. Nonetheless, they were reliant on traditional research methodologies and perhaps justifiably so. The reviewed studies provide a number of suggestions for future research.

### Suggestions for Future Research

Table 1 provides an outline of the recommendations proposed by the researchers for future research in the area of tertiary level teaching and learning in SL.

Author(s) Year	Suggestions for Future Research
Girvan.T and Savage.G (2010)	'Future research is required to explore other pedagogies for use in virtual worlds. We suggest that initial identification of these pedagogies should be based on the perceived educational affordances available in the virtual world' (p. 349).
Mayrath et al. (2011)	The potential integration factors that affect learner engagement in SL.
Jarmon et al. (2009)	'More research is needed to understand how experiential project-based collaborative activity may apply to other instructional contexts using SL. For example, using SL for undergraduate and high school courses and shorter term student projects needs to be examined' (p. 180).
Cheong, D. (2010)	Longitudinal research on the efficacy changes of pre-service teachers who engage in teaching practice in SL is recommended.
Esteves et al. (2011)	Analysis to verify if 'students can transfer their knowledge to other situations' (p. 12).
Andreas et al. (2010)	'The examination of several more CL techniques, in order to assess their applicability and effectiveness when applied through a 3D CEVE. More specifically, we can examine and increase the potential of CL techniques which have been tagged as having low or moderate online transferability by the research community. By implementing specific functionalities and realising particular didactic approaches, we can effectively transfer these techniques to the 3D online environment' (p. 614).
Mahon et al. (2010)	The researchers suggest there is potential in exploring 'more sophisticated methods for control' of robotic avatars within the environment and, subsequent, interaction within the environment (p. 127).

**Table 1: Suggestions for Future Research**

## Summary

In this chapter, seven cases of the use of SL to assist in HE teaching were identified and critiqued. A range of HE sectors and subject disciplines were considered and three key questions were examined:

- How is SL employed by HE teachers in their pedagogic practice?
- Which research methods are employed by researchers who are conducting research on the use of SL in pedagogic practice?
- What suggestions for future research are made by the researchers?

In summary, this chapter illustrates a number of considerations for future research in this area. First, the teaching and learning techniques employed in the cases presented in this chapter are all based on minimal teacher guidance. Future studies should address a wider range of pedagogic approaches. Second, the cases provide a limited account of the function and role of the teacher in educational practice within SL. Future studies should address the role of the teacher in further detail and address this methodological gap. Third, to be considered seriously as a pedagogic platform, future research should be based on the perceived educational affordances of SL. Fourth, the inclusion of ‘thick description’ could have provided a more nuanced account of the research findings. Further to this, future studies should consider the range of research methods available that might enhance data collection and help to provide a fuller description of events for those not accustomed to the world of SL. Finally, while the cases point to affordances and challenges of teaching and learning in SL, a framework for future SL HE educators is not provided. In combination, these points illustrate the need for future research. Next, Chapter 3 provides an account of the research paradigm that frames this study.

## **CHAPTER THREE: RESEARCH PARADIGM**

## **Introduction**

Chapter 3 presents the research paradigm that frames this study. This chapter comprises two sections. In Section 1, I situate the study by defining the research focus and research field. In doing so, I demonstrate how this research is consistent with the ontology, epistemology, methodology, and ethics of a constructivist paradigm. Section 1 concludes with an evaluation of the quality of this research under three headings the appropriateness of research design, demonstration of trustworthiness and rigour, and finally the usefulness of the research to the research community. Section 2 outlines the process of thematic analysis adopted in the thesis. I identify five stages in the analysis process. These stages comprise data management, coding, selection of themes, checking for credibility, and data presentation.

## SECTION ONE

### **Defining the Research Purpose**

There are two initial steps in the design of a research inquiry. Firstly, the purpose of the research must be identified. Secondly, the research field must be defined (Denzin and Lincoln 2005). This qualitative research inquiry, following an emergent design, is an exploration of HE teaching and learning in the virtual world, Second Life. In the first phase, investigations began at the macro-level with a panoramic exploration of teaching and learning in SL. The study of the experience of others within a given context, such as teaching and learning in SL, is referred to as shadowed data (Morse 2000). Whilst acknowledging the problems that foreshadowing can bring, shadowed data is critical to the qualitative research inquiry since:

It provides the investigator with some idea of the range of experiences and the domain of the phenomena beyond the single participant's personal experience, and it provides some explanation of the rationale for these differences (Morse 2000, p. 4).

In the second phase, the research data are drawn from an exploration of teaching and learning in one optional module, Religion and Cyberspace, offered to third year student teachers registered on programme of ITE. In this phase, my SL classroom becomes the field under study.

### **Defining the Research Setting: 'Identifying the Field'**

As demonstrated in Chapter 1, virtual worlds are recognised as places of human culture, which are inhabited by persons and enabled by online technologies (Boellstorff 2008; Castronova 2006). SL is considered a relatively new virtual world. Castronova (2006) proposes SL might best be described as a new frontier with a distinct migratory pattern. First, missionaries and e-vangelisers made their way to this virtual world to preach the Good News. As exemplified in Temple Beit Israel, The Bnei Baruch Education and Research Institute, The Anglican Cathedral of Second Life, and The Christian Church of Second Life. Next, commercial and economic organizations including Adidas, Reebok, American Apparel, Dell, MTV and Sky News opened their virtual doors for business. Following this, politicians and campaign teams newly awakened to the potential of this platform employed it as a promotional tool to extend their reach to a new audience (McCullagh 2007, n.p.). At the same time, educational practice within SL



began to flourish, as evidenced in the work of Harvard College (2008), Imperial College London (2007) and the Loyalist College (2009).

Within this virtual landscape, 'Parental Guidance' and 'Mature' areas emerged. One alarmed researcher found 'something of a sex playground accreted around my land, catering for every fetish you can conceivably imagine. And the traffic was amazing' (Ellis 2007, n.p.). 'Griefers' using anonymity to its full potential found new forms of abuse, ranging from the mildly humorous (exploding virtual pigs) to the sinister involving 'images of objects that are designed to upset and offend, including huge swastikas and, once, a model of the World Trade Centre in flames' (Hutcheon 2006, n.p.). Rather than seek assistance from the town sheriff, Linden Labs, some residents employed vigilante groups, such as the Anti-Griefers Special Organisations (AGSO) for home protection (Adrian 2010). The migratory pattern to the virtual world can be summed up as follows:

A simplified economic story would say that those doing relatively less well in one place face the risks of change and head off to a new place. They stake claims there but retain ties with their former neighbours. If they do well, they stay: if they don't they go back (Castronova 2006, p. 11).

Evidently, many have chosen to stay in order to explore, exploit and research the potential of SL. Once we recognise virtual worlds as places where people do things, connect and interact, it is argued that 'we can start to study just exactly what they do and why, in their terms they do it' (Jeffrey 2011, n.p.).

In the micro phase of this research, the field is my virtual world classroom. While classroom ethnography is an established practice (Frank 1999), ethnography in a virtual world classroom created by the researcher pushes the boundaries and understanding of ethnography further. Neither the researcher nor research participants are 'native', in the traditional ethnographic sense, to the environment. Thus the traditional shifting from outsider to insider collapses. As a teacher, I document my experience of becoming immersed in the SL environment (Chapter 4). In bringing students into an online environment they also engage in a similar process. Together we learn to 'speak the language' and grapple with the environment. Our experiences in the virtual world, however, are not homogenous. In acknowledging this, this research adopts a constructivist paradigm (addressed later in this Chapter).

The construction of the online classroom raises some interesting issues which contribute to the wider discussion of ethnographic practice. First, online and offline classrooms share some similar characteristics. One might argue they are always, at some point, 'new' and to varying degrees are 'constructed' by the class teacher. In an offline context, the class teacher makes the classroom his or her own by virtue of designing the learning space. In the online context, the class teacher has greater flexibility with regard to the movement of walls and re-configuration of the learning space. In this research the construction of the classroom is documented (see Chapter 4). Additionally, in both online and offline contexts, the class group is also, to a degree, constructed. I argue, however, that as the module under study was optional, students had freedom of choice and therefore, in some ways, this class group might be considered less constructed than that of a traditional class group (where class groups are chosen by ability or age group). Additionally, the presentation of the module as optional is pedagogically sound as research suggests 'students are often reluctant to use technologies that are forced on them' (JISC 2008, p. 12). Cognisant of such issues and the exploratory nature of the research question, a constructivist research paradigm and constructivist teaching approach was considered the most appropriate way to proceed. This approach was deemed appropriate in order to re-balance issues of power that might be construed by conducting research within my own classroom in a new online environment. In line with this approach, I am learning both *with* and *from* students and the final written account consist of my experience as a virtual world teacher and that of my students.

## Research Paradigm

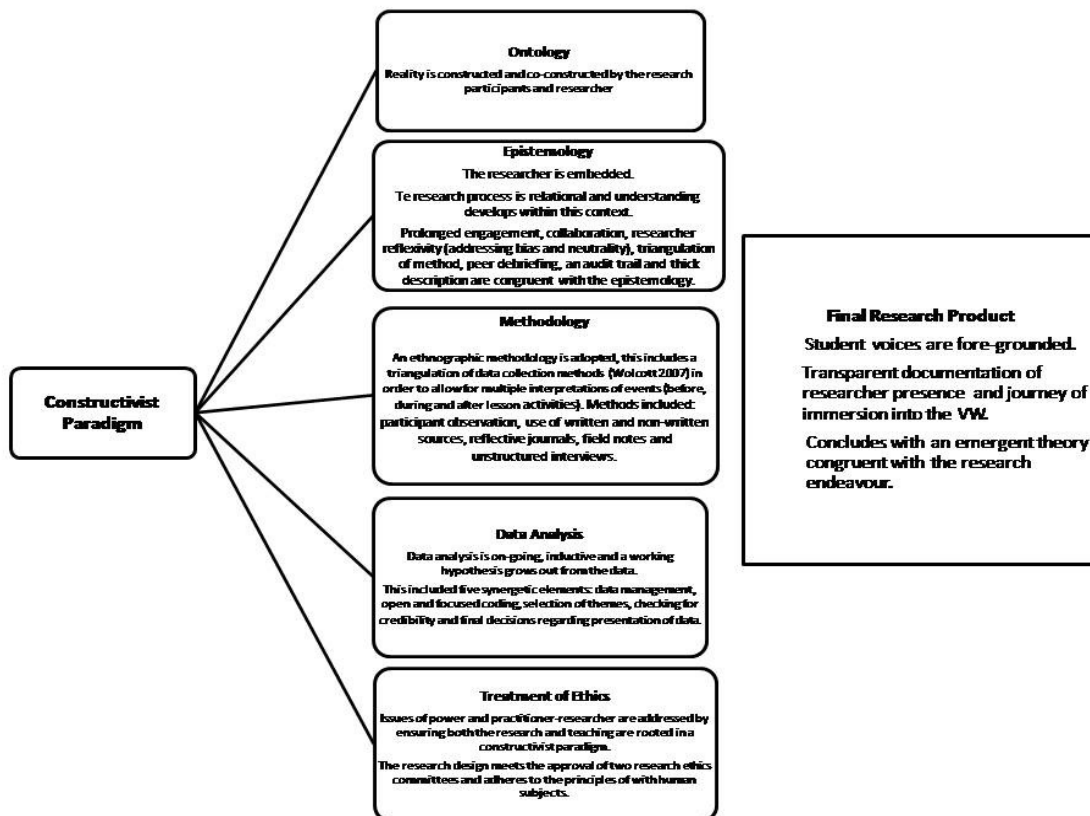


Figure 22: Research Paradigm

A constructivist paradigm is adhered to in this research (see Figure 22: Research Paradigm). The term ‘paradigm’ is elusive, avoiding precise definition despite abundant attempts (Kuhn 1970; Sanday 1970; Guba and Lincoln 1985; Guba 1990). It is my understanding, that the research paradigm forms the framework to situate the qualitative research inquiry:

A paradigm may be viewed as a set of basic beliefs (or metaphysics) that deals with ultimates or first principles. It represents a worldview that defines, for its holder, the nature of the ‘world’, the individual’s place in it, and the range of possible relationships to that world and its parts, as for example, cosmologies and theologies do (Guba and Lincoln 1994, p. 104).

In essence, a paradigm is the researcher’s lens. In line with the constructivist approach, I am embedded within the research and consider both my teaching and research to be a relational practice. This research is a co-construction process between the researcher and reciprocators as the latter were active participants in the research. The ‘basic beliefs’ that define this paradigm, summarized in my ontology, epistemology, methodology and treatment of ethics are all consistent with a constructivist paradigm.

## **Ontology**

Ontology asks the question ‘what is the form and nature of reality and, therefore, what is there that can be known about it?’ (Guba and Lincoln 1994, p. 108). Positivist inquiry asserts that reality is unchanging. This view is referred to as realism (Guba 1990, p. 19). This perspective ‘assumes all people experience the world in the same way, and thus the goal of research is to learn more so that phenomena can be controlled or predicted’ (Agostinho 2005, p. 17). It is as though the inquirer ‘is standing behind a one way mirror, viewing natural phenomena as they happen and recording them objectively’ (Guba and Lincoln 1985, p. 107). In contrast, the naturalistic or constructivist inquiry affirms the principle of relativism. The relativist researcher takes issue with the notion that an ‘objective’ reality can be known. Relativism argues that reality is represented through the eyes of the researcher and the participants. Realities are:

Apprehensible in the form of multiple, intangible mental constructions, socially and experimentally based, local and specific in nature (Guba and Lincoln 1994, p. 111).

Phenomena are studied in their natural settings. In this research the setting, outlined in Chapter 1 and Chapter 4, is a virtual world classroom. Further to this, within the realm of this research ‘multiple constructions of realities exist’ (Agostinho 2005, p. 18). Reality is viewed in different ways by the researcher (as both teacher and researcher) and by the students. Frank suggests that ‘in juxtaposing these views, we come to see what is real from a variety of perspectives’ (1999, p. 4). In doing this, I acknowledge that reality is constructed and co-constructed by research participants and myself. In adhering to this, the final written account provides multiple perspectives by layering data from both student and teacher.

## **Epistemology**

Epistemology is concerned with ‘the nature of the relationship between the knower (the inquirer) and the known (knowable)’ (Guba 1990, p. 18). For the positivist researcher objectivity is the ‘Archimedean point’ (p. 19). The positivist researcher ‘does not influence the phenomena or vice versa’ (Guba and Lincoln 1994, p. 107). In contrast, this naturalistic epistemology asserts such a view is implausible:

We can no more separate our theories and concepts from our data and precepts than we can find a true Archimedean point—a god’s-eye view—of ourselves and our world. (Shermer 2007, n.p.).

In this research, I am involved, creative and reflexive throughout the inquiry process. I became the 'research instrument' through the process of participant observation. The concept of participant observation is influenced by the *Verstehen* method (Weber 1864-1920). Weber illustrated two methods of *Verstehen* or understanding. They are direct observational understanding and explanatory understanding. First, direct observational understanding is arguably a positivistic method, whereby the researcher tries to understand the phenomena by observation alone: what is *going* on? In contrast, explanatory understanding emerges when the researcher understands the phenomena by placing it in the wider context of meaning: *why* is it going on? In this research, I adopted creative methods to facilitate participant observation in a virtual world (outlined below). As ethnography is a relational endeavour, I became 'part of the situation being studied in order to feel what it is like for people in that situation' (Sanday 1979, p. 527). As the study progressed, the creation and accumulation of knowledge occurred as a result of the interaction between the research participants and me. Together we are integral to the study, and together we construct reality (Lincoln and Guba 1985, p. 37). In this way, reality is neither subjective nor objective 'it is interpretive, mediating two worlds, between a third' (Agar 1982, p. 783). Mindful of my location in the *doing* and *writing* of this research, the issues of ethics, including power, and validity are addressed later in this Chapter.

According to Carter and Little (2007) 'the epistemological contribution to research is essentially theoretical: it has to do with theories of knowledge' (p. 1319). In addressing this, I acknowledge this research is not a deductive, theory testing approach. It is situated within a constructivist paradigm where the construction of knowledge is an exploratory relational activity. This requires a reflexive and engaged researcher who can account for their role in the research process and final product (see p. 70). Additionally, in adopting this stance, there must be a recognition that final virtual world adjustment theory, presented in Chapter 6, is best considered a 'working hypothesis' which emerged from the data pertaining to one group of students.

### **Methodology**

Methodology asks the question: 'How can the inquirer (would be knower) go about finding out whatever he or she believes can be known?' (Guba and Lincoln 1994, p. 106). For the positivistic researcher, the methodology is experimental and manipulative (Guba 1990, p. 30). The positivistic researcher believes only in that which can be tested

under a controlled manner and subsequently verified or falsified. Qualitative research, however, does not aspire to match such positivistic criteria. According to the constructivist paradigm 'in order to understand people's behaviour we must use an approach that gives us access to the meanings that guide behaviour' (Atkinson and Hammersley 2005, p. 8). In keeping with the exploratory nature of the research endeavour and the overarching paradigm, an ethnographic methodology was considered most appropriate.

The goal of ethnography 'as of all social research, is to produce knowledge' (Hammersley 2002, p. 15). Ethnography sets out to achieve this goal by researching 'social action within a discrete location from first-hand experience' (Morrison and Pole 2003, p. 17). The concept of the lone ethnographer studying *the other* exemplifies the traditional period of ethnography (Rosaldo 1989 cited in Denzin and Lincoln 2005, p. 15). The lone ethnographer finds illustration in the work of Boas (1911), Malinowski (1947), Mead (1977), Strauss (1988), and Freeman (1999). Palmer, of the Chicago School, argues that the ethnographer is:

Like an adventurer in new lands, the man engaged in exploratory research must follow many blind trails, make unfruitful excursions in an effort to conquer the unknown, to map pathways through unfamiliar territory (Palmer 1928, p. 6).

Despite the many contested *movements* through which ethnography has passed, two elements remain constant (Delamont et al. 2000; Denzin and Lincoln 2005). First, is the commitment to empirical study, and second, is the concern with the exotic or strange (Cooper et al. 1995).

In this research, I am committed to the empirical study of educational practice, and this educational practice takes place within a recent one might even say exotic, virtual world. In this case, the micro-study of educational practice in a virtual world occurs within my own classroom. Without a doubt, teachers are researchers (Cochran-Smith and Lytle 1998; Pole and Morrison 2003). On a daily basis, teachers engage in informal ethnographic practices. Teachers observe their students engaged in learning activities, they are inquisitive about the events that occur in their classrooms, and they reflect on their role as teacher. This enables teachers to improve their own competencies and capabilities, and subsequently the learning experience for their students. However, such activities 'often become invisible because they become so regular, patterned and ordinary' (Frank 1999, p. 3). The educational ethnographer sheds light on 'the culture of teaching and learning as they occur in people's ordinary daily activities' (Preissle 1999,

p. 650). In this research, it is educational activity in a virtual world that is under investigation. Further to this, a constructivist approach is adopted to teaching in the virtual world, which fits both with my values as an educator and within the research paradigm.

In choosing this methodology, I am choosing a methodology 'which best serves the context and particulars' (Goswami et al. 2009, p. 2). Further to the findings from Chapter 2, I contend that pedagogy in SL can be researched through the creative adaptation of a traditional ethnographic methodology (Eisenhart 2001). This involves adjusting traditional methods of research to the unique virtual environment (Garcia et al. 2009). In choosing this route, I am aware of the 'paradox of conducting a non-traditional ethnography in a non-traditional non-space with traditional sensibilities' (Markham 1998, p. 62 as cited in Wilson 2006, p. 308). Moreover as traditional 'insider' and 'outsider' categories, to some extent, collapse in the virtual world, the 'subject' ethnography is also challenged. Nevertheless, 'adopting and interrogating ethnography keeps it alive, contextual and relevant' (Jeffery 2011, n.p). In this way, this research contributes to a wider discussion of the adaptability of ethnographic methods for online research.

## **Literature**

Undoubtedly, the review of literature is essential to the research process. The presentation of the literature, however, can be problematic as 'there are probably as many organizing possibilities as there are authors' (Merriam 2009, p. 76). In presenting a coherent narrative in this thesis, the reviewed literature is not limited to expression in one designated chapter. Instead, the reviewed literature finds expression across the body of the thesis. First, the Introduction presents relevant literature to situate the study. Next, Chapter 1 draws from a large body of literature on virtual worlds to present a comprehensive picture of the field of this research, SL. In Chapter 2, literature on teaching and learning in SL in the context of Higher Education is presented. In this chapter, my understanding of the research paradigm finds expression by drawing from literature related to the key methodological considerations. In Chapter 4, literature contributes to the description of my journey of immersion into the world of SL. In Chapter 5, relevant theory saturates the presented themes. Finally, Chapter 6 draws on literature from a variety of disciplines to explain and present my understanding of learning within SL. Next, data collected within the virtual world is addressed.

## **Data Collection Techniques**

The educational ethnographer conducting research in a virtual world has a steep learning curve. The ethnographer must learn to participate and observe without a physical presence in the field. In addition, they move between the offline and the online environment. They must adjust traditional methods of collecting data for the new environment and find ways to represent their research to the reader unfamiliar with the new virtual space (Garcia et al. 2009). Nevertheless, it is argued that the general issues in online or offline ethnography tend to be quite consistent (Dowling and Brown 2010). Therefore, offline data collection methods can be employed effectively with some creativity on the part of the researcher. Brewer (cited in Pole and Morrison 2003) suggests that *method* refers to the tools the researcher might employ to collect data. As ethnography is a non-linear approach, it is through the fluid interaction and interplay of methods that meaning and understanding emerge. Wolcott proposes that the trademark of ethnography is the triangulation of method:

The strength of ethnographic fieldwork lies in its triangulation, obtaining information in many ways rather than solely relying on one (Wolcott 1997, p. 158).

In this research, I drew on Wolcott's suggested methods for ethnography in education. Given the context of this inquiry, Wolcott's traditional methods were reconfigured to best suit this study.

Five methods were adopted:

- (1) Participant observation
- (2) The use of written and non-written (digital) sources
- (3) Interviewing (un-structured)
- (4) Data analysis
- (5) Reflexivity

### **(1) Participant Observation**

Methods should facilitate an exploration and assist in the analysis of the key concern of ethnography: *What is going on here?* The primary method of ethnographic research, flowing from the underpinning epistemology, is the 'researcher as instrument' (Guba and Lincoln 1981). The researcher is involved, creative and reflexive throughout the process. Underpinning the concept of 'researcher as instrument' is the researcher as a participant observer. Participant observation, however, is not just method. Rather,



participant observation 'is the situation that makes our work possible at all' (Agar 1982, p. 793). Additionally, some report the concept of 'participant observation' is an oxymoron since 'you cannot fully participate and fully observe at the same time' (Boellstorff 2008, p. 70). Yet, 'it is within this paradox that ethnographers conduct their best work' (p. 70). Participant observation is fundamental to ethnographic research:

Without such immersion in the process and life of the community, the researcher runs the risk of imposing a barren and preconceived frame of analysis that has little to do with the specific field of study (Kinnevy and Enosh 2002, p. 122).

Therefore, immersion in the field is a critical task for the ethnographic researcher. This task involves initial exploration, which is sometimes referred to as '*walking around doing nothing*' or a *Grand Tour* exercise (Spradley 1980). In essence, immersion involves:

being with other people to see how they respond to events as they happen and experiencing for oneself these events and the circumstances that give rise to them (Emerson, Fretz and Shaw 1995, p. 2).

The virtual world lends itself to covert and overt participant observation. Covert observation, understood as lurking, is an acceptable method of data collection in order to obtain a pattern of relevant aspects that can focus subsequent interview questions (Garcia et al. 2009). Remaining at a level of detached observation, however, leads to the possible danger of failing to understand the perspectives of participants (Atkinson and Hammersley 2005). In contrast, is active participant observation, which is also referred to as participant-experiencer or complete participant contributor. In this role, the researcher joins the identified group and totally immerses in the group as though an ordinary member. This can be done openly by seeking permission from the relevant group or alternatively on a covert level with the researcher's identity hidden to all (Pole and Morrison 2003). Although a variety of roles may be adopted, the 'usual aim is to maintain a more or less marginal role' (Atkinson and Hammersley 2005, p. 88). It is this position that allows the researcher access, but establishes a boundary against over familiarity.

Whether participating through covert or overt methods, the researcher should acknowledge that by his or her very presence in the environment, he or she becomes involved in the co-construction of knowledge. Therefore, a movement from observer to participant shifts the role of the researcher 'from archivist to accomplice' (Marham 2005, p. 803). This is most evident in online research where 'boundaries are not so

much determined by 'location' as they are by 'interaction' (Markham 2005, p. 802). Given the significance immersion into the field has to the research activity, Chapter 4 provides a comprehensive account of my journey of immersion into the field. As participant observation is a central research tool, further attention is now given to the topic.

### **Methods of Participant Observation Employed in this Research**

Firstly, this research began with a panoramic exploration of teaching and learning in SL, specifically in relation to HE. Subsequently, I focused on research within my virtual classroom in SL. At a panoramic level, I followed the 'levels of participation' model. Given the vastness of the field I *attempted* to employ a triangulation of participant observation methods (Pole and Morrison 2003). This triangulation included total covert participant observer, participation in the normal setting, and finally participation as observer. Atkinson and Hammersley sum up the logic for the triangulation of participant observer roles as follows:

By systematically modifying field roles, it may be possible to collect different kinds of data whose comparison can greatly enhance interpretation of the social processes under study (2005, p. 96).

Previous studies have argued the 'ethnographer should attempt to experience the online site the same way that actual participants routinely experience it' (Garcia et al. 2009, p. 56). In line with this, attempts were first made to conduct research through total covert immersion. At this level, I participated in numerous one-off SL classes covering topics from basic SL skills, to Linden Scripting Language (LSL) to English as a Second Language (ESL). This level of participation provided an introduction to teaching and learning in the virtual world. The classes, however, were not of a sufficient duration to enhance this study. Second, permission was sought from the gatekeepers of identified groups to participate without the knowledge of the other participants, thereby not affecting the naturalness of the setting. This, however, was not acceptable to the gatekeepers I approached and access could not be negotiated. Consequently, this level of participation did not occur. Third, permission was sought to participate fully as a student and overt researcher in an identified group. Following some work, this level of participant observation was secured. The field was the undergraduate optional module 'Is One Life Enough' offered by Dublin Institute of Technology. During this phase of the research, all members of the group were aware of my identity. Data collection took place over a twelve week period, and I completed the module for credit.

A dilemma was encountered, however, as the module gate keepers stipulated that only data from my own learning was permitted for inclusion in this thesis. In line with the ethical principles adhered to in this study, this prohibited the use of the wider ethnographic data collected over the module period. Whilst acknowledging a good ethnography is auto-saturated, I did not intend this study to be purely auto-ethnographic. Therefore, the data collected from that fieldwork stage does not serve as the main focus of this research. Nevertheless, participation in the identified module and one-off classes provided a valuable learning experience which is comprehensively documented in Chapter 4. In sum, the panoramic exploration of everyday reality of HE teaching and learning in SL was a necessary first step in the ethnographic process and assisted my understanding of '*what is going on here?*'.

Following this, pragmatic choices had to be made and the decision was taken to focus on the minutiae of teaching and learning in the virtual world in the context of one module offered on a programme of ITE. As a result the module, Religion in Cyberspace, delivered through SL served as the micro-field for this research. Following the design and approval of the module, permission for this research was obtained through MDI's Research Ethics Committee. All participating students were informed of the research activity, and all gave consent to participate in the research project. The module took place over a full semester, an 11 week period. Subsequent to class one, all classes were delivered synchronously through SL. Eight students participated in the module for credit, completing it in full. In this phase, I undertook the role of educational ethnographer, alternatively referred to as teacher-researcher or practitioner researcher.

In this research, I acknowledge the possible tensions of occupying the dual role of teacher and ethnographer. The analogy of bifocals is useful to further an understanding of the duality of roles. The teacher-researcher views the virtual world activities through two interconnected lens. First, as a teacher, I had a responsibility to ensure students had opportunities to achieve learning outcomes. I recognise this as a professional duty of care for my students and my subject. Therefore, I engaged in the teaching activity and delivered my module 'as normal'. My observations of the teaching learning process informed my actions within my class. As an ethnographer, however, my optical powers focused-in to understanding the actions within the environment. Lenses shifted as appropriate. Together, both lenses contribute to a comprehensive picture of events.

Nevertheless, the dual role of research and teacher raises concern regarding the issue of power. As previously outlined, this was addressed by adhering to a constructivist research paradigm (see p. 65), constructivist approach to the module delivery (see p. 113) and a final account which foregrounds the participants' voice through a layering of data types (see p.78).

## **(2) The Use of Written and Non-Written Sources**

Chapter 2 reports the rich nature of the data for online participant observation in the virtual world. Geertz suggests:

What we call our data are really our own constructions of other people's constructions of what they and their compatriots are up to (Geertz 1973, p. 9).

Consequently, the data facilitate the creation of dense accounts of 'thick description' (1973, p. 6). In the creation of such accounts, I had to become a compulsive collector of data (Wolcott 1997). In so doing, I had to consider 'a priori what constitutes data in the first place' (Markham cited in Denzin and Lincoln 2005, p. 806). In the virtual world data is visual, aural, and textual. In the world of SL, as with most online communication mediums, 'all interactions leave behind a durable trace: electronic tracks' (Smith 1999, p. 196). In SL, all textual communication, known as text chat, is logged. I saved chat logs from each SL lesson for inclusion in data analysis. Further to this, I captured hundreds of in-world snapshots and a small amount of video. I am conscious however, that a picture or video clip of events after the event is not a substitute for 'observing the interactional process which produced it' (Garcia et al. 2009, p. 60). Nevertheless, the images in particular are useful for enhancing the research.

Field notes are an essential method of data collection in ethnography. Field notes are 'accounts *describing* experiences and observations the researcher has made while participating in an intense and involved manner' (Emerson et al. 1995, p. 5). In essence, field notes are descriptive representations of events selected by the researcher. While field notes capture meaning, the researcher's lens tints the action account. Field note observations, like multimodal data, are never researcher neutral. As they are selected, they are also representative of the researcher. Whatever the context the ethnographer finds herself within, this reality of re-presentation of the other must be addressed in the writing up stage. It is suggested that the process of writing field notes:

Helps the field researcher to understand what he has been observing in the first place and, thus, enables him to participate in new ways, to hear with greater acuteness, and to observe with a new lens (Emerson et al. 2008, p. 15).

Therefore, the process of writing field notes can facilitates researcher reflexivity, which is essential to the credibility and rigour of the study. While access to such a wealth of rich data is clearly advantageous, it can also be an administrative challenge. From my initial exploratory study of educational practice in the wider SL community, the volume of data generated from even a short event is immense. Therefore, a high level of administrative discipline was required during the preparation of field notes.

Consequently, a field note template (Appendix 3) was prepared during the macro investigation phase.

### **(3)Interview**

The combination of participant observation and interviews provide rich, mutually illuminating data (Atkinson and Hammersley 2005). Observing behaviour is ‘clearly a useful enquiry technique, but asking people directly about what is going on is an obvious short cut in seeking answers to questions’ (Robson 2002, p. 272). Employing a variety of methods to enhance exploration in the field enables the researcher to triangulate or ‘cross check results obtained from observation and recorded in fieldnotes’ (Sanday 1979, p. 528). Admittedly, the boundary between participant observation methods and interview methods can become blurred. As a result, it is useful to articulate the intended interview methods prior to entry to the field. In line with the emergent design of this research exploration unstructured interviews were employed. Interviewing occurred in both the online and offline context. During this process, I was aware that interviewing is never a neutral exchange:

The interviewer is a person, historically and contextually located, carrying unavoidable conscious or unconscious motives, desires, feelings and biases.

(Fontana and Frey 2005, p. 695)

Both the interviewer and the interviewee have their own histories. Moreover, it is in the meeting between the two, within the research context, that knowledge develops. I return to my bifocal analogy. In my role as a teacher, I asked questions relating to the module content. As an ethnographer, I followed leads that included mismatches or breakdowns between what I was witnessing in the virtual world and my understanding. In this way, observation provided guidelines for my questions. In posing such questions, I shifted between the lens of researcher and teacher.

#### **(4)Data Analysis**

Theorists vary on their opinion of when the process of analysis should begin in the research inquiry. On the one hand, it is argued that process of analysis begins before one formally begins fieldwork, at the stage when the research question is formulated and clarified (Atkinson and Hammersley 2005). Following this theory, analysis then continues through the fieldwork stage, descriptive stage and formally takes shape in the researcher's analytic notes. Consequently, analysis begins at the moment of the research design and throughout the data collection period. On the other hand, it is reported that 'content analysis can be performed only after ethnographic observation or involvement with a cyber community' (Kinnevy and Enosh 2002, p. 121). Either way, commitment to analysis and communication of written and non-written sources is central to the ethnographic task. Both warrant equal weighting. Subsequently, the ethnographer must learn how to translate, analyze, and present the unstructured and multimodal into a traditionally largely text based report. The flexible emergent design of this research implies the process of analysis is ongoing. As data analysis and ethnographic description go hand in hand, Section 2 of this Chapter presents a comprehensive account of these tasks.

#### **(5)Reflexivity**

Reflexivity is the 'researcher's active thoughtful engagement with every aspect and development of their research' (Quinlan 2011, p. 482). In adhering to this concept of reflexivity, the researcher should explicitly acknowledge the choices and responses guiding the research by means of a transparent account (Etherington 2004). Whilst acknowledging transparency is a contested concept (Butler 2005), it provides an appropriate starting point for the reflexive researcher. In this research, transparency begins with the outline of the rationale for selection of epistemology, ontology, methodology and ethics that provide a paradigmatic framework for this research. The display of transparency at this level, however, is a given. The following section outlines the practicalities and limitations of reflexivity.

#### **Neutrality**

The 'ideal' position for the researcher is to adopt a neutral data collection and analysis function. Such a suspended approach neutralizes the probability of data contamination. In this position, the researcher is removed and non-influential in the research process. The data can be verified, and the results are undeniable. It is to this end that the

positivist researcher strives. Such a position, however, ignores the role the researcher plays in the outcome of their research (Gergen and Gergen 1991). In reality, a position of neutrality in research is difficult for any researcher to obtain. This difficulty arises from the improbability of ‘attaining an observer free picture’ (Gergen and Gergen 1991, p. 76) because there is no such thing as a position of complete neutrality. Rose argues there is ‘only greater or less awareness of one’s biases’ (1985, p. 77). The researcher, therefore, must account for their role in the research process. In this qualitative research, I am the primary research instrument and, therefore, I am at the heart of the research process. The extent to which the *self* is visible in the final account is dependent upon the chosen research methodology. Ultimately, representation ‘is always self-presentation’ and ‘the Other’s presence is directly connected to the writer’s self-presence in the text’ (Denzin 1994, p. 403). The challenge for the researcher then is to ensure the trustworthiness of research by accounting for ‘ourselves in the research’ (Etherington 2004, p. 16). In this research, I employed ethnographic techniques consistent with a constructivist paradigm. Far from being a ‘vulnerable observer’ (Behar 2008, p. 14), however, I adopted an essential role in the meaning making process. Therefore, recording and reflecting on my position in the research process is crucial to this endeavour.

### **Addressing Researcher Bias**

In addressing the concern of bias one must provide an authentic account of their role in ‘construction of meaning in the research process’ (Quinlan 2011, p. 421). This begins with an acknowledgement ‘that most ethnographic data is “produced” not “found”’ (Simon and Dippo 1986, p. 196). The acknowledgment of qualitative research as a production requires explication of the role, membership and common characteristics of the researcher, the participants and the reader in the research process. In this research, the participants (both students and teacher) are at once expert and neophyte. This combination means the experience of teaching and learning in the virtual world is familiar yet unfamiliar. The students are expert in their ‘role’ as students and, according to Prensky (2010), in their technical expertise. I am ‘expert’ in the role of teacher, yet a novice researcher. Both students and I, however, shared the characteristics of being neophytes in our virtual world roles and identities. The journey into the virtual world as a student and as a teacher was a new experience. Consequently, the journey begins from a position of ‘not knowing’ (Etherington 2007, p. 21). This position allows for all parties to be open to new knowledge and production of meaning. Adopting a stance of

‘not knowing’ may seem naive or unrealistic in the traditional research context. In the virtual context, however, this starting position of ‘not knowing’ is feasible for all parties. For me, this strategy of open-mindedness permitted discovery, and the subsequent production of meaning that is the heart of ethnography. It is within this frame that the research process unfolded.

The starting position of ‘not knowing’ is not limited to the researcher and participants. The position of ‘not knowing’ equally applies to the reader. Accordingly, the reader should avoid ‘pouring new wine into old wineskins’. The reader is a spectator, of sorts, to the virtual world experience. Within this context, the reader should maintain a stance of reflexivity and openness to new ideas. The reader is challenged by the inherent messiness of ethnographic texts, where data cannot be reduced to ‘frozen moments’ (Back 2007, p. 17). Indeed it is not possible for the researcher to produce a fully illuminated story or claim to know all. Rather, the dialogue produced by the researcher is a story but not the *only* story. The shades and flow of the story are subject, to an extent, on the lens brought by the reader.

Ultimately, the final construction and presentation of the research rested with me. This includes how meaning is made, what voices are heard, and how the story is told. Reflexivity, however, calls for an account of such choices. In conducting ethnography as a participant observer, I was privy to a perspective. Not having the benefits of panoptic surveillance techniques, choices were made. There are many templates to assist the novice researcher. Inevitably, choices made in the field do not strictly adhere to a rule book. Being pragmatic in my techniques, the sound advice of Mills was followed:

Every man his own methodologist! Methodologists get to work!  
(Mills 1970, p. 137 cited in Plummer 1983, p. 2)

As earlier outlined, I employed a triangulation of data collection techniques (Wolcott 1997). Briefly, these comprised participant observation, collection of written and non-written sources and unstructured interviewing.

### **Voices in Concert**

Chapter 5 presents the research findings thematically. The themes, however, are not monographs, and do not attempt to ‘dissolve’ the voice of the participants (Plummer 1983, p. 4). Themes essentially reflect ‘issues of evidence and proof in the organization



of the ethnographic account' (Atkinson 1990, p. 82). Therefore, given the methodology and underlying epistemology, participants are brought to the fore within each theme. The use of data from multiple participants to construct the thematic account has numerous benefits (Atkinson 1990). First, the inclusion of conversation from the field permits the reader to listen to the experience of participants. This is demonstrated through the use of excerpts from chat-log transcripts, student reflections on lesson activities, and my reflective journal and field notes. The inclusion of multiple voices allows for a descriptive presentation 'a polyphonal and collaborative text' (Atkinson 1990, p. 82). Again, one must acknowledge the choice of excerpts and voices included suggest the reader is privy to some voices and not others. Further still, in representing the participants' voices, I have a censorship role in the selection, interpretation and presentation of data, which should be addressed. At a practical level, all data cannot be presented, and choices must be made. What is presented provides a coherent story. What is left out lowers the 'dross rate' (Plummer 1983, p. 24). Finally, in line with the constructivist paradigm which underpins this study, the employment of multiple perspectives throughout the final account helps to rebalance issues of power that might be construed in this practitioner research. How to integrate the voices of participants in a meaningful way needs to be addressed.

### **Reflections**

As earlier identified, reflections and field notes are included in this research. Such documents are 'an immensely valuable and vastly under-used resource' (Plummer 1983, p. 11). Students electronically compiled reflections based on each lesson activity. In addition, I kept a reflective journal from the pre-research stage through to the data analysis stage. At one level, the reflective journal provided a record of 'what went on backstage in the research' (Ellis and Bochner 2000, p. 741). More than an audit trail, however, the reflective journal provided a structured mechanism allowing the articulation of thoughts and the initial stages of analysis (Watt 2007, p. 82). This is referred to as a 'conscious in-dwelling' (Etherington 2004, p. 124). Reflective journaling was a systematic process that permitted engagement with hunches, the following of clues, and the subsequent examination of understanding. The collection and inclusion of both teacher and student reflections allow for rich insight into the experience of teaching and learning in the virtual environment. At the analysis stage, the student reflections served to protect against distortions or misinterpretation of events. At

times, they also had the opposite effect by confirming hunches or bringing to the fore ideas that were not fully formed:

Another person can reflect back to us what they can see, which is often more than we can see ourselves, thus opening us up to less conscious aspects of our selves.

(Etherington 2004, p. 29)

This reciprocal dialogue showed reflexivity in action as participants shared their understanding rather than the imposition of an interpretation of events from above (Steier 1991). Again, this another layer of protection against issues of researcher power in relation to the final construction of the research story.

In addition to the inclusion of reflections, in-world photography documented the research journey. Images, however, are at once true and constructed. The image is:

True in the sense that it reflects light falling on a surface, but it is constructed by the technical, formalistic, and other selections that go into making the image and by the context in which it is viewed.

(Harper 2000, p. 749)

In this research, all participants captured visuals of events in the field. The images are constructions of in-world events as they unfolded, however, images of lessons were not staged. Rather, the images are an on-the-go documentation of the journey from a variety of perspectives. Students captured images for their fieldwork diary, and final class presentation. The captured images were organised as lesson episodes, displayed in a PowerPoint file, and subsequently uploaded to a shared web platform after every lesson. This provided students with an opportunity to peruse images before completion of their lesson reflections. In the final class, students visually presented the experience of their journey in the SL environment.

As we were co-constructors in documenting the journey, the capturing of images did not raise 'suspicion and fear' (Grimshaw 2001, p. 5) nor did it have a negative impact on participants. The motivation to include images in this research is twofold. First, the images are representations of experience of the virtual world from numerous perspectives. The visual representation provides a mechanism, other than text, to communicate and illustrate the experience. Second, the images enhance the thematic narrative for the reader, providing vivid description that cannot be accomplished with

words alone, thus adding depth to the communication of themes to the reader. The final layering of data types allows for a fuller narration of the key themes. It also provides the reader with an insight into the shifting nature of understanding teaching and learning in a virtual environment.

### **Fallor Ergo Sum**

Reflexivity is a human process. As humans, we have the capacity to be wrong. As a result, reflexivity as a human process is open to criticism. Therefore, the limitations of reflexivity must be addressed in order to avoid accusations of romanticism. The ‘degrees of reflexivity’ we can engage with are dependent on many variables (Mauthner and Doucet 2003, p. 425). Firstly, despite best intentions, attempts toward acknowledging bias in data collection, interpretation and presentation is bound by human nature. Realistically, reflexivity takes place after the event. Kahneman (2010) refers to this as a cognitive trap, which is we remember things differently to how we experienced them. Moreover, ‘the remembering self is a story teller’ who weaves a tale defined by moments that are of significance (Kahneman 2010, n.p.). Unconsciously, we can distort experience through memory. We begin by shaping the research story before it has even touched paper. Secondly, despite intentions to be reflexive ‘no one likes the feeling of being wrong or, worse still, the feeling when we are proven wrong’ (Schultz 2011, n.p.). Schultz refers to the fear of wrongness as error blindness, characterised by ‘the attachment to the feeling of being right’ (n.p.). Such an attachment can unconsciously undermine the reflexive process. Finally, at a very practical level, the variable of ‘real life’ can hinder reflexivity. Time constraints, family commitments and the randomness of life all impact on research. In addressing the challenges, reflexive practice should not be viewed as an isolated endeavour.

Clearly, subjectivity cannot be ‘transcended’ by self-reflection alone (Gergen and Gergen 1991, p. 78). In this research, to avoid the imputation of navel gazing or self-indulgence, I engaged in monthly presentations and discussions with my PhD supervisor, Dr. Margaret Farren. Such meetings provided an opportunity to check for ‘distortions’ that might compromise the quality of the research (Etherington 2004, p. 27). Distortions took many forms, comprising bias, positionality, preconceptions, and the struggle *to be right*. Dr. Farren provided me with an opportunity for detailed examination of my understanding throughout the research process. Similarly, critical friends, drawn from my professional context, encouraged questioning of fundamental

assumptions. All parties advised caution when making claims to truth in the final analysis stage.

This is well founded advice (Back 2007). Proceeding with caution requires commitment to critical and reflexive listening. This reflexivity requires careful crafting, listening not only for the larger story but also ‘for the background.....half muted’ (Back 2007, p. 8). Back refers to this craft of listening as an art, an engagement with the minute. Listening moved this research process beyond mere transcription or collection of information, to close attention to the insights of participants. As such, it was a conscious shift from sifting for information at the surface to digging deeper for insights. This process helped prevent this researcher from straying down along ‘the line of least resistance’ (Atkinson and Hammersley 2005, p. 21). Engagement with this level of reflexive listening requires commitment, patience and openness. This practice of listening also encourages awareness of incomplete knowledge and to ‘never become ignorant of our ignorance’ (Back 2007, p. 12).

This section presented an account of the role and importance of reflexivity in the research process. First, an account of my role in the research was provided. Second, the role of participants and reader in the meaning-making process was illustrated. Third, the methods of engagement in reflexivity were outlined. Finally, the practical limitations of reflexivity were presented and addressed.

### **Ethics**

Markham (2005) argues that all method decisions are ethics decisions therefore, ethics is rooted in the choice of methodology. This inquiry employs a traditional methodology, ethnography and applies it to an online setting. Online ethnographic ethical issues are wide ranging. They include practical concerns of shifting population, public versus private discourse, online disinhibition, virtual informed consent and difficulty in achieving online anonymity (Hine 2002). In this inquiry, further concerns included researcher presence and assessment. In addressing concerns, the traditional ethical principles of practitioner research were adhered to (Groundwater-Smith and Mochler 2007). Firstly, the research adhered to ‘ethical protocols and processes’ (p. 206). Research ethics approval was secured from Mater Dei Institute of Education (MDI) and Dublin City University (DCU) (see Appendices). This research was deemed ‘low-risk’ by both MDI and DCU research ethics committees (REC). On commencement of the module students were provided with information about this research and the proposed

data collection methods. Given this virtual world was a new environment for students considerable time was spent explaining the data collection types (chat log transcripts, reflections on specific lesson activities, in-world photography). This information was presented orally by the researcher (assisted by a PowerPoint presentation). Students were provided with a plain language statement and time was given for a question and answer session. Students were informed they could withdraw from the research at any time and still continue to participate in the module. There was no penalty from withdrawing from the research study. In line with requests from MDI REC, students were not identified by their Second Life pseudonym. In adhering to this, students were assigned a new pseudonym and any reference made to their offline or online identity was removed from the data. Additionally, any reference made by students to other SL residents or other individuals was appropriately anonymised or removed from the data. As a practitioner researcher, I also abided by Wolcott's warning that an ethnographic account is 'not an expose, not a licence to tell all' (2005, p. 235). Whilst in-world photographs were employed in this research, the reader will note the images included in the final thesis focus on class activities, thereby guarding the anonymity of individual students. Finally, in line with MDI REC recommendations, an external examiner was present for the final examination of the module.

Secondly, in adhering to recommendations made by Groundwater-Smith and Mochler (2007) for ethical practitioner research, a transparent disclosure of the research process is presented in this Chapter and in Chapter 4 'Getting Started'. In so doing, this research contributes to knowledge of virtual world ethnography. Thirdly, this research is collaborative in nature. This is evidenced through the constructivist research paradigm which frames this study and constructivist approach to the delivery of the VW module. In this way, 'ethics are 'intrinsic' to the paradigm as the ontology and epistemology argue the participant is a co-creator of knowledge' (Guba and Lincoln 1994, p. 115). The final account presents not only the researcher's account of events but also the students' account of events, in sum it presents what Wolcott (2007) refers to as a 'triangulation' of evidence. Fourthly, Groundwater-Smith and Mochler suggest that ethical practitioner research should aim to 'be transformative in its intent and action' (p. 206). Although this research did not set out with intention of being transformative, the data suggest transformative learning experiences occurred (see p. 96, p. 194). Additionally, this research has something valuable to add to the wider discourse of pedagogy in a virtual world and research in virtual environments. Finally, the writers

suggest that practitioner research 'should be able to justify itself to its community of practice' (p. 206). In adhering to this, this research has been presented at a number of conferences and research colloquiums. In addition, it has the support of the Institute within which the work is situated. The ethical principles for practitioner research lead to further questions concerning the quality of the inquiry itself.

### **Quality of this Research Inquiry**

The quality of the research study is dependent on three factors:

1. The design of the research: that is the **appropriateness of the research design** for the research problem
2. The process in which the inquiry is undertaken: **demonstration of truthfulness and rigour**
3. The outcome of the research: that is, the **usefulness of the research** to the research community (Agostinho 2005, p. 20)

In the following section, I briefly address each factor.

### **Appropriateness of Research Design**

I contend this research design is appropriate for this research endeavour. It meets the *three* mandatory criteria for considering a study to be naturalistic which is synonymous with a constructivist or interpretivist paradigm (Agostinho 2005). Firstly, the inquiry process must be consistent with 'the ontological, epistemology and axiological assumptions of the five proposed axioms' (p. 6). As discussed, my ontology, epistemology and methodology exhibited congruence with the constructivist paradigm (see p. 65). Secondly, Agostinho proposes the researcher must be 'committed to the development of skills to operate as an effective instrument' (p. 6). In verifying this commitment, a rigorous audit trail was maintained. Thirdly, the researcher must have 'made a serious effort to develop an initial design statement' (Lincoln and Guba 1985, p. 250). This criterion is evident in the approved design proposal. In addition to the appropriateness of the research design, the research must also attempt to demonstrate trustworthiness and rigour.

### **Demonstration of Trustworthiness and Rigour**

Creswell and Miller (2000) outline nine validity procedures for demonstrating the trustworthiness and rigour of a research project. This research meets seven of the nine criteria.

### **Triangulation of Method**

In line with advice from Wolcott (2007) this research exhibits triangulation of method through the corroboration of participant observation, field notes, written and non-written sources and unstructured interview. This form of triangulation of method provides the potential for cross checking data but also acknowledges that, in line with the constructivist paradigm, accounts might not converge as multiple constructions of reality exist. In adhering to this, the final account relies ‘on multiple forms of evidence rather than a single incident or data point in the study’ (Creswell and Miller 2000, p. 127).

### **Prolonged Engagement**

Second, I engaged in field work for a prolonged period (as outlined in Chapter 4). This provided an opportunity to hear varying perspectives with the hope of achieving ‘a better understanding of the context of participant views’ (Creswell and Miller 2000, p. 128).

### **Collaboration**

Third, the authors report that ‘credible data collection comes from close collaboration with participants throughout the process of research’ (Creswell and Miller 2000, p. 128). In this research, close collaboration with the research participants via immersive participant-observer methods was maintained. Additionally, the ontology and epistemology underpinning this study firmly situates it as a collaborative endeavour (see p. 65).

### **Researcher Reflexivity**

Fourth, researcher reflexivity is of core concern and finds expression in this chapter, and in Chapter 4 ‘*Getting Started*’.

### **Thick Description**

Fifth, thick description is the basis of an ethnographic approach. Both the narrative account, ‘*Getting Started*’, and the presentation of themes provide holistic description.

### **The Audit Trail**

Sixth, a password protected audit trail based on Halpern's six categories for reporting information was maintained during the study (1983 cited in Lincoln and Guba 1985, pp. 319-320). In addition, during monthly meetings with my supervisor, data and tentative findings were presented. Therefore, my supervisor can also attest to the 'credibility of the account' (Creswell and Miller 2000, p. 128).

### **Peer Debriefing**

Seventh, peer review (also known as peer debriefing) occurred formally and informally throughout this research. Informally, peer review occurred through discussion with colleagues in my professional context, and peers engaged in doctoral studies. Formally, peer debriefing occurred over the duration of this study during monthly meetings with my thesis supervisor. Further to this, the data were presented at three conferences. First, the research process (as outlined in Chapter 4) was presented at the conference *Rethinking Educational Ethnography* (2011). Second, during the *DIVERSE* International Conference (2011) the themes, presented in Chapter 5 of this thesis, were discussed. Third, the methodological approach adopted in this research was presented at the conference *Values and virtues in practice-based research: Articulating our values and virtues* (2012). In addition, the module Religion in Cyberspace was shortlisted for the Jennifer Burke Award for Innovation in Teaching and Learning 2012 (in association with the Irish Learning Technology Association and Dublin City University). During the judging event, the module and tentative findings were presented to an expert panel. In all cases, constructive and critical feedback was received and taken on board in the final write up of the thesis. In sum, the seven procedures outlined demonstrate the trustworthiness and rigour of this research.

### **Generalisability**

In the field of quantitative research, generalisability is a hallmark of quality. However, generalisability and ethnography do not sit comfortably together. In line with the constructivist paradigm which frames this study, the findings and theoretical inferences are relevant to one group at one particular point in time. No grand claims for generalisability are made. Given the emphasis on thick microscopic description, this research is best understood as making a 'trade off' (Fine et al. 2009, p. 613). That is, 'choosing depth and perspective' as a more appropriate constructivist research endeavour than generalisability (2009, p. 613). However, some tests for generalisability are possible. Fine et al. argue that it is possible to conduct meta-data analysis across a



number of ethnographic case studies in a related field of study. Second, they suggest that ethnographic accounts have ‘more relevance to theoretical generalisations’ (p. 613). In line with this, the final chapter of this thesis addresses an established theory (culture shock, and associated cultural adjustment) through the lens of a virtual world module. As a result, this thesis provides a new way and innovative way to understand student adjustment to a virtual world. Nevertheless, given the research paradigm one can only lay claim to the development of a working hypothesis. Finally, the authors suggest that ethnography ‘contributes to the naturalistic generalisability of findings’ (p. 613). That is, the potential generalisability of the research also lies with the reader. The best illustration of this is found in relation to autoethnographic accounts:

the focus of generalizability (sic) moves from respondents to readers, and is always being tested by readers as they determine if a story speaks to them about their experience or about the lives of others they know; it is determined by whether the (specific) autoethnographer is able to illuminate (general) unfamiliar cultural processes

(Ellis et al. 2011, n.p.).

Whilst acknowledging the limitations of generalisability, this research has something valuable to add to the wider research community.

### **The Usefulness of the Research to the Research Community**

Finally, the topic turns to the usefulness of the research to the research community. All research is concerned with making a contribution to knowledge:

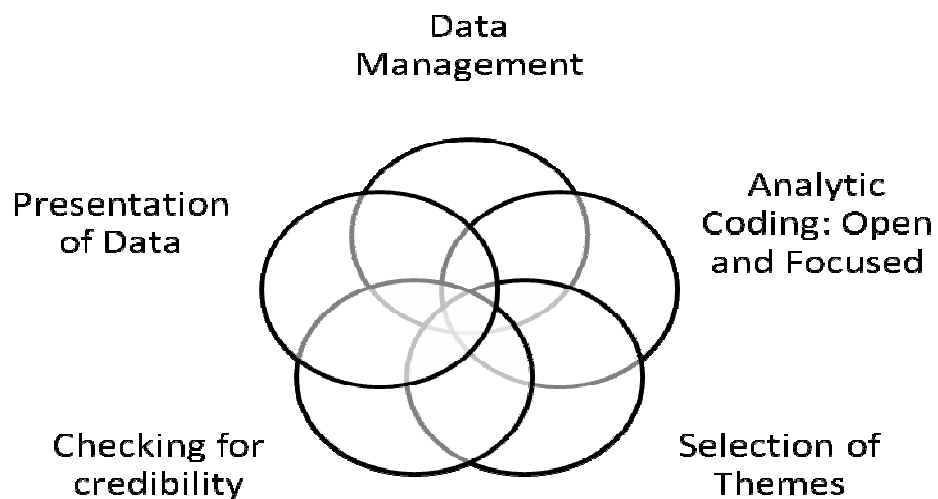
Both qualitative and quantitative researchers think they know something about society worth telling to others, and they use a variety of forms, media and means to communicate their ideas and findings (Becker 1986, p. 122 cited in Denzin and Lincoln 2005, p. 11).

In contrast to prior literature on teaching on Second Life, this thesis contributes by addressing a methodological gap, as identified in Chapter 3, by providing rich descriptions of practice that were previously lacking.

## SECTION TWO

### Thematic Analysis

Thematic analysis is ‘a method for identifying, analysing and reporting patterns (themes) within the data’ (Braun and Clark 2006, p. 79). Frequently, however, the *process* of thematic analysis applied in research is not made explicit. A packaged set of instructions for the analytic procedure did not arrive neatly at my desk. Instead, it was a bespoke design. In this section, the *process* of analysis adopted in this research is identified. In so doing, five synergetic elements are presented (Figure 23). They comprise data management, coding, selection of themes, checking for credibility, and data presentation.



**Figure 23: The Analytic Process**

### Data Organization, Tracking and Management

The data presented in the following chapters were collected in preparation for, and during the module ‘Religion in Cyberspace’. The volume of data amassed comprise hundreds of pages of logged conversation (referred to hereafter as ‘chat logs’), numerous researcher reflective journals, student reflections, hundreds of in-world snapshots, and folders upon folders of field notes and data analysis cycles. Clearly this abundance of data is necessary in order to pay due account to the process of research. However, analysis of this wealth of data is challenging and I had to adopt a rigorous data management strategy. For this reason, I considered the use of Computer Assisted Qualitative Data Analysis Software (CAQDAS), such as *NVivo*. There are significant merits to using both CAQDAS and the pen and highlighter but for the purposes of this research a manual approach is more appropriate.

It is a widely accepted that CAQDAS usage may 'aid the researcher in his or her search for an accurate and transparent picture of the data whilst also providing an audit trail of the data analysis process as a whole' (Welsh 2002, p. 1). Proponents report that CAQDAS packages directly assist with the progression of data analysis (Richards and Richards 1994). In particular, it is argued that CAQDAS packages aid in the avoidance of sloppy coding (Darlington and Scott 2002). Additionally, others advocate the use of CAQDAS to provide 'protection against self-delusion, let alone the presentation of unreliable or invalid conclusions to scientific or policy making audiences' (Miles and Huberman 1994, p. 2). Through this lens, CAQDAS is a supportive aid to the researcher facilitating transparency and rigorous data management.

Critics, however, report that the use of the CAQDAS code and retrieve system can distance the researcher from the data (Fielding and Lee 1998). Seidel and Kelle suggest that there is an added danger of 'losing the phenomenon and losing its context' (1995, p. 59). Additionally, others point out that CAQDAS can facilitate 'coding fetishism', drowning the researcher in possible coding scenarios (Richards 2009, p. 125). More serious concerns are that such packages are not neutral and may impact negatively on one's research paradigm (Dicks et al. 2005). I am in agreement that 'computers do not analyse data; people do' (Weitzman and Miles 1995, p. 3), and I am conscious of the support CAQDAS packages, such as *NVivo* or *Atlas.ti*, can offer. Nevertheless, I wished to remain true to the data rather than adopt 'a mechanical set of procedures' imposed by a pre-designed package (Fielding 1993, p. 5).

By situating my stance on CAQDAS, I provide another level of transparency to this research. Further to this, Section 1 of this chapter comprehensively addressed the questions of trustworthiness and rigour. Therefore, following a critical review of the purpose of implementation of a CAQDAS package, I determined to continue with a manual approach supported through Microsoft Word usage. Having given consideration of the researchers mentioned, on balance I believed the implementation of the manual approach was a more appropriate and pragmatic way to proceed. I adopted a manual approach to synthesise the data into meaningful codes, patterns, and themes (Creswell 1998), more appropriate to the research in hand. This meaning-making approach was supported through Microsoft Word usage, which assisted in key aspects of the project unity and data analysis. Including:

- Making up notes in the field
- Writing up or transcribing field notes
- Editing: correcting, extending or revising field notes
- Coding: attaching key words to segments of text
- Storage: keeping files in an organised database
- Search and retrieval: locating segments of the text and making them available for inspection

(Pole and Morrison 2003, p. 98)

### **Initial Recording: Memos and Coding**

Given the flexible emergent design of this research, the process of analysis was ongoing. That is to say, that some level of data collection and analysis simultaneously occurred in the field:

Some reflection on the data collection process and what it is producing is essential if the research is not to drift along the lines of least resistance and to face an analytical impasse in its final stages (Atkinson and Hammersley 2005, p. 160).

While still in the field, I read reflective journals, chat log transcripts and maintained my field notes. Throughout this process, I recorded memos (date and time) alongside the data. Memos might best be described as speculative analysis ‘tentative reflection, perhaps revealing major insights, that is done throughout data collection’ (Woods 1986, p. 121). In this research, I employed memos to capture ‘Aha’ moments (Agar 1982). ‘Aha’ events sparked my thinking. They were unexpected moments, events that were at odds with my prior experience and occurrences that helped me to make a connection between new knowledge and old. Memos are justifiably the first step in the analysis ‘there object being to suggest lines of analysis, to point the way to connections with other data’ (Woods 1986, p. 124). Whilst still in the field, the memos acted as a reminder to ask participants more about an issue that had been observed or said. Later, they served as a ‘reminder to self’ about literature that was possibly relevant to a particular data sample.

Upon leaving the field, I began the step by step analysis of the entire body of data. To begin, the data (chat log transcripts, field note journals, reflective journals, student reflective journals) required refinement. To do this, I adopted a process of coding:

Ethnographic coding involves line-by-line categorization of specific notes. In this process, the researcher’s stance toward the notes changes: the notes, and the persons and events they recount become textual objects (although linked to personal memories and institutions) to be considered and examined with a series of analytic and presentational possibilities in mind (Hammersley and Atkinson 2005, p. 115).

The analytic coding of the data proceeded in two phases (see Appendix 5: Approach to Coding). First, I engaged in the open coding of data. Open coding involved the reading of data line by line to ‘identify and formulate any and all ideas, themes or issues they suggest no matter how disparate’ (Emerson et al. 1995, p. 143). To do this, I applied codes (a word or abbreviation) to the data. During this phase, I tried to be as open as possible to potential codes, which resulted in a substantial number of codes (see Appendix 7: Sample Coding). This initial coding made identification of emerging patterns within the data possible. This process facilitated engagement in tentative analysis, and helped me to make connections to the existing literature, which I later added as a memo. Second, I engaged in focused coding. In order to avoid swimming in codes, I had to employ selectivity (Woods 1978, p. 129). This involved the classification of emerging patterns into considered patterns. Patterns, however, were not exclusive, and I identified some ‘interdependence’ (Woods 1978, p. 126). In the final phase of the coding process, I returned to the data to identify core themes.

### **Selection of Themes**

A theme ‘captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within that data set’ (Braun and Clark 2006, p. 82). In this research, I combined and catalogued considered patterns into sub-themes. Numerous sub-themes emerged during the analysis process. Given the quantity of sub-themes I had to make choices as to what to pursue, explore and what to ‘put on the back burner, at least for the moment’ (Emerson et al. 1995, p. 157). I collated sub-themes into themes and then reviewed all; some were similar and others collapsed into each other. At this point, I had a thematic map that assisted in defining and refining the themes (Braun and Clarke 2006, p. 92) (see Appendix 6: Thematic Map). Themes combined ‘components or fragments of ideas or experiences, which often are meaningless when viewed alone’ (Leininger 1985, p. 60). In this attempt at *meaning-making* (Van Maanen 2011, p. 221), I identified five fundamental themes. The themes represent the virtual world journey. As the voices of all participants are of equal importance, they are ‘pieced together to form a comprehensive picture of their collective experience’ (Aronson 1994).

### **Checking for Credibility**

The reflexive educational ethnographer must continually be aware of how her presence ‘may have shaped the data’ (Atkinson and Hammersley 2005, p. 102). In this case, my

presence is evident within the data (as outlined in *Chapter 4: Getting Started*). To ensure analysis was credible, I adhered to the credibility framework presented by Pole and Morrison (2003, p. 103). Figure 24 outlines the *approach* and *action* adopted for credibility.

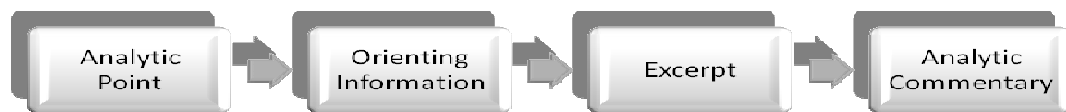
<b>Approach</b>	<b>Action</b>
<i>'Checking with informants, but also adopting critical attitude towards what informants say'</i>	<ul style="list-style-type: none"> <li>• Discussing 'aha' moments, patterns, emerging themes with participants</li> <li>• Checking for patterns across the data</li> <li>• Discussion of findings with outside parties (such as doctoral supervisor, academics, internal readers)</li> </ul>
<i>'Seeking alternative explanations'</i>	<ul style="list-style-type: none"> <li>• Continual re-reading of data with particular attention given to data that do not 'fit' with patterns.</li> <li>• A stance of openness to all possibilities during the coding phase of data analysis</li> <li>• Openness to other possible explanations</li> <li>• Openness to literature from outside my disciplinary background</li> </ul>
<i>'Checking ethnographer effects'</i>	<ul style="list-style-type: none"> <li>• Sustained reflexivity, as outlined in <i>Chapter 3</i>.</li> </ul>
<i>'Representing the range of voices in the field'</i>	<ul style="list-style-type: none"> <li>• The writing up stages included multiple voices.</li> </ul>

**Figure 24: Credibility Framework**

In sum, the process of analysis is hard work. I am in agreement with Emerson, Fretz and Shaw (1995) who honestly report it is ‘less about something emerging from the data, of simply finding what is there; it is more fundamentally a process of creating what is there by constantly thinking about the import of previously recorded events and meanings’ (1995, p. 168). The next step in the research process was to decide on the presentation of the data.

### **The Presentation of Data Analysis**

The organization and representation of the ethnographic account required careful consideration. Transforming ‘tales from the field’ (van Maanen 1988) into a coherent composition is an issue of concern for any creative ethnographer. I considered a variety of methods for composition of the research, and decided to employ an excerpt-commentary framework for the presentation of each theme (Figure 25).



**Figure 25: Excerpt-Commentary Unit**

This field note centred analytic commentary provides a coherent unit for each theme.

It focuses attention through an analytic point; illustrates and persuades through a descriptive excerpt introduced by relevant orienting information; and explores and develops ideas through commentary grounded in the details of the excerpt.  
(Emerson et al. 1995, p. 182)

By employing this method, I *re-present* the data from this research project within a coherent composition. The data are re-presented in this manner in Chapter 5, which provides a thematic analysis of teaching and learning in Second Life in the context of one module situated within a programme of ITE.

## **Summary**

This chapter comprised two sections. In Section 1, the paradigm that frames this research was outlined and justified. First, the study was situated by defining the research focus and research field. Second, the manner in which this research is consistent with the ontology, epistemology, methodology and ethics of the constructivist paradigm was demonstrated. Third, the quality of this research was evaluated under three headings: the appropriateness of research design, demonstration of truthfulness and rigour. In conclusion, the usefulness of the research to the research community was outlined. Section 2 presented the process of thematic analysis adopted in the thesis. Five phases in the analysis process were identified. The phases comprised data management, coding, selection of themes, checking for credibility, and data presentation. Next, Chapter 4 provides an account of how immersion into the research field was achieved.



## **CHAPTER FOUR: GETTING STARTED**

This chapter provides an account of how I achieved immersion into the world of Second Life (SL). Most often associated with the rite of baptism, immersion refers to being absorbed, submerged, or engrossed in something. In this research, immersion is more than a ‘quick dip’ or ceremonial sprinkling. Immersion is the way in which the ethnographer ‘learns what is required to become a member of that world, to experience events and meanings in ways that approximate members’ experiences’ (Emerson et al. 1995, p. 2). As this research field is a virtual space, immersion refers to prolonged ‘mental absorption’ (Carr et al. 2006, p. 54) through a virtual body within a virtual space. The representation of the events contributing to the act of immersion into the virtual field is achieved through a re-telling of the journey:

The ethnographer as author must represent the particular world he has studied (or some slice or quality of it) for the readers who lack direct acquaintance with it. To do so, he moves back and forth between specific events recounted in his fieldnotes and more general concepts of interest to his discipline (Emerson et al. 1995, p. 169).

Three stages emerged during my journey of immersion. These stages are identified as stages of Separation, Transition and Transformation. First, separation refers to the movement from the offline world into the virtual world. Second, transition refers to the period of adaptation and adjustment to the virtual environment. Third, transformation refers to the process of *both* learning and learning to teach within the SL environment. Within each stage, distinct sub-stages of development were experienced:

1. Separation

- Boundary crossing
- Life as a ‘Newbie’

2. Transition

- Learning Second Life skills
- Liminal moments
- Gaining access
- Establishing persistent identity
- Establishing a ‘sense of place’

3. Transformation

- Becoming an SL teacher

The timeline of this research spans from 2008 – 2012. I was an integral part of the research project, in the *doing* of the research, the *meaning-making*, and the *writing* of the research story. I documented the journey in a range of ways, including the keeping of field notes, reflective journaling, chat logging, blogging and the capturing of events through in-world photography. Consequently, my experience of this journey provides a rich source of data.

### **Beginning the Journey**



**Figure 26: Beginning the Journey**

Boas (1911) travelled to Baffin Island to study the Inuit People, Malinowski (1947) to the Trobriand islanders, and Mead (1977) to the Samoan people. The journey of such ethnographers highlights the importance of immersion within the field before beginning to explore first-hand the experience of people within that field. While their research locations differ, all followed a move from outsider to insider through prolonged engagement and participation within their field of study. I did not arrive in this new virtual world by means of a canoe but rather by way of my web browser (Figure 26). The journey of immersion could be described as a rite of passage:

The life of an individual in any society is a series of passages from one age to another and from one occupation to another (van Gennep 1906, p. 3).

Regardless of chronological time or place, rites of passage have a large degree of similarity. Often described as periods of transition, they refer to the crossing of boundaries from one culture to the next. Turner (1979) refers to such transitions as a process, a becoming, which may culminate in a transformation. Passages are open to interpretation, the mediating ‘of two worlds between a third’ (Agar 1982, p. 783). On

reflection on my rite of passage into the virtual world, I identified three stages through which I passed. These stages were: separation, transition and transformation. This pattern, while influenced by the works of van Gennep (1906) and Turner (1979), emerged from reflection on my experience as a new member of the SL environment, a pupil within an SL module and a teacher of an SL module.

### **Stage One: Separation**



**Figure 27: Separation**

### **Boundary Crossing**

The frontier, the imaginary line, connecting milestones or stakes, is visible – in an exaggerated fashion – only on maps (van Gennep 1906, p. 15).

In this research, I describe the journey from the physical world into the virtual as a territorial rite of passage, akin to crossing a new frontier or threshold. In children's literature, the movement from one world to another is a perilous journey, from safety to the unknown. The frontier line has symbolic significance; a secret untended garden (Burnett 1911), an open window (Barrie 1911), a wardrobe (Lewis 1950), a doorway or gate (Tolkien 1954). Within each story, the actor pauses briefly at the threshold line to consider the possible consequences of their actions, simultaneously looking back at the known and forth into the unknown. In crossing the threshold, the actor sets out on a journey of 'becoming' anew. In each instance, the actor returns transformed; physically, emotionally, psychologically or spiritually. In this research, the frontier line was not marked by rocks or sacred spaces but a computer screen. In early September 2008, I took the first step of this rite of passage and arrived on 'Welcome Island' in Second

Life. Welcome Island is designed as a tutorial space through which the new resident must pass. Within this space, the new resident has the opportunity to practice communication and locomotive skills before venturing deeper into the virtual world. It is, in a sense, a neutral zone (van Gennepe 1906, p. 18) where new residents remain until they have mastered the basic skills (Figure 27).

### **Life as a 'Newbie'**

Those who join SL begin their virtual life as a 'newbie', the SL term for new member. The newbie could be compared to Turner's neophyte:

They have no status, property, insignia, secular clothing, rank, kinship position, nothing to demarcate them structurally from their fellows. Their condition is indeed the very prototype of sacred poverty (Turner 1979, p. 95).

In the virtual world, the newbie finds themselves separated from the known, experiencing a sense of wonder, sometimes bewilderment, within this new environment. 'Newbies' are easy to spot. Not yet adept at editing their appearance, their form takes that of the 'Cookie Cutter' avatar. The 'cookie cutter' is a generic avatar that gives away the 'newbie'. The newbie will run into many doppelgangers, and cries of '*look it's my twin*' are a regular phenomenon. Akin to a loosed creature, they fly in circles, crashing to the ground every now and then. They run wildly into furniture, into walls, and often find themselves stuck in corners, or at the bottom of a virtual lake. Not yet familiar with the practice of dressing their avatar, newbies can be spotted wearing the suitcase rather than the clothing. This period of initiation is a passage through which every resident must pass. All newbies, therefore, begin their SL as equal.

I began my virtual world journey by choosing a generic female avatar from the prepared options. As my SL skills base developed, I experimented with my avatar identity. One day I would choose a female avatar, the next I would choose a male avatar, all of different shapes and sizes. The following excerpt recounts an early SL experience as a buxom female avatar and illustrates how identity choice can have consequences for one's SL experience:

*During my excursions today, I was approached by a tall, dark and (virtually) handsome male avatar with obvious amorous intent. 'Hey babe, wanna (sic) have some fun' he typed into the public text chat box. Uncomfortable with the attention, I politely responded 'No, thank you' and walked away. Persistent in his endeavours, he ran alongside me 'You look hot!' he typed and motioned his avatar to whistle. I collected my thoughts, laughed to myself and typed 'Thank you'. Delighted that this might indicate an invitation to more, the amorous*

*avatar moved in closer. Within an instant, I morphed my avatar appearance – shifting from slim avatar to a tiny balloon-like woman, reminiscent of Humpty Dumpty. ‘You are mad!’ he typed as he backed off at speed. I chuckled to myself and waddled on.*

(Field note excerpt 2008)

This experience concurs with Taylor’s findings that suggest online ‘body choice may support stereotyping’ (p. 56). For a period after this event, I chose to engage in my virtual world activities through a fox avatar. The choice of avatar body had a two-fold purpose. First, as the fox avatar was relatively unusual it acted as a conversation opener facilitating engagement with other SL residents. In this way, the avatar acted as a tool (Martey and Shiflett 2012). Second, it helped to avoid unwanted flirtatious attention and enabled me to ‘*get on with the job*’. In this way, the avatar was employed as a prop ‘for the presentation of the researcher self in the social arena’ (Martey and Shiflett 2012, p. 118).

## Stage Two: Transition



**Figure 28: Transition**

## Learning Second Life Skills

Adaptation to SL is a challenging and experiential learning process. SL ability develops at different rates, but the development of skills, while chaotic in practice, is relatively orderly and logical. It is a gradual process, with success dependent upon the amount of time spent ‘in-world’. For full participation in the environment, the basic skills of movement and communication are essential. Such skills are more common than one would first imagine. Most SL residents are familiar with basic computer gaming

procedures, and the general principles of ICT. SL skill development thus becomes a ‘reformation of old elements into new patterns’ (Turner 1979, p. 9). I began by learning practical virtual locomotive skills, how to walk, run and fly. I learned how to communicate within SL through local text chat and voice chat. Chat abbreviations and emoticons frequently saturate in-world non-verbal communication. Additionally, as communication is synchronous, researchers suggest that avatar body language allows another level of expression (Ventrella 2011). As an ethnographer and resident in the community, it was imperative that I learned to employ and ‘read’ this language. Additionally, as I intended to set up home in SL, I studied the fundamentals of Linden Scripting Language (LSL). Again, through a process of assimilation of prior knowledge with new, I came to an understanding of the unwritten rules and etiquette of SL (Figure 28). I devoted the majority of year one to what Agar describes as ‘wandering around doing nothing’ (1982). This time provided the opportunity to immerse myself and explore ‘what is going on here’. This time, however, was not without its tests.



**Figure 29: Liminal Moments**

### **Liminal Moments**

An avatar in ‘Steampunk’ clothing was strolling around the empty University campus. Despite my regular visits to this campus, this was the first time I had seen someone here. She had long black hair tied back in a pony-tail. A red fascinator bedecked with a plume of black feathers was perched on her head. She wore a red full length ‘lady of the manor’ gown with a voluminous skirt. Over this, she wore a black tailcoat. On her feet were short shoe-boots. The elaborate outfit told me she was certainly not a ‘newbie’. Glad to see company (and wondering where she purchased her outfit), I introduced myself through public text chat and motioned my avatar to wave “Hi”. In an instance, she ran at

me, her long red dress swishing out behind her. She made contact and bumped my avatar backwards. Thinking this was accidental, I attempted to side-step out of her way. She turned and followed, this time making contact on purpose, propelling my avatar backwards. A moment of panic, what is she doing? 'Hey' I typed. I took my hands away from my keyboard and watched with bewilderment and bemusement as my avatar was pushed along at speed. What to do? Not quite sure....Is it someone I know? I checked her SL profile. This was not a mischievous friend. What was her problem? Annoyed with the treatment of my avatar, I logged off. Twenty minutes later I logged back in. As the SL programme loaded, I felt as though I was peeping around a corner. A quick 'pan camera' action indicated she had left the scene, to be on the safe side I teleported out of there. I had been 'griefed'.

(Field note excerpt 2010)

Throughout the initial transition period, I encountered breakdown, and break-through experiences. In the world of ritual, such marginal experiences contribute to the feeling of being 'betwixt and between' (Turner 1979, p. 95). The marginal position is precisely that, an experience of being on the threshold between the community and isolation. Events contributing to 'break-down' moments included unwelcome attention and, as illustrated in the field note, some intermittent encounters with 'griefers'. Most frequently 'breakdown' experiences occurred as a direct result of spending weeks, and in some cases months, in virtual isolation roaming what seemed like a barren post-apocalyptic landscape of virtual wilderness. For the novice ethnographer and new SL resident, such limbo experiences could be described as liminal moments (van Gennep 1906):

During the liminal period, neophytes are alternately forced and encouraged to think about their society, their cosmos, and the powers that generate and sustain them. *Liminality may be partly described as a stage of reflection* (Turner 1987, p. 14).

During such times, I felt as though I had yet to reach the inner layer of community life within the world of SL. Uncertainty, anonymity, questioning and a sense of absence characterized this stage. I had no fixed identity, no rank, no virtual space to refer to as home, and no comrades. Additionally, I was conducting research within a virtual space that is considered, by some, to be substandard to 'real life'. Given the attributes of this liminal milieu, I embarked on an inner journey. During this stage, I often re-evaluated my choice of this virtual world as the research field.



## Gaining Access

Breakthrough came as a result of sustained engagement with the environment. I learned of, and encountered, a variety of residents and groups that have settled in SL. These groups included faith-based communities (Church of Latter Day Saints, SL Evangelists, Unitarian Church of Second Life), fantasy identity-based communities (Steampunk, Furrries, Tinys) to everything in-between. Some residents were more curious than others:

I attended my first SL meditation today. It took place in a replica temple, identical to an offline temple – with a statue of the Buddha, colourful prayer flags and chimes. Approximately 10 other residents were present, in a range of guises from humanoid to animal avatars. I expected them to dress modestly given the context; however, no dress code was immediately apparent. The most unusual participants were a male avatar accompanied by a small child avatar. The male, was dressed as a cowboy with waist-coat and leather pants, complete with Stetson and black sun glasses. The child was a small pig-tailed girl wearing a red dress with white ankle socks. She was clutching a teddy bear. They sat quietly throughout. Afterwards, we congregated outside the Temple. I took this as an opportunity to make some SL contacts. The child ran around her ‘father’ and continued to chant ‘let’s go Daddy, you promised’ through the public text chat box. I had not seen a child avatar before, and I found the conduct of ‘it’ perplexing. Nobody else seemed in the least bothered by the child avatar. Not sure how I felt about ‘it’, I said my goodbyes and moved on.

(Field note excerpt 2009)

In the most part, the residents were extremely helpful, and I made numerous contacts. To improve my knowledge of teaching and learning (and friendship ties) within this environment, I joined many SL educational groups including The International Society for Technology in Education (ITSE), Second Life Educators Database (SLED) and Virtual World Educators Roundtable (VWER) discussion group. Additionally, I attended the Open University conference ‘Researching Learning in Virtual Environments’ (2008). The conference provided an opportunity to learn from other educators about their experience of pedagogy in SL. At this stage, however, it was necessary to make progress from ‘hearing’ about educational practice to participating as a student within SL. As Chapter 3 outlines, numerous challenges were encountered. Nevertheless, I believe we can learn both through observation of teaching in action (Lortie 1975) and through participation. First, we can learn by *observing teaching in action*, which is widely regarded as worthwhile:

Seeing in practice is inherently constructive and, as such, it is regarded as a particularly worthwhile learning opportunity in professional learning and in teacher education (Orland-Barak and Leshem 2009, p. 29).

Specifically, I learned *how* teaching occurs in SL through observation. I focused on the observation of key skill sets that comprised:

- (a) Teaching and learning process skills – specification of outcomes, lesson management, assessment of lesson outcomes
- (b) Classroom management skills – responsiveness to students, how to approach discipline and pupil management
- (c) Teacher communication skills – employment of teaching tools, delivery of lesson
- (d) Subject content engagement skills – how to motivate learners and present content in an engaging manner
- (e) Methodological skills – which methods can be employed and which work best from a students’ perspective

(Adapted from Mater Dei Institute of Education 2011, p. 8)

Second, we can *learn through participation* within a SL module. By becoming a learner in SL, we *learn by doing* (Dewey 1910; Lewin 1936; Piaget 1982; Kolb 1984; Gardner 1985). We learn: classroom communication skills (how to respond – text or chat), classroom etiquette, which teaching methods are engaging for the student, how to overcome challenges (technical or locomotive) and what it feels like to be a student in SL (creation of identity, being part of a class community, learning from one another). This interplay between *observation* and *participation* permits the SL student (and researcher) a unique lens into pedagogical practice in the virtual world. This approach concurs with best practice in online learning which affirms that teachers should experience ‘technology from a learner’s point of view before deciding whether and how to use it’ (JISC 2009b, p. 4). In order to engage as a student within SL, I attended numerous one-off classes. Lesson topics varied from learning the basics of Linden Scripting Language (LSL), to English as a second language (ESL):

50 avatars were present in today’s scripting class. The teacher used two media boards and presented at speed using voice chat. An assistant typed the script of the lesson into the public text chat box. A giant rabbit blocked my view of the events, so I had to move. I found it very difficult to keep up and did not understand the terminology employed by the teacher. Most participants seemed to understand what was being taught. We were then invited to a ‘sandpit’ and practice our skills. Some of the other class members explained the task to me, and by the end of class, with thanks to their help, I had managed to make a small seat complete with a snazzy polka-dot cover.

(Field note 2009)

Such experiences informed my practice as an SL teacher and helped to hone my ethnographic skills. However, I wanted to participate in modules of a longer duration. Pragmatic considerations came into play at this point. First, the majority of SL modules sourced were offered through universities in the United States. With a time difference of seven or more hours, participation was not possible. Further to this, substantial fees were also a consideration. Nevertheless, through continual engagement with the SLED list, I became aware of a relevant module “Is One Life Enough?” offered through SL by Dublin Institute of Technology (Figure 30). In this module, students ‘explore the creation, management and exploitation of content in blogs, online social networking sites, virtual worlds such as Second Life, video and picture hosting sites’ (O Connor 2009).



**Figure 30: 'Is One Life Enough' Module**

As discussed in Chapter 3, the module gate keepers stipulated that only data pertaining to my personal learning experience could be included in this thesis. Given the word count limitations, I made the decision not to include this data. Nonetheless, participation in the module significantly helped the development of my SL skills, and subsequently my understanding of teaching and learning in the virtual world of SL.

Throughout this period, like the classic neophyte, I drew from the wisdom of the SL community members. Through dialogue and engagement I grew confidence in my SL skills. Whilst acknowledging learning is a continual process, with time I no longer stood out as a ‘newbie’ in the SL environment. It is within this period of transition that I became privy to the possibilities of education in this environment. At this point, I identified a fracture in my understanding. I moved from being a voyeur of in-world

activity to engaging in activities as an SL resident. As such, this moment indicated the movement from being an outsider to becoming an insider in the world of SL.

### **Establishing Persistent Identity**

Avatar selection is crucial to ‘a user’s projected identity, whatever they choose it to be’ (Ducheneaut et al. 2009, p. 1159). Therefore, with my SL skills established, it was necessary to re-create a professional avatar. Modifying avatar appearance is straightforward; we can slip on a new skin with relative ease. At this point in my research, however, the construction of a digital self was more nuanced than the mere appropriation of another avatar. Avatar construction commenced with reflection on my role as a researcher, a teacher and a learner. Consequently, the construction of a professional avatar could be considered a deliberate attempt at impression management, a performance of the self (Goffman 1959). The language of performance, however, is problematic. It suggests a deliberate production and ‘acting out’ of a fiction. A fiction implies the use of the imagination but also elements of fabrication. Clearly the creation of an avatar is an exercise in production. Nonetheless, to knowingly ‘act out’ a false representation of the self could be construed as deceptive. Given my professional context, the choice of my avatar was pedagogically driven. Specifically, this involved the creation of a believable and accurate representation of my corporeal self with a virtual realm. In this way, I do not consider my avatar as a mask or performance tool. Rather, it is a presentation, perhaps even a dimension, of the already established *self* within the virtual world.

O’Brien (1999) argues that ‘gender is one of the first means by which persons introduce and represent themselves to others in electronic communities’ (p. 86). We are not ‘magically freed from our bodies when we go online’ (Martey and Consalvo 2011, p. 178). Gender choice can provide us with a method to assess and categorize the other in a personally significant way. Presenting my professional self in the virtual world in a gender ambiguous form, such as the fox avatar, or in a highly sexualized manner might have had a negative impact on both my virtual world and real-world professional identity. Further to this, I did not want to create further distance between my students and myself. As a result, my persistent avatar choice is in human female form. Additionally, it has some resemblance to my corporeal characteristics (colour of hair, eye-colour and physique). While I do not consider my avatar an idealized version of

corporeal self, it is certainly enhanced with clever (invisible) lighting attachments and make up.

Avatar clothing has both an aesthetic and functional role. However, it also has a social role as it contributes to impression management. In sum, clothing relates a ‘specific expression of self’ (Martey and Consalvo 2011, p. 168). My avatar clothing selection adheres to a professional dress code; a suit jacket, blouse, knee length skirt and low heeled shoes. As clothing can move in SL, my avatar also wears ‘glitch pants’ that are the same colour as my skirt in order to ensure my avatar ‘doesn't end up flashing a bare behind’ (Toshihiko 2006, n.p.). In short, my digital representation communicates to others that I am a professional engaged in formal activities. In this way, my avatar is an authentic representation of my offline persona. For this reason, over the course of this research I maintained this avatar appearance.

As my avatar identity was persistent for the duration of the study, I was easily recognizable to my peers and students as ‘Odysseus Tempest’.



**Figure 31: Establishing Identity**

Odysseus is the epic hero of Homer’s Iliad and Odyssey. Odysseus’ journey home to Ithaca was fraught with challenges and obstacles. A similar tale can be told of the research journey. The choice of surname, Tempest, comes from Shakespeare’s ‘The Tempest’ – a tale of a magical world of another kind. The Tempest and its characters mirror the current penchant for virtuality. Caliban’s lines provide some reflection on the expedition to brave new worlds;

Be not afeard. The isle is full of noises,  
Sounds, and sweet airs, that give delight, and hurt not.  
Sometimes a thousand twangling instruments  
Will hum about mine ears, and sometime voices,  
That if I then had waked after long sleep  
Will make me sleep again; and then in dreaming

The clouds methought would open and show riches  
Ready to drop upon me, that when I waked  
I cried to dream again.

(Shakespeare 1610, 3.2.18)

Despite the careful construction of my avatar pseudonym, the shortened version, Ody, implies a much less impressive character. Odysseus is the virtual body through which I conducted my research, my learning and my teaching in the virtual world. The nurturing experience of creating an avatar, designing its face, giving it a name and employing it as a form of self-expression leads to a certain level of attachment. This could, perhaps justifiably, be considered narcissistic given the avatar is self-representative. As a result of the creative process, the avatar can become ‘a potentially immortal creature’ (Turkle 2011, p. 79). The attitude toward this immortal companion can become blurred, for example, Odysseus’ eyes can follow the motion of my mouse, blink and, from time to time, can briefly seem to make contact. Moreover, Odysseus’ face can emote, albeit when directed to do so. Through small recognised social interactions, the avatar has the potential to elicit emotive responses in its creator. When I direct my avatar to smile or laugh, I am most likely laughing too in the offline world. When I see other avatars smile and laugh, I mirror their actions through my avatar. According to Turkle (2011) this reactive phenomenon is similar to mirror neuron activity, which one experiences in the offline world. Despite knowing my avatar is a computer generated object, I sometimes catch myself attributing human qualities to the avatar, switching between first person and third person language;

I’m surprised how difficult it is to find a professional suit for her. It is not as though she is challenging to dress. I love the lavender wings, and the ball gown is great, but I’d be unhappy turning up to my first class dressed as a debutante dragon.

(Field note excerpt 2010).

This experience of humanizing a computer generated object concurs with Turkle’s research findings (2011). Creating a home for ‘her’ provided the next task.

### **Establishing a Sense of Place**

To establish a *sense of place* within SL, I created a home followed later by the development of a virtual campus. It is necessary here to clarify what exactly is meant by place. Place is broadly defined as ‘a meaningful location’ (Creswell 2004, p. 7). In addition, place is generally understood to have three key elements; location, locale, and a sense of place (Resor 2010, p. 186). The location of my SL residence is fixed to a SLURL, while the locale is *Calaveres*, a suburban housing development. A *sense of*

*place*, however, is more difficult to determine. As employed by geographers, *a sense of place* is defined by the non-material, that is, ‘the subjective and emotional attachment a person has to a place’ (Resor 2010, p. 186). The difference between place and space then is *meaning*. Within the virtual world this issue is compounded by the fact that *place* exists within a *virtual* space. As a result, an SL *place* cannot be physically experienced, however as meaning relates to the non-material, a virtual space can still be experienced as *meaningful*. For now, the establishment of a *sense of place* refers to the process of creating a virtual *home* that later acted for a period of time as a classroom base for students.

Unlike the offline world, property ownership is a relatively straight forward process in the virtual world. Within the SL environment one begins by choosing a property from a catalogue of housing styles: contemporary, fantasy (read mushroom clad roof), Japanese or Canadian Roof House (Figure 32). As the property was to serve as a base classroom, I established suitability criteria. The criteria comprised location, space and design. I selected a property that matched the established criteria and named it ‘Ithaca’. The property consisted of an unfurnished ground and upper level. During the process of furnishing my virtual property, I learned the value of SL building skills. One in particular is the importance of ‘prim count’. Each item in SL is made of ‘prims’, short for primitives. Each location regulates the number of prims allowed, and my SL home has a limit of 117 ‘prims’. With delight I amassed free furnishings from the SL marketplace. Delight, however, turned to dismay as the prim count for my home reached its limit within a matter of minutes. Needless to say, low prim count items are available at a cost, and the actual cost of the ‘free SL home’ then emerges.

The initial purpose of my virtual residence was to promote, through attachment, immersion into the SL environment. Attachment here refers to my attachment to the world of SL. According to the cultural-distance hypotheses, it is more easy to adjust to a new environment if it is similar to the environment of origin (Furnham and Bochner 1986; Ward and Kennedy 1993). While my SL home does not replica my offline home, the upper level provides some of the normal cues that suggest a ‘home’ environment – a fireplace, chairs, pictures and plants. In addition, the lower level is designed as a traditional classroom. As the property shape cannot be altered I had to work within the parameters of the available structure. Throughout the process, I practiced my SL building skills and my SL presentation skills, in relative privacy.



**Figure 32: Ithaca Phase One**



**Figure 33: Ithaca Phase Two**





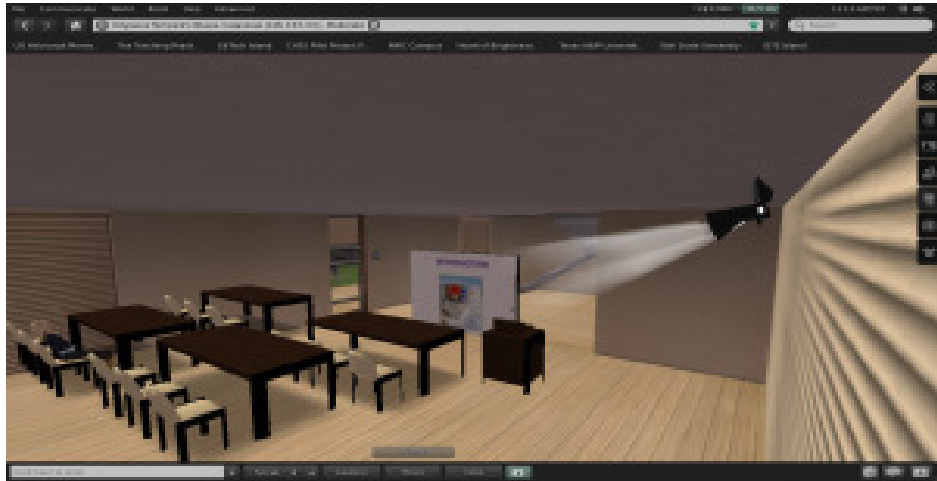
**Figure 34: Ithaca Initial Classroom Layout**

Renovating Ithaca into an SL classroom was not without its tests. The following excerpt highlights one unexpected occurrence:

My SL classroom looked like a scene from ‘The Apprentice’ - large glass boardroom table complete with six office chairs – too formal. I decided to redecorate today with a school theme in mind. Following some quick research in the SL marketplace, my new Victorian style school house furnishings arrived. They are small wooden desks complete with chairs attached (the chairs cannot be lost and require less time to arrange in rows). A green chalkboard completed the look. I began by unpacking my new fittings. Right arm out, select object, select ‘open’, copy to inventory, drag and drop to my classroom. Next, I positioned the desks in rows; backward, forward, rotate. Twenty minutes later, all were in line. After that, I positioned the chalk board, stretched ‘face’ to a suitable size and completed a quick test. Then I took a seat to relax and survey my work. At this point, my avatar dramatically animated into a rather compromising position. I quickly got up and tried another seat. Again, my avatar animated into another pout and pose. I tried another seat, yet another sexy pose. They had to go. Right arm out, right click - delete, right click - delete, right click - delete, right click - delete. I have to start from scratch again. Note to self and SL teachers: test all furniture for pre-set animations.

(Field note excerpt 2010)

Following this incident, I spent considerable time researching furnishings with low prim count, and without in-built ‘poses’. The property development took place over the next number of weeks and during this time my SL building skills and knowledge developed (Figure 33, Figure 34, Figure 35).



**Figure 35: Ithaca Classroom**

In addition to the basic furnishings, I experimented with a number of SL add-ons. As I do not ‘lock’ my property down whilst offline, my classroom includes a notice board with links to my blog and to the MDI webpage. Furthermore, I added a visitor tracker. This enables a resident to keep track of the number of visitors to the area, along with the time of visit and distance to the property. The purpose of the tracker was to have an indication of the heavy traffic times during the SL day. In an effort to be a good neighbour I added a robotic greeter (a bot) to Ithaca. R2-D2, however, proved a difficult employee:

I made R2-D2, my SL bot, redundant today. I spent hours figuring out how to script him to say ‘Hello, you are very welcome to Ithaca’ and figuring out how to get him to provide visitors with a greeting card. R2-D2 was positioned inside the door of Ithaca and added a nice aesthetic and functional finish to my classroom. Unfortunately, for some reason, he has taken refuge beneath the foundations of Ithaca. When I entered my home earlier today, I looked forward to his greeting. All I could see, however, was a red dot just above ground level with hovering text notifying me of his presence. Trying to extricate him from under the floor boards proved too difficult and he now permanently resides there. The red dot is the only indication of his presence.

(Reflective Journal 2010)

Despite billing as a suburban housing estate, I encountered relatively few residents in the area. Therefore, neither add-on proved particularly useful. I initially found this frustrating and somewhat disappointing. On critical reflection, however, the absence of other residents in this area made it an ideal location for SL newbies. At this stage, my attention turned toward the design and development of an SL module.

### **Stage Three: Transformation**

#### **Becoming an SL Teacher**

Prior to this stage, I had observed teaching in SL but had not personally engaged in the practice of teaching within the virtual world. This section provides an account of the development of an SL module, Religion in Cyberspace. First, I address the rationale for the module design and module context. Next, I identify the issues I encountered and my approach for overcoming challenges, which may prove useful for new SL educators. Finally, I present the final stages in the reconstruction of the SL learning space. In this way, I considered the events identified here as transformative moments in the process of becoming an SL teacher.

#### **Religion in Cyberspace**

In September 2010, I designed 'Religion in Cyberspace' a third year optional online learning module delivered through SL (Appendix 4). Online learning refers to a course where 'most or all of the content is delivered online' (Allen and Seaman 2010, p. 5). The participants were post-primary student teachers who specialize in Religious Education with an elective subject. The student teachers teaching placements occur in post-primary schools within the Voluntary Secondary, Community, Comprehensive and Vocational Educational Committee sectors. During their practicum, the students teach the state syllabi in Religious Education to Junior Certificate and Leaving Certificate level. Central to the syllabi is the core aim 'to appreciate the richness of religious traditions and to acknowledge the non-religious interpretation of life' (DES 2005, p. 3). In achieving this aim, the religious educator should encourage their pupils to be both a 'critical questioner and a reflective searcher' (DES 2005, p. 3). It follows then student teachers should also become critical questioners and reflective searchers in order to assist others in developing such competencies.

The encounter with a variety of religious and non-religious world views within SL had an influential effect on my design of the module. In particular, the depth and richness to the expression of world views in SL were striking. In some ways, SL could be said to reflect an increasingly pluralistic world. Religious pluralism 'is about recognising all faiths and none, about what it is to be Irish in all its wonderful forms' (Parker-Jenkins 2012, n.p.). Within their professional and personal contexts, the student teachers are part of a 'religiously pluralistic world' (Vogel et al. 2012, p. 108). MDI's philosophy is to provide student teachers with the skills and knowledge to teach within a pluralist, secular, multi-religious Ireland in the 21st century. Strategies to promote such skills and

knowledge emerge in the dialogue between religion, culture and the school (Williams 2005).

Religion in Cyberspace provides an introduction to the topics religion online and online religion (Helland 2000) within the context of SL. First, religion online refers to how communities employ technology, in particular SL, to provide information pertaining to their world views. This may take the form of a replica building, a museum or information boards with links to service information. Second, online religion refers to the actual practice of religion online, for example, this includes ritual practices and worship or prayer services within SL. At this point it is necessary to state the module does not include catechesis, faith-formation or evangelisation, nor is it designed to only support Catholic students. The module brings Religious Education, teaching methodologies and strategies, and technology together. The approach is constructivist and might be best described as a curriculum-led. That is to say, each lesson topic relates in some way to a topic the students will teach either on their school based practicum or at a later stage within their own classroom. In this way, the module also helps students to make the connection between the module content and their classroom practice. Appendix 4 provides a summary of the lesson topics, the learning outcomes, learning outcome assessment and the teaching-learning methodologies and strategies employed during the module.

The methodologies and strategies I employed to deliver the module are MDI approved. This is relevant since they will subsequently be employed by students during their practicum. In each lesson, I identified the methodology/strategy including the rationale for the choice. Additionally, during the lesson I highlighted each phase of the chosen method or strategy. In this way, students had an opportunity to learn through *observation* and *participation*. Essentially, this provided students with a lens to ‘see into teaching’ (Loughran 2007, p. 1) First, by making the methodology explicit student teachers had an opportunity to improve their understanding of the mechanics of employing such methodologies in the classroom. Second, and perhaps more importantly, student teachers had the opportunity to learn from within the methodology, as a pupil would in the classroom context. Furthermore, by drawing from a range of teaching methods I had a greater probability of reaching ‘more students in effective ways’ (Gardner 2009, p. 107).

When designing the module, I took on board the findings from Enochsson and Rizza (2009), as outlined in the Introduction to the thesis (see p. 8). By engaging students in the module through SL they had an opportunity to observe a teacher educator modelling the use of a technology. In this way the module provided a lens into the potential affordances and barriers of the deployment of such technologies in the classroom. It was both a demonstration of how to use technology and an opportunity for hands-on experience. It should be noted at this point that Teen Second Life shut down in December 2010, just before the module commenced. Currently, an age restriction of 16 and over is placed on the main SL grid. As a result, it can only be employed with senior cycle post-primary pupils. Nevertheless, I contend that the ICT skills developed as a result of participation in this module are potentially transferable to other virtual world contexts, for example, OpenSim.

### **Issues and Approaches**

In the design and delivery of the module a number of considerations had to be addressed. First, access to a ‘team of staff’ (Mayrath et al. 2010) was not an option. In addition, my colleagues had limited SL knowledge. Therefore, little SL technical support or advice was available from within my Institution. In addition, a small budget was available for the module. Further to this, other issues that were identified in the review of the literature required careful consideration (p. 56). These comprised module content, prerequisite teacher skills, Web technologies for module support, methods and forms of online assessment, technical support, the SL classroom and the feasible modes of classroom communication. Table 2 provides an account of ‘Issues and Approaches’.

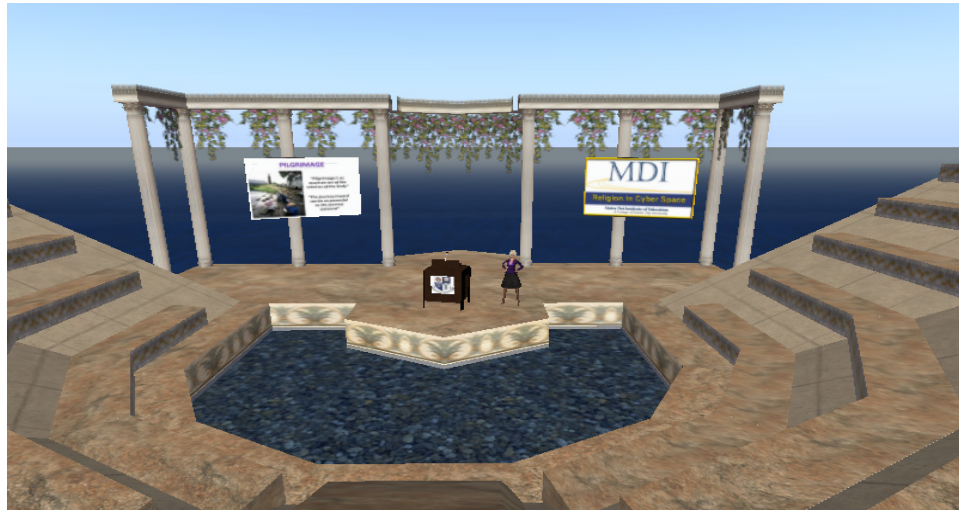
<b>Issue</b>	<b>Approach</b>
Designing Module	<ul style="list-style-type: none"> <li>• Each module lesson was linked to a relevant element of the JCRES/LCRES Religious Education Curricula</li> <li>• Lessons delivered by employing one of MDI’s approved teaching methods or strategies</li> <li>• Developed connections with SL community members in the related areas</li> <li>• Sourced suitable locations and resources</li> </ul>
Teacher Skills	<ul style="list-style-type: none"> <li>• Developed through immersion into the virtual world; process of <i>learning by doing</i> and observation of other teaching practices</li> <li>• In-world skills: preparation of slides, note cards, teleport links, notes for technical issues, roll-call techniques (taken in-world, double checked with transcript logs after lesson)</li> </ul>
Technologies for Module Support	<ul style="list-style-type: none"> <li>• Moodle: message sent to each student prior to the lesson including: lesson topic, start time, methodology, notes, class location, key activity</li> </ul>

	<p>(virtual world field trip/guest speaker), SLURLs for late comers.</p> <ul style="list-style-type: none"> <li>• Snapshots: student and teacher lesson snaps collated and posted to Moodle subsequent to each lesson.</li> <li>• Blog – Outlined how to get started with SL, video links, key technical issues (loss of sound, switching between basic/advanced mode, taking snapshots)</li> </ul>
Online Assessment Methods	<ul style="list-style-type: none"> <li>• Weekly lesson reflections (non-graded)</li> <li>• Assignments posted to Moodle (linked to JCRES/LCRES topics and methodologies employed during lesson)</li> <li>• Keeping of fieldnotes during the lessons (including snapshots and note for final presentation)</li> <li>• Class presentation based on SL learning experience (conducted in-world or offline)</li> </ul>
SL Technical Support	<ul style="list-style-type: none"> <li>• SL software placed on PCs in MDI.</li> <li>• Appropriate help made available for students using SL from laptops.</li> <li>• Support from Dublin Virtually Live during introductory sessions</li> </ul>
Location	<ul style="list-style-type: none"> <li>• Odysseus Tempest's Ithaca</li> <li>• Dublin Virtually Live Amphitheatre</li> <li>• Dublin Virtually Live – MDI Virtual Campus</li> </ul>
Class Communication Methods	<ul style="list-style-type: none"> <li>• Voice</li> <li>• Text Chat</li> <li>• Pre-prepared lesson script</li> </ul>

**Table 2: Issue and Approach to Designing SL Module**

### **Reviewing the Learning Space**

Following the design and approval of the module, my attention turned again to the learning space. As a result of size concerns consequent to lesson one, the use of Ithaca as the class base was reconsidered. Following some inquiries, suitable location was secured through Dublin Virtually Live (DVL). DVL is a three-dimensional recreation of Dublin city in SL (<http://www.dublinvl.com>). The space available to MDI for the duration of the module was an elaborate amphitheatre with semi-circular seating and a platform from which one can teach the class group (Figure 36, Figure 37). In this regard, it met the module requirements. Subsequent to the initial orientation lesson in Ithaca, DVL hosted the remainder of the module.



**Figure 36: Dublin Virtually Live Amphitheatre**



**Figure 37: Lecture Space in Dublin Virtually Live**

The single most striking observation made during this initial immersion into SL, is that the majority of the observed classes took place within designated SL classroom spaces, and employed traditional didactic teaching approaches. In this module, I aimed to include the wider SL community to encourage dialogue with different world views and, in particular, to observe the practice of faith within SL. In this way, the module fostered socialization by engaging students with the SL community and each other. As a result, the amphitheatre served as a space for introducing and concluding the lesson. The delivery of lesson content, however, occurred outside the boundaries of the classroom.

Virtual field trips included:

- OnIslam Virtual Hajj Simulation
- US Holocaust Memorial Museum 'Night of Broken Glass' Simulation

- The monastery of St. Catherine, Mount Sinai
- The Church and Monastery of St. Francis
- Vassar College recreation of the Sistine Chapel
- Adam ondi Ahman, The Church of Latter Day Saints
- First Unitarian Universalist Church of Second Life
- The Buddhist Centre for Meditation and Teaching

Toward the conclusion of the first module, Mater Dei Institute of Education opted for a permanent virtual space in DVL. This space takes the form of a virtual campus (Figure 38, Figure 39). The current classroom design includes integrated teleport links, shared media boards, working laptops, and numerous orientation task boards. The module is currently offered on the undergraduate BRelEd programme.



**Figure 38: Exterior of MDI in DVL**





**Figure 39: Interior of MDI in DVL**

### **Are We There Yet?**

At this point, a justifiable question is posed: How do you know you achieved immersion into the virtual world? I return to the role of the ethnographer to answer this question. The ethnographer aims ‘to do field research by doing and becoming – to the extent possible –whatever it is they are interested in learning about’ (Emerson et al. 1995, p. 2). This chapter provided a descriptive account of ‘*doing and becoming*’. Three key stages of immersion experienced during the rite of passage into the virtual world were identified. They comprise separation, transition and transformation. First, separation refers to the movement from the offline world into the virtual world. Second, transition refers to the period of adaptation and adjustment to the virtual environment. Third, transformation refers to the process of *both* learning and learning to teach within the SL environment. Within each stage, distinct sub-stages of development are highlighted. As a result of the rite of passage into the virtual world, I moved out of my comfort zone, from security into the unknown. In an effort to understand teaching in SL, I stepped away from assuming the role of teacher and assumed the role of student. Liminal moments, moments of darkness, questioning, and reflection interspersed the journey. This chapter concluded with the demonstration of the initial steps taken to begin teaching in SL. In Chapter 5, I further illuminate aspects of the remainder of the journey of immersion, with a focus on my teaching and my students learning within SL.

## **CHAPTER FIVE: TALES FROM THE VIRTUAL FIELD**

In this chapter, I present five themes using an excerpt-commentary framework. The themes represent the voices of the teacher and students who participated in the module 'Religion in Cyberspace'. The themes for discussion comprise:

- 1) The virtual teacher
- 2) Learner engagement in the virtual environment
- 3) The fear factor
- 4) Getting to grips with methodology
- 5) Virtual world place based education

## Theme One: The Virtual Teacher



Figure 40: The Virtual Teacher

Given the nature of this exploration, reference to teaching cannot be confined to one theme alone. This theme, however, exemplifies five key issues. Namely,

- Virtual preparation
- Loss of social cues
- Teacher presence
- The virtual learning space
- Voice verses text chat

It is generally accepted that the ‘sage on the stage’ model of content delivery dominates at tertiary level. Undoubtedly, there is a place for such a model of teaching and it has its merits. Within the virtual world, however, reliance on a ‘default model’ is not possible. Within the virtual world, the role and function of the teacher is subject to greater interpretation:

*The learning curve for the SL teacher is steep. The amount of ‘behind the scenes’ preparatory work is beyond that of delivering a ‘regular’ lecture. I have found myself spending days carefully constructing lesson plans, preparing note cards, setting up my class tools. My class tools include preparing teleport links, video links (to key learning theories) and Moodle notes. I have also found it useful to prepare scripts for my lesson content in case of technical difficulties (I can cut and paste into the text chat box if voice chat fails). The script also helps to keep me on track – teaching in SL brings many distractions (from ‘fly-bys’ to plagues of IMs to technical issues). The lack of ‘social cues’ is also quite difficult to get used to – it is surprising how attached we are to the ‘nod of a*

*head' or the 'look of understanding'. In the SL classroom, there is no 'wink and elbow language of delight'. At times, when I am in my SL class, I feel like a radio presenter even though my avatar is animated for speech gestures when I speak (moving her arms, nodding her head). I sometimes, however, find her detracting from, rather than helping, my sense of online presence. Then my phone rings or there is a knock at my door and I am back to 'reality' again.*  
(Field note entry March 2011)

The excerpt illustrates a number of important issues.

### **Virtual Preparation**

As Chapter 2 and Chapter 4 of this research demonstrate, virtual world modules require significant resource preparation. Broad scale preparation requirements included the design of the module, securing an SL classroom, and the creation of a professional teacher avatar. At a micro-level, however, the SL teacher requires a thorough knowledge of the virtual world (for sourcing appropriate educational locations), and competent SL building skills (for construction of slide shows, teleport links and note cards). Despite substantial '*behind the scenes*' preparation, unexpected challenges emerged during the module delivery.

Three challenges identified in excerpt included '*Fly-bys*', '*technical issues*' and '*plagues*' of instant messages. First, '*Fly-bys*' are uninvited guests who drop into class for fun. As the name suggests, '*Fly-bys*' circle overhead before making a descent into the classroom. On landing they either took a seat or dramatically wandered around the classroom, usually interspersed with dance moves. While undoubtedly entertaining, they consumed valuable class time. In most cases, no significant difficulties occurred, however, '*Fly-bys*' required careful handling and helped enhance my in-world interpersonal and classroom management skills.

Secondly, technical difficulties also added to the steep learning curve. Such challenges include issues of students unable to hear voice-chat, problems with teleportation and some incidents of the entire SL network slowing down (referred to as 'lag'). When the students' computers experienced lag, the quality of the learning experience was impacted. This caused students some frustration as they could hear the class activity but were unable to move their avatar. The simplest technique to overcome this is a quick restart of the SL system.

Thirdly, as students learned to navigate in the virtual world, I had to learn to manage their '*plagues of IMs*' requesting help. Consequently, the use of a prepared lesson script proved helpful '*to keep me on track*' while simultaneously responding to student questions through a back channel of instant messages. Other techniques included Moodle page resources and a '*cut and paste*' list of responses to answer basic technical problems. While technical difficulties were much less than anticipated, they added a new dimension to managing a lesson.

### **Deciphering Social Cues**

In the virtual world, communication is mediated through an avatar. As a result, one does not have immediate access to '*normal*' or recognised non-verbal social cues. According to Zeki, 'non-verbal communication can be an important source of motivation and concentration for students' learning as well as a tool for taking and maintaining attention' (2009, p. 1443). In the offline classroom, learner engagement at a basic level can be recognized through facial and bodily social cues, for example, nodding in agreement, eye-rolling, smiling or frowning, and the folding of the arms. Such cues, however, are not immediately recognizable in the virtual world. As a result, I identified initially feeling '*at a loss*' as the conventional '*nod of a head*' or the '*look of understanding*' cues were absent. Students corroborated this feeling of '*loss*':

*Compared to a real lecture the biggest difference I found was not seeing the facial expressions or physical gestures. (Victoria)*

*It's difficult when you can't see the persons face, they might mean things in a different way than you heard it. (Emma)*

Nonetheless, SL is an example of a rich media source (Daft and Lengel 1986) as it can support multiple verbal and non-verbal cue systems. For two fundamental reasons, I felt it important that I identify and employ a variety of cue systems. First, they were important tools for enhancing my in-world non-verbal skill set. Second, the identification of such cues was essential for assessing student engagement. By way of illustration, I adopted six methods to improve my in-world non-verbal skills. First, I employed an expressive 'teacher voice' throughout my lessons. This involved varying pitch and tone to indicate significant points, and demonstrate my personal engagement with the lesson topic. Second, I animated my avatar to move her lips and adopt appropriate speech gestures in time with my voice. At a basic level, this provided another level of expressiveness. Third, when based in the classroom, I purposely

repositioned my avatar around the room, and approached students when addressing them and when listening to feedback. At a visual level this indicated I was listening to the feedback and it also helped to keep students focused on what was happening in-world. Fourth, during lessons or field trip activities I provided support through the back channel of instant messaging and additionally employed avatar gestures to encourage students with tasks. Fifth, at the beginning and end of lessons, I employed media boards to focus learning and draw attention to the key concepts of the lesson. Finally, through class activities, field trips and short assessment tasks I varied the stimulus where and when appropriate. In sum, such tools helped the development of my in-world non-verbal skill set. As a result, students were provided with some recognisable social cues.

Equally important, in order to 'read' student in-world social cues I adopted an activity based pedagogical approach that required active student participation through the avatar. This provided a measure of observable feedback on student engagement during the lesson. Two techniques were employed. First, students were encouraged to use their in-world speech gestures and put their avatar hand up to demonstrate a willingness to offer a contribution. This acted as a turn-taking mechanism and helped to keep students focused on in-world activities. Second, students were encouraged to engage actively with all in-world activities through field trips or related activities. In order to do this they had to engage with the SL interface and in-world resources. From a teacher's perspective, the movements of a student's avatar provided a visual cue to their level of engagement and in-world ability. Remaining at a level of observation only for deciphering learner engagement is problematic for the in-world teacher. With this in mind, students' written contributions and after class discussion provided an opportunity for a deeper level of engagement analysis.

### **Teacher Presence**

Next, the excerpt identifies how teacher presence required reinterpretation in the virtual world. In the virtual world, presence has two meanings; teacher presence, and 'being there'. First, presence refers to the concept of teacher presence as understood in the field of teacher education. Here, teacher presence is:

A state of alert awareness, receptivity and connectedness to the mental, emotional and physical workings of both the individual and the group in the context of their learning environments and the ability to respond with considered and compassionate next best step....reflective teaching is a practice that demands presence (Rodgers and Raider-Roth 2006, p. 266).

Additionally, teacher presence is assisted through the creation of quality learning experiences (Hayes and Weibelzahl 2009). In recognising the importance of this, I attempted to bridge the distance between the participants and myself in a number of ways. In a deliberate attempt to establish teacher presence, I designed and constructed a professional teacher avatar (*as previously outlined*). Appearing in class as a giant dragon or flying saucer might have undermined my online teacher presence. Admittedly, however, it would have made for an enjoyable class discussion. In order to confirm my teacher identity I began each lesson by situating my avatar to the front of the room. This purposeful action established my role within the space. Further to this, I followed carefully structured lesson plans that sought to create engaging classes. Through the avatar then, I performed and committed to the role of teacher. As earlier identified, this included the animation of my avatar for speech gestures to walking around the virtual classroom during phases of teacher exposition. In effect, it was an attempt to 'reduce the physical and psychological distance' between the students and myself (Hayes and Weibelzahl 2009, p. 57).

Nevertheless, despite careful construction of my professional online identity, I encountered difficulties being '*present*' in the environment. The broad use of the term *presence* is sometimes equated with an experience of feeling at one within a virtual environment. Sheridan describes presence as a 'sense of participation and involvement' (1992, p. 121). Further to this, Lombard and Ditton write that presence in a mediated virtual world occurs when that world 'seems truly "natural," "immediate," "direct," and "real," a mediated experience that seems very much like it is not mediated' (1997, n.p.). Although this may be true, such observations tend to overlook the fact that within SL at times 'we see ourselves, not through a first-person perspective but as a distinct other; we watch the body that represents us from the outside' (Martey and Consalvo 2011, p. 166). In the opening excerpt, I described my early experience as a teacher in the virtual environment as akin to being a '*radio station presenter*'. The avatar is '*moving her arms, nodding her head*'. At times, however, I attempted to disassociate myself from my avatar as I found her '*distracting*'. This suggests that my experience of presence was influenced by environmental factors. Two categories of environmental factors are identified in the excerpt. First, factors internal to the virtual world had an impact on my presence within that context. These included '*plagues*' of instant messages and a distracting avatar animatedly nodding and gesturing. Both of which initially interrupted the flow of the lesson and the feeling of being in the environment. Second, factors



external to the virtual world had an impact on my presence within the virtual context. These included a telephone ringing or colleague knocking on my door, such distractions brought me back to the offline context or *'back to reality again'*.

### **Virtual Learning Space**

Learning spaces 'encompass the full range of places in which learning occurs, from real to virtual, from classroom to chat room' (Wilson and Randall 2012, p. 2 citing Brown 2005, n.p.). In this research, I designed and created a learning space in the virtual environment.



**Figure 41: The MDI Learning Space**



**Figure 42: MDI Classroom – Phase One**



**Figure 43: MDI Classroom – Phase Two**

Figure 42 and Figure 43 illustrate the SL classroom, which went through several design phases. Figure 42 illustrates the earliest version, while Figure 43 illustrates the most recent version. Clearly ‘nothing we see on a computer screen is objective and given, everything is created; code is written, graphics are drawn, sound is recorded, and the actions available to the user are a result of conscious or unconscious design decisions’ (Skold 2012, p. 15). I made conscious design decisions in relation to the functional and aesthetic features of the classroom. First, the classroom comprises a number of seats and desks, a lectern to the front of the classroom and a media board for displaying images or slides. To the back of the room are seven large posters. Each poster, with integrated teleport link, represents locations we travel to during the module. Students can click to teleport to module destinations. To the right, a notice board displays images by the students during their fieldtrip excursions. To the left, are interactive illustrations of traditional learning theories, for example, the zone of proximal development, Piaget’s stages of development and classical conditioning. Each illustration has an integrated video or web link to a relevant article, which opens when clicked. As the classroom space is sound enabled, a student can view videos in-world. The web-enabled laptops, visible on each desk, allow students to post to their Moodle page during class. For aesthetic effect, images of key learning theorists, such as Piaget, Papert, and Vygotsky are visible around the classroom.

Despite designing the space with interactivity in mind, at a surface level the classroom communicates a similar message to the traditional lecture space (Figure 41).

*When the students first arrived in class today, I expected them to run wild, fly up to the ceiling, dance a jig, and have fun. Instead, I was rather disappointed.*

*Those with the necessary skills immediately took a seat. One by one they sat down in quick succession. Those who could not figure out how to sit down became briefly agitated; ‘what do I click?’; ‘How do you get it to sit down again?’; ‘It won’t sit down for me?’. Later, when we returned from our fieldtrip the students all returned to their seats (the ones they had sat in at the start of the class). When class was over, they stood up (as they would when leaving the physical classroom), shuffled about a little and then logged off.*

(Field note entry January 2011)

The design of the virtual classroom suggests an attempt to shape interaction. In this construction, students were spectators and dutifully took their seats. The hidden discourse within this space confirms the traditional distinction between teacher and learner. The teacher is separate to the students, and the students adopt a passive role in the learning process. On reflection, the design of the virtual classroom highlights three issues. First, it highlights an attempt to regulate student and teacher roles in the virtual world. Second, it leads to an assumption of a teacher-centred pedagogy; the students seated, the teacher at the lectern engaging in information transmission. Additionally, at a surface level, the setting appears to promote a passive learning approach which does not require or encourage student interaction to a great degree. Ultimately it appears to be a lecture space within a virtual world. Third, the design suggests an attempt to influence and control behaviour. Despite the available technology, as a novice SL teacher, I recreated the actual in the virtual.

Although I initially considered the mirroring of the offline in the online problematic, the familiarity of traditional classroom also turned out to have positive consequences. First, the classroom setting clearly established the expectations of behaviour. The ‘newbie’ student, therefore, had an innate understanding of ‘how’ to act and behave within this environment: *‘one by one they sat down in quick succession’*. Second, the creation of a recognisable space provided a sense of security. Consequently, the classroom itself can be viewed as a tool in the creation of a positive learning environment. As my understanding of the role of the SL classroom developed, I identified that this traditional classroom design served three purposes. Firstly, it was a gathering space. It provided a space to assemble students to introduce and conclude the lesson topic, to monitor attendance, and a place to assist students with technical issues. As a result, students referred to it as *‘home’* and their *‘base’*. Secondly, as *‘home’* it provided a safe space for student-led discussion and debriefing following class activities. Additionally, as the environment is flexible, seating could be rearranged to encourage inclusivity and

dialogue. Thirdly, the integration of technology into the virtual classroom (teleport and media links) encouraged students to interact and engage with their environment. This facilitated the development of key skills required to negotiate the environment. It became clear that although the structured SL classroom was an aesthetic and functional tool, it was not the primary learning space. Instead, the world outside the constructed SL classroom walls was the learning space. This topic is explored further in Theme 5 ‘Virtual world place based education’.

### **Voice Verses Text Chat**

As earlier identified, what is taken for granted in the offline context is sometimes ‘lost in translation’ in the virtual context. In this research, students chose not to employ verbal communication:

*Students are not using voice chat. I know they all have microphones, but they have not made any effort to communicate through ‘voice’ during the lessons. During the debriefing sessions I have made a deliberate move from voice chat to text chat to encourage student participation. Once I switch to using text chat the discussion is flooded with questions, comments and responses. Interestingly, I find students are engaging better, and with more enthusiasm than I have encountered in face-to-face lessons. The problem now is keeping up to speed with the conversation. Listening to responses proves difficult. Cues for turn taking are also difficult to ascertain. Many threads of conversation are occurring simultaneously, and I must sift out the key points, scrolling up and down through the text chat box. Regularly, students wander from the initial question. Bringing them back on track takes careful negotiation –careful not to dampen the enthusiasm. I will continue trying to encourage the group to employ voice chat, but text chat is my fall-back tactic for class discussions for now.*

(Field note February 2011)

This passage raises important issues. First, students had the ability to use voice in the SL environment, but choose not to. Second, I automatically chose to deliver lesson content and engage in discussion through voice instead of text chat. Third, in order to facilitate productive class discussions I had to reconsider my communication methods and include text chat communication in my lesson delivery. Fourth, when we all employed text chat as the main mode of communication the discussion was ‘flooded’. A broad interpretation of the passage suggests students were uncomfortable to contribute to the class discussion in front of their peers. Yet the text chat logs gathered throughout this research testify this was not the case. Students willingly contributed through text communication.

In an attempt to understand the preference for text over voice chat, I discussed the issue with students. They suggested pragmatic reasons for employing text chat: *'it's just easier to use text chat'*; *'I can keep up with the conversation better that way'*. Moreover, students asserted text chat enhanced their online identity: *'I sound better in text chat'*; *'I feel stupid talking to my computer, text chat is better'*. While others argued, *'nobody wants to hear their own voice coming back at them'*. The data suggest that students' experienced disruption to the flow of the lesson when using voice chat. Moreover, the data seem to suggest the use of voice chat might have impacted on students' experience of presence in the virtual world, for example, one student identified *'talking to'* the computer. This heightened awareness of the offline context, which had the effect of making the student feel *'stupid'*.

The preference for text chat over voice chat is not a phenomenon unique to this group of participants. Turkle refers to it as an 'avoidance of the voice' (2011, p. 207). At a basic level, the use of voice contributes to a picture of another's identity, for example, gender and age. Unfortunately, however, voice is employed to 'make a judgement about a person's intelligence' (Williams et al. 2007, p. 432). As this research demonstrates, the availability of alternative channels of communication means voice can be avoided with relative ease in the virtual world. As a result, the projection of the self can be carefully constructed. With some thought, a student has an opportunity to construct their identity anew; they can write, edit, re-write, and when satisfied with the construction, post their thoughts. In this research, the technology provided students with an opportunity to *'sound better'*. As a teacher, I identified students were *'engaging better'* than in the *'face-to-face'* context. Without a prepared script, the use of voice during classes might have undermined the creation of this *'better'* self. Nonetheless, I am in agreement with Walther who suggests that it is quite unlikely that individuals can convey 'being articulate or being humorous' unless they possess such characteristics (Walther 2011, p. 454).

The excerpt also highlights the challenges associated with synchronous text chat communication. As a consequence of 'flooded' text chat, multi-threads of synchronous conversation were happening. This impacted on the immediacy of feedback as I had to engage in *'scrolling up and down through the text chat box'* in order to keep up with the discussion. This challenge has been identified by other SL educators and researchers (Nesson and Nesson 2008; Wadley et al. 2009; Wadley 2012). In overcoming this I had

to learn to search within the text chat to '*sift out the key points*' but also to add rigour, ask questions and, should discussions wander, '*steer*' student '*back on track*'. In sum, despite the multiplicity of communication channels available, the students favoured the use of text chat over voice chat. Therefore, in order to engage with students, I had to modify my practice in a considered and creative manner.

### **Summary**

Theme 1 illustrates considerations for the virtual world teacher. Despite comprehensive preparation, a number of unexpected challenges emerged during the delivery of the module. First, as a result of the absence of a physical presence in the virtual world, non-verbal cues were not immediately recognisable. Consequently, group dynamics, student engagement and teacher motivation were not easy to '*read*'. In addressing this challenge, I illustrated methods employed to enhance in-world teacher and student non-verbal skills and communication. Such methods had the effect of making visible that which we take for granted in the offline world. Next, I identified how '*teacher presence*' takes on another meaning in the virtual world. I identified how I developed my in-world teacher presence, but simultaneously also experienced '*lack of presence*' as a result of environmental factors both internal and external to the virtual world.

Next, I illustrated how I reverted to the familiar when designing and creating the SL classroom. The resulting design had identifiable benefits and challenges. First, as the classroom setting was instantly recognisable the '*newbie*' student could easily identify and adopt their '*normal*' tertiary level learner etiquette. This may have helped to reduce anxiety in the virtual world (Goffman 1959). On the other hand, the '*default*' classroom engendered perceptions of passive learning. As the module progressed, such perceptions diminished. In the final section, I identified the students' preference for text-chat communication. The use of text chat facilitated students in their projection of a '*better self*' (Turkle 2011). As a result of text chat communication, new classroom management tools, such as cues for structuring '*turn-taking*', were required. This theme builds on the data presented in Chapter 4. In sum, it presents an account of the act of teaching in the virtual world and the associated challenges.

## Theme Two: Learner Engagement in the Virtual World



**Figure 44: Learner Engagement in the Virtual World**

In this theme, learner engagement in the virtual world (Figure 44), I identify six factors that affected learner engagement. They comprise:

- Avatar identity
- Students' experience of presence
- Co-presence
- Affective engagement
- Participation
- Reality

### **Avatar Identity**

In the world of SL, avatar choice acts as an in-world physical representation of the user. In this research, the participants were third year student teachers, two male and six female. As a consequence of the nature and size of the Institute, the participants knew each on a first name basis and shared an offline history. In the first class, students



created their avatar. Toward the end of the class, we participated in a virtual world shopping trip to purchase avatar clothing. Discussion about avatar choice occurred after class in conversation with the researcher:

*I thought it was great craic, like having a Barbie; you can change it into anything you want, like fantasy clothes or whatever.*

(Emma)

*I changed the appearance of my avatar during the class and made him short and wide which was fun. I also changed the skin colour of the avatar and tried to change its clothes but I think I have to buy clothes somewhere.*

(Ryan)

*I'm waiting to find a nice shop like Abercrombie to spend my Linden Dollars*

(Marissa)

*I really enjoyed changing my appearance and the structure of my avatar. I found it hard at the start but when I got used to it, it was really enjoyable and easy.*

(Lauren)

*I just chose a female avatar, one that resembles me. I chose this avatar simply because she was normal looking.*

(Mary)

*The rationale behind my decision is simple. I felt it was the only character that remotely reflects me, as other such characters included a dog and a robot.*

(James)

The statements and general feedback suggest that students found the creation of an avatar an enjoyable experience. Surprisingly, despite the opportunity to redefine their physical attributes in the virtual world, students' avatar choice reflected their offline physical identity. All students created and maintained humanoid, Caucasian and gender aligned avatars for the duration of the study. In addition, the students chose traditionally gender appropriate clothing. As a result of maintaining their 'cookie-cutter' avatar appearance for the course of the study, students' 'newbie' status was evident to other residents. Over the duration of the research, no one participant intentionally deviated from the group norm.

The choice of a generic avatar that '*resembles me*' is not uncommon. This finding is in agreement with Mortey and Consalvo's research on avatar choice, which found that out of 211 research participants 'almost every single participant was humanoid, attractive, and, on some level, conventional' (2011, p. 179). They also found that the participants 'largely aligned their avatar's gender with their offline gender' (2011, p. 174). Despite



the blank canvas, participants in this research chose to remain closely aligned to their offline physical identity and group norm. Essentially, the participants attempted to recreate their offline identity in the virtual world. The choice of a persistent avatar identity that *'resembles me'* demonstrates an attempt to author an authentic self in the virtual world.

On two occasions during the research, participants' avatars deviated from the group norm. In both cases, the experience caused some distress. The first instance occurred during the orientation session. As a result of a technical glitch, one student's avatar did not download fully. As a consequence, she appeared as an egg for the duration of the class. Being represented as an egg avatar caused the student concern and great amusement for her classmates. The student requested to be changed back *'from an egg to a human'*. As I had not encountered this before, it took some time. As the class progressed, the student continued to wail about being *'an egg'*. This demonstrated the student clearly cared about the appearance of her avatar within the group. In the wider social media world, the use of the 'white egg' in place of an avatar is a tell-tale sign of a newbie (for example, on Twitter). Once returned to human form the student laughed about the incident but made frequent reference to the incident for the duration of the module.

The second example of a participant's appearance deviating from the group norm occurred later in the module. The student attended a lesson wearing a black face mask. The mask, while clearly visible was not mentioned. When the lesson concluded, the student approached for help: *'@Ody: It doesn't let me detach the mask'*. The student did not know how the item attached to his avatar's head and it caused enough distress that the student asked me to remove it from his avatar. Both cases provide examples of participants wish to adhere to the group norm, and the resulting anxiety caused when deviations from the group norm occurred. Whatever digital body one authors, it becomes the vehicle for experience and expression in the virtual world (Taylor 2002). In sum, there was little evidence of diversity through avatar choice in this research.

### **Students' Experience of Presence: 'Being There'**

The data demonstrate students' varying conceptualizations of presence. During lesson two, students travelled to St. Catherine's Monastery (Figure 45). St. Catherine's Monastery simulation includes a manuscript library, an icon gallery, the Burning Bush, and several prayer spaces.



**Figure 45: Icon Gallery in St. Catherine's Monastery SL**

Following the class, students reflected on their experience of participation in the class activities:

*It was as if we were tourists visiting this monastery. My bedroom was not what surrounded me anymore, I felt as though I was actually in the monastery. I arrived late as I was figuring out how to listen but I soon got it. I visited the burning bush and was walking all around the monastery.*

(Marissa)

*I felt as though we were able to leave the world we were currently in and fully understand what happened to Catherine in her life through the use of SL.*

(James)

The language employed by students suggests the simulation provided a sense of social realism, a believable space in the virtual world. Although the students were not physically in the environment, they identified an ability to leave ‘*the physical world*’ and psychologically immerse into the virtual world. This level of assimilation is a salient feature of learner engagement in a virtual world:

Subjects have to give up the sense of presence in one environment to achieve a stronger sense of presence in the other one (North et al. 2002, p. 64)

The excerpts further demonstrate presence as a form of transportation from one context to another. Marissa commented ‘*my bedroom was not what surrounded me anymore*’ and that she ‘*arrived late*’, while James identified being able to ‘*leave the world we were currently in*’. Following another lesson, Marissa stated: ‘*in the class we visited the Buddhist meditation centre, where we were transported down to the gardens to meditate*’. Subsequent to a class visit to the Anglican Cathedral in SL, James described having ‘*almost like first-hand experience of the Church*’. Similarly, others described

being ‘inside’ the virtual world and ‘being there’. The experience of presence as transportation was, no doubt, facilitated by the inclusion of virtual world field trips in the module.

The students’ experience of presence, however, varied dramatically during the module. In the following short excerpt Marissa, who earlier described feeling as though she was ‘actually in the monastery’, identifies difficulties with being *present* in the virtual world.

*I feel in real life there is much more engagement, like you can have anyone stroll in here and pretend they are you. I could be doing something else at my computer or get distracted more easily than if I was at a lecture.*

Here, Marissa highlights the factors which affected her experience of presence in the virtual environment. The student refers to the offline world as ‘real life’. In contrast to the virtual world, she considered ‘real life’ to be ‘much more engaging’. The student described her experience during the lesson as being ‘at my computer’ indicating an awareness of being in both contexts (online and offline) simultaneously. The offline context, however, provided a greater variety of stimuli that caused the student to ‘get distracted more easily’. Marissa’s reflections are consistent with my experience of presence, as identified in Theme 1 (see p. 122). It is somewhat surprising then, that students identified persistent levels of co-presence throughout the module.

### **Co-Presence: ‘Being There Together’**



**Figure 46: Being There Together**

Despite the varying degrees of presence experienced by students over the duration of the SL module, the language they employed illustrates persistent levels of *co-presence*. Co-presence can be defined as the experience of ‘*being in*’ the virtual environment together (Zhao 2003; Dalgarno and Lee 2010). It is a feeling as though ‘another person is there’ (Nowak 2001, p.7 citing Bull 1983, p. 162). It is further argued that co-presence is more significant than an understanding of another tangible presence in an environment with you (Figure 46). It is a ‘sense of connection with another mind’ (Nowak 2001, p. 8). Consequently, co-presence requires interactivity between persons within a mediated environment.

Students identified a collective moving ‘*together*’ within the virtual environment: ‘*we were tourists*’; ‘*we went together to the Church*’. Other students proposed ‘*after a while you become completely immersed in SL, so despite the physical distance between lecturers, guest speakers and other students, you really feel like they are in the room with you*’. Drawing on Zhao (2003), I identified four interrelated factors which contributed to the perceived sense of social connection, of ‘*being together*’ in the virtual world. First, co-presence was established as a result of students’ recognition of their shared social relationship, a class group. Second, co-presence emerged as a result of reciprocity, helping one another within the virtual world. Third, being a small group, students were mutually accessible to one another. Finally, through the use of text chat and instant messages, students experienced being ‘in touch’ with one another. Interestingly, the experience of ‘being there together’ is considered a key affordance of virtual world education (Lombard and Ditton 1997). Next, it is argued that affective engagement heightened the experience of ‘*being together*’ in the virtual world.

### **Affective Engagement**



**Figure 47: St. Michael the Archangel Monastery**

In addition to the acknowledgement of varying levels of presence and persistent levels of co-presence, students described their learning using the language of the affective:

*I felt as though as I was actually in the monastery. (Figure 47)*  
(Marissa)

*I really enjoyed changing my appearance and the structure of my avatar.*  
(Lauren)

*I believe it is a great place, I loved being able to fly and being able to explore, I want to learn more.*  
(James)

*I feel that what we learned in this class would prove extremely useful and vital for my future classroom practice. I feel that as a teacher you would definitely be able to incorporate this information within the classroom.*  
(Diana)

*I loved the way in which you were able to explore. I had great fun. I felt as though when I was meditating in second life I was actually meditating in real life and this is the excellent thing about second life you become part of it while you are in it.*  
(Marissa)

Affective engagement in the virtual world was evident in the student comments presented here, and throughout the data. The role of the affective has long been identified as an important factor in learner engagement (Krathwohl et al. 1974). Affective engagement implies the student has a personal interest in the learning activity. Personal interest identified in this excerpt includes motivation, curiosity, topic interest, and fascination with learning. In an early discussion, Ryan commented that he had ‘*stayed around for about another hour to try and figure out how to use it more effectively*’. This demonstrates Ryan’s personal motivation to develop his SL skill set. Personal motivation was identified throughout the data:

*There was never a question of me not turning up for class. I wanted to be there, I wanted to learn, I can use this in my own teaching. It wasn’t a chore.*  
(Victoria)

*I think the module was worthwhile in terms of my own learning. It helped me to understand how to use methodologies creatively. I wanted to learn more and this was a worthwhile course for me.*  
(Emma)

*I am more focused and engaged than in ‘normal’ lectures. The activities are fun and I want to be here, it will help my own teaching.*  
(Lauren)



Personal motivation directly related to the students' conception of 'worthwhile' learning. In this case, learning was considered worthwhile when it contributed to their 'own teaching'. Consequently, finding meaning and value within the experience made participation productive, rather than 'a chore'. At this level, students identified their experience within the virtual world as one of *meaningful participation*. Nonetheless, students questioned if participation in virtual activities was 'full participation'.

### Participation

Lesson 6 explored the concept of Cyber Sangha (online Buddhist communities), which included participation in meditation in the Buddha Centre in SL (Figure 48).



Figure 48: Meditation in the Buddha Centre



Figure 49: Lesson Six Class Discuss

On return to the amphitheatre (Figure 49), a lively discussion developed around participation in the virtual world:

*I think realistically to really engage in mass or in a meditation you need to physically be doing it, but it [SL] is as close as to the real thing as you can get, but clearly not the real thing.*

(Lauren)

*Well, I think that in the lesson four, when we went to mass in the Monastery, we participated and were able to respond 'Amen', and such, so I think you can participate it is just a new means of participation.*

(Emma)

*I think to fully participate you need to be in a sacred space. I think you need to physically be in a sacred space not just mentally or visually. I'm not arguing against SL.*

(Mary)

*I think that to engage fully one cannot do it through the medium of a computer/avatar.*

(Victoria)

*And as well as this you are not fully focused as you are directing it [your avatar] all the time.*

(Lauren)

*I think you do not need to [be physically present], I understand we did not receive the Eucharist but we did participate in the mass we attended.*

(Emma)

*But mass is about receiving the body of Christ. You can't receive that through your avatar.*

(Lauren)

*You need to experience things with your five senses not just vision and hearing or this thing.*

(Mary)

This excerpt raises some fascinating points. First, the majority of students verbalized an insistence that one cannot 'really' participate in a meaningful way 'through an avatar'. Second, avatar usage is described as though the avatar is a puppet, a virtual world Pinocchio. Students referred to their avatar as 'this thing' with little reference to any personal connection. They described 'directing it' to complete tasks and in-world activities. Third, they proposed one cannot meaningfully participate through 'two senses – hearing and vision'. In sum, the majority of students argued that although the virtual world provided a level of participation that was 'as close as you will get to the real thing' it was 'clearly not the real thing'. Nevertheless, the earlier data indicate students

still found the experience worthwhile because it informed their own teaching. It is evident from this excerpt, however, that students considered the degree of participation limited because it is a mediated experience.

### **Reality**

The ontological question of reality was evident throughout the data.

*You are constantly reminded it is not real life e.g. being able to fly.*  
(Lauren)

*SL isn't a substitute for reality, because in real life there is much more engagement.*  
(Marissa)

At first, the excerpts appear to indicate the students were employing the noun 'reality' to convey that the virtual world is an inauthentic space, inferior to a tangible reality. As the earlier data demonstrates, however, students highlighted the personal meaning they experienced from the virtual world activities. Moreover, students asserted they could '*do things here we can't do in real life*'. While Marissa was adamant that '*there is much more engagement in real life*' others proposed that the medium, despite its virtuality, still provided a quality experience that was '*better than a real life lecture*'. The students' difficulty in conceptualizing the experience of the virtual world is additionally highlighted in their descriptions of their avatars as '*it*', '*like a puppet*' or a '*thing*'. I returned this sub-theme to students for further discussion; however, students continued to find it challenging to conceptualise their experience:

*'In the real world, I mean in the physical world, we can't do those things'; 'It is real but it isn't, if you know what I mean'; 'It's real, virtual reality, I experienced it, but it isn't really real'.*

Interestingly, students did not describe their relationship with others in the virtual environment as inauthentic:

*I played the Sims when I was younger, but this is completely different because the other Avatars are real people.*  
(James)

Throughout the data, students identified '*being together with*' their class group and others in the virtual world. Although the SL technology mediated in-world relationships, such relationships were considered real. This was demonstrated in the



language of co-presence and observed through student collegiality. Nevertheless, the real and the virtual remained complex dichotomies for the participants throughout the module.

### **Summary**

This theme highlights the identifiable factors that had an impact on learner engagement in the virtual world. Firstly, students' avatar choice lacked diversity. They did not deviate from the group norm for the period of the module. This indicates a desire to adhere to conventional expectations. When deviations occurred students became anxious and this had an impact on their in-world experience. Secondly, learner presence in the virtual environment varied during the module. Some felt '*absorbed*' and referred to '*being there*' or being '*transported*' into the virtual world, while others were always aware of the external environment with its associated distractions. Despite this fact, co-presence was evident throughout the data. This is a significant finding since peer collegiality has an impact on learners' online experience (Girvan et al. 2010; Cheong 2010; JISC 2009a; Child 2010; Salmon 2011). Students frequently referred to '*being there together*'. This may indicate students' group identity persisted in the virtual environment, while students' individual experience of presence was inconsistent. Thirdly, affective engagement was evident in the data. Despite inconsistent levels of individual presence, students described their experience in the virtual environment using the language of the affective. The data suggest the experience had personal meaning for the students and as a result they were personally motivated to engage in learning. Fourthly, students deemed the experience meaningful because it was useful to their teaching. This accords with earlier cases presented in Chapter 2 (Girvan et al. 2010; Jarmon et al. 2009; Cheong 2010; Esteves et al. 2011). Fifthly, throughout the module, students struggled to verbally express their virtual world experience. The use of an avatar provided a virtual body to experience the virtual world. The avatar, however, was described in Frankenstein terms as a 'thing' or 'it'. This indicated a possible lack of personal connection between students and their avatar. In addition, students found it difficult to explain the virtual world '*it is real but it isn't, if you know what I mean*'. The data suggest students questioned the authenticity of the environment and consequently their actions within the environment. In sum, this theme 'Learner engagement in the virtual world' has highlighted some of the salient factors affecting learner engagement in the virtual world.

### **Theme Three: The Fear Factor**

The theme of fear was identified in the data. However, there are many nuances within this theme that require examination. First, students feared this new technology, and specifically what it might mean for them. Second, students perceived anonymity as a potential enabler for online predators and this caused a level of concern. Third, students considered the positive benefits of anonymity for those who may be fearful in a classroom context. Finally, the data suggest humour played a key role in diffusing feelings of fear in the virtual world.

### **Is This The Way of The Future?**

The Introduction to this thesis presents the debate surrounding the skills, identity and competencies of the Millennial generation (Tapscott 1998; Prensky 2001; Squire 2002; Beck and Wade 2006; Palfey and Gasser 2008; Tapscott 2008; Prensky 2010) (see p. 4). Empirical research has questioned the validity of the digital native/digital immigrant divide (Bennet et al. 2008; Hosein et al. 2010; Jones et al. 2010; Jones and Healing 2010). The data from this research contributes further to the debate. In this research, students expressed concern regarding the employment of virtual worlds in the classroom. The following excerpt illustrates a sample of students' concerns:

*It is fine for this module, but I'd be afraid I would get addicted to it if we had every class here; You know people could log in and have lots of accounts, you can't trust who you are talking to.*  
(Ryan)

*I entered this virtual world I never thought existed and I'm in my bed in my pyjamas yet attending a class and completing tasks, to be honest it scares me because is this the way of the future?*

(Marissa)

*Overall, I think we shouldn't be looking at this as the new classroom.*

(Marissa)

*I've never played computer games, I'm afraid I'd get addicted. I have friends that are addicted.*

(Lauren)

*Unfortunately the internet is full of predators and SL is no exception to this...at the moment it is not a secure environment, if this (SL) was to grow the threat of malicious people to students would be greater than ever.*

(James)

*As a teacher you are leaving yourself open to risk if you use ICT in the classroom.*

(Mary)

This data highlights several interesting issues. First, the language employed by students demonstrates a fear of addiction to technology. Given the research on the ‘willing’ digital native (Prensky 2001) this was a somewhat unexpected finding. The findings here would seem to concur with more recent empirical findings on the Millennial learner debate (Bennet et al. 2008; JISC 2009b; Bennett and Mahon 2010). On discussing the topic with students, they asserted they have friends ‘*who are addicted to computer games*’ and ‘*I would not want to go that way*’. This indicated some students did not distinguish between the virtual world of SL and a computer game. Consequently, some came to the conclusion that the virtual world could equally become addictive.

Second, the excerpt suggests students feared for their role as future teachers should this technology become more commonplace in the classroom. Participation in the module permitted students to engage safely with new technology and observe how teaching occurs in the virtual world. The technology, however, required both teacher and students to re-conceptualize their roles. The participants in this research were at an early stage in the development of their professional teacher identity. This professional identity was based on the traditional conception of a classroom based teacher. Introducing students to this technology had a de-stabilizing effect on their understanding of their professional identity: ‘*to be honest it scares me because is this the way of the future?*’ The perceived threat to their teacher identity might be traced to their growing conceptualization of what it means to be a teacher.

### **This Place is Full of Predators**

Similarly, despite the careful construction of a safe learning environment, students raised concern about *predators*: ‘*Unfortunately the internet is full of predators and SL is no exception to this*’. This is intriguing since students never identified meeting ‘*predators*’ or encountering grievers. Nevertheless, they initially contended that the online environment is ‘*full of predators*’. Students recognised the technology provides an opportunity for identity deception because the ‘the basic cues about personality and social role we are accustomed to the physical world are absent’ (Donath 1999, p. 32). Ryan highlighted how one person has the potential to create ‘*lots of accounts*’ and, therefore, legitimate identity cannot be ascertained. As a result of the loss of accountability, he was initially sceptical about the people he encountered in SL: ‘*you can’t trust who you are talking to*’.

While students maintained humanoid, gender aligned avatars for the duration of the study they recognised that others do not necessarily mirror their offline identity in the online world. Therefore, the reliability of online assessment signals is questionable. In his writing on assessment signals and virtual worlds, Donath suggests that in the animal and human world assessment signals abound, from horns on a stag to ‘a brawny bouncer in a bar’ (1999, p. 32). In both cases, we recognise the assessment signals as reliable indicators of their owner. In the world of SL, however, assessment signals are sometimes unreliable. In this research the students questioned if the avatars created by SL residents were an accurate representation of the person in the offline environment. In effect, if the people they met in SL were concealing their identity. During one lesson, students questioned a guest speaker’s offline identity: *‘I know this may seem like a strange question, but is there verification that you are a minister?’*. Another bluntly asked *‘how do we know you are real minister?’* The speaker divulged her background and assisted students to identify methods of online identity verification.

The discussion then turned to the penalty and deterrent for fraudulent identity presentation *‘what happens to fake priests, do they get punished?’* When students discovered there is no penalty for SL deception, apart from possible exclusion from some SL communities, they were unsatisfied: *‘it leaves room for a lot of manipulation’*. One student, still somewhat perplexed with the idea that a person would *‘fake’* their identity in SL ventured *‘do people role-play as priests though for real?’* to which the astute response was *‘I’d say you get all sorts on this’*. The students’ concern regarding *‘predators’* demonstrates they are aware of their responsibility for the safety and security of their students whilst online. The discussion led the students to question how SL identity can be verified and the penalty for those who use anonymity for ill-gain. In this research, it is particularly interesting to note that the possibilities for identity creation in the SL environment were found to initially engender feelings of vulnerability and unease.

### **You Can Hide But Also Be More Honest**

Due to their shared history and small class size, students participating in the module were not totally anonymous to one another. Nevertheless, students perceived the avatar provided a level of anonymity to their interactions:

*It allows people to be themselves...without the fear of being ridiculed. (James)*

*I think it is an excellent medium for those people that would normally shy away from answering in a normal classroom scenario. I'm much more confident in here. (Victoria)*

*You can hide but also be more honest. (Lauren)*

*People are less likely to be judged here than in a traditional classroom. (James)*

*You can express yourself more without the fear of being judged. (Mary)*

*I agree with the fact that one can be more expressive online, as they may air their personal opinions in a manner they may be unable to do in reality. (Ryan)*

Later in their reflective journal activities, students continued to explore how anonymity has the potential to alleviate anxiety and apprehension in the classroom:

*If you don't have much confidence to speak out this is a good place for you, it provides a way for quiet people to ask questions to real people that they wouldn't do in real life. (Ryan)*

*One can be more expressive online as they may be able to air their personal opinions in a manner they are unable to do in reality. (Emma)*

There are several aspects to the comments that are worth exploring further. Initially, students fixated on the use of an avatar for deception, as a tool to enable individuals to relinquish responsibility and act in devious ways. In further teasing out the topic, students reflected on how the virtual classroom and the associated use of an avatar could provide context and means for individuals to transform their 'real' social skills. They argued that individuals who 'don't have much confidence' can speak freely and be 'more expressive' in the virtual environment. Moreover, the data also highlight that an individual could 'hide behind the avatar' while simultaneously being 'themselves'. The students identified the use of an avatar could permit individuals to be more open and honest in their communication with other 'real people'.

The phenomenon the students identified is referred to as the online disinhibition effect (Suler 2004). It proposes that when people are online they 'loosen up, feel less restrained, and express themselves more openly' (p. 321). Disinhibition occurs as a direct result of the perception of anonymity and related invisibility in the online context.

Students suggested an individual can be more confident, more expressive, more open and more willing to engage with the class group in the virtual world context. The data suggest students were speaking about this phenomenon in relation to others. Some students, however, were referring to their own virtual world experience.

In the theme, The Virtual Teacher, I also identified how students appeared to be more confident and engaged in the virtual world classes than I had experienced them to be within the offline classroom. I concede numerous factors might explain this perception. Nevertheless, in the virtual context, the ‘*quiet*’ person can easily alter their ‘*real life*’ demeanour and boundaries. The students did not suggest that a new disassociated identity emerged in the virtual environment. Rather, they proposed that a dimension of the identity, not normally displayed in the offline environment, can flourish in the virtual world. Students essentially agreed that ‘each setting allows us to see a different expression of the self’ (Suler 2004, p. 325).

Prior studies have reported that the creation of an avatar can foster behaviour and attitude modification (Yee 2007). In his research on the ‘Proteus Effect’, Yee suggests the transformation of the self in the digital environment can influence how we behave within that environment, for example, the creation of an avatar with a confident appearance can modify a user’s behaviour in such a way that they become more confident in the virtual context. Further to this, Yee suggests that behaviour modification can sometimes continue into the offline context. In this research, I did not collect evidence of offline behaviour modification. Students’ statements, however, demonstrate that some experienced online behaviour modification as they stated they were ‘*more open*’ and more ‘*confident*’ as a result of their use of an avatar.

### **Having a Laugh**

Finally, the students employed visual and textual humour to diffuse apprehension in the virtual world. Initial adaptation to the environment can be chaotic and students periodically demonstrated their frustration:

*When we were preparing to depart for field trip today, Diana found herself ‘stuck’ in the ‘seated’ position. She asked how to stand up. As I was handing out note cards for our location, I did not respond to her question immediately. Clearly, the student was not happy with this, and began dramatically pleading to her peers for help:*

*Diana: please help me.....I’m stuck and I can’t get up :(*

*Diana: :(*  
*Diana: :(*  
*Diana: :( :( :(*  
*Diana: can anybody help me?*  
*To the side of Diana appeared another avatar 'dancing a jig' with the helpful words:*  
*Ryan: I'll say a prayer for you!!*  
*The class whooped and clapped, and another student went to Diana's aid.*  
(Field notes February 2011)

This use of visual and textual humour to diffuse anxiety was a regular occurrence. Frequently students purposely employed avatar physical gestures to lighten the class atmosphere:

*We returned from our field trip and took seats. Students led the debriefing activity. The discussion started and stopped. Students frequently required prompting. Long pauses until Lauren took the lead and moved the discussion forward. She repeatedly articulated that she felt conscious of talking too much. Ryan got up from his chair and moved closer Lauren. He placed his avatar in front of Lauren in a kneeling position. He sat like a child would when deeply listening to a story. I found this very perplexing, but waited to see what he was up to. He then got up and took a seat on her knee. Horrified at his behaviour she typed 'You're a mad man, GET OFF ME!! ☹'. The other students motioned their avatars to clap and laugh. The conversation then flowed.*  
(Field notes February 2011)

As identified in both excerpts, 'Having a laugh' had two notable cathartic effects. First, 'having a laugh' alleviated anxiety by encouraging the group to respond and participate in the action, this occurred through clapping and laughing. Consequently 'having a laugh' provided a lead in to keep the conversation flowing. In both cases, visual and textual humour contributed to group cohesion.

### **Softening The Blow**

In addition to visual gestures, students also employed emotional icons, known as 'emoticons' to create a congenial classroom atmosphere. Emoticons are the 'punctuation marks that viewed sideways resemble facial expressions' (Krohn 2004, p. 322). Students employed emoticons both as a defence practice, and as a positive reinforcement technique. The following excerpt provides an example of this use of emoticon:

*I don't think that by directing a virtual avatar to do something you are fully engaging.....to fully engage you need to PHYSICALLY do it!!!! (Marissa)*

*So, if a person is physically disabled can they fully engage in activities?*  
(Teacher)  
*Oh...sorry (Marissa)*  
*Sorry ☺☺☺☺ (Marissa)*

Such patterns of emoticon use were evident throughout the data. Deliberate emoticon use attempted to control communication, and thus contributed to online identity construction. When students were unsure if they ‘*came across badly*’, they employed the emoticon directly after the ‘*offending statement*’. This indicated uncertainty at how others had perceived comments. In essence, students employed emoticons as a means ‘to soften a negative tone and to regulate the interaction’ (Derks et al. 2008, p. 380). Thus, the emoticon conveyed the typical ‘voice inflections, facial expressions and bodily gestures’ that are not immediately available in the virtual world (Huang et al. 2008, p. 466). Essentially, emoticon use was ‘defensive practice’ (Goffman 1959, p. 24). However, students also used emoticons as a positive reinforcement technique. Students used the ‘smiley face’ to support a classmate, to indicate satisfaction with a statement or to reflect cheerfulness in general. This use of emoticons added depth to classroom communication and positively enhanced the learning environment. It is apparent from the data that emoticon use was a ‘protective practice’ (Goffman 1959, p. 24) facilitating collegiality.

### **Summary**

In this theme, I identified the impact of the ‘The Fear Factor’ on teaching and learning in the virtual world. First, the data indicated a fear of new technology, specifically ‘*what it might mean for us*’. The introduction of new technology forced students to re-evaluate their understanding of teaching and indeed, learning. Second, students surprisingly voiced concern about ‘*predators*’. Third, the data illustrated how anonymity can have benefits. At a basic level, the data suggest some positive online behaviour modification. The use of an avatar transformed the behaviour of some students who were ‘*normally shy*’ in the offline classroom. These data corroborate my observations (see p. 122). Fourth, students adopted visual and textual humour to alleviate apprehension in the virtual world. Finally, the data suggest students deliberately employed emoticons as both a defence mechanism and a positive reinforcement technique. Together, the points identified here, contributed to the creation of an affable class atmosphere and furthered group cohesion.



#### **Theme Four: Getting to Grips with Methodology**

Virtual worlds support a wide range of pedagogic approaches (see p. 35). I employed a range of methods and teaching learning strategies to deliver the module ‘Religion in Cyberspace’ (Appendix 4). These included activity based learning, concept formation, case-study, presentation and interpretation of data, simulation, role-play, discussion and constructive controversy. Students will employ such approaches during their future classroom practice. At the start of each lesson, I outlined the choice, the rationale and phases of the chosen pedagogic approach. As demonstrated in Chapter 4, I employed this format in order to provide students with an opportunity to enhance their understanding of the methodology through:

- (a) *Observation of the method* in use by the class teacher
- (b) *Learning from within the method* as a participant in the class

This fourth theme collates student and teacher reflections on three experiential methods comprising simulation, activity based learning and experiential case-study.

#### **Simulation**

An important feature of three dimensional virtual environments is their ability to provide realistic simulations (Barker et al. 2008). The cases presented in Chapter 2 indicate engagement in simulations can foster reflection on the classroom skills required by the student teacher during their practice (Cheong 2010; Mahon et al. 2010). During the module, one simulation activity generated particularly lively discussion. The topic of lesson three was virtual pilgrimage, specifically online representations of the Hajj (Muslim pilgrimage). The virtual Hajj is a three dimensional replication of Mecca in SL designed to teach participants the meaning and significant of each phase of the Hajj (Figure 50). The lesson began with an introduction to simulation as a teaching method, followed by an introduction to the concept ‘Virtual Pilgrimage’. We then teleported to the simulation:

*My role in this lesson was to guide students to each information point, somewhat like a tour guide minus the umbrella. We began by exploring the replica of Jeddah international airport. I provided students with information on what occurs when pilgrims arrive in Jeddah and gave them the basic facts and figures. We moved to the right of the airport to the changing facilities. I encouraged students to enter the state of Ihram (which involved changing into simple white clothing) to symbolize unity with other pilgrims. Students had to point and right click the Hajj tool bag in order to change their clothing. Some managed it better than others, as I was watching the clock I had to move them along – some better dressed than others. As a group, we then explored each phase of the Hajj pilgrimage, simulating the actions of a pilgrim during the*

*pilgrimage journey. First, we explored the Grand Mosque and circumambulated the Ka'bah. Students engaged their avatars in the ritual bodily movements of Ra'kah, Muslim prayer (Figure 50). They seemed to enjoy this and I could hear camera's clicking away in the background. In an activity which represents Mohammad's wife Hajar's searching for water, the students ran between mounts of Safa and Marwah. Together we learned of the spring of Zamzam. Next, we travelled the plains of Arafat and then to Muzdalifah. In Muzdalifah, we explored the tented city and collected pebbles for the stoning of the devil ritual. Finally, we move to the five pillars (representing satan) and animated our avatars to participate in the stoning of the devil ritual. We were all engrossed in this activity, and students asked a lot of questions. On the way back, we stopped at the barbers for the symbolic cutting of hair. However, students did not manage to remove their avatar hair. The activities took just under 70 minutes to complete. Following participation in the pilgrimage we returned to our class base to debrief on the lesson activities. It was exhausting to keep them on track. As a teacher, I found the lesson immensely enjoyable.*

(Extract from Teacher Journal)



**Figure 50: Engaging in The Movements of Ra'kah**

On completion of the simulation we returned to the classroom for discussion. The following excerpt presents the students thoughts on simulation as a teaching method in the virtual world.

*I thought the simulation was very good, it was almost like we were actually there in Mecca being able to throw the stones and actually take part in the Muslim rituals through our avatars. I think this is a worthwhile activity because I remember everything about Mecca in detail, whereas if we just learned about it*

*in a classroom environment I wouldn't have learned as much or have been interested in the topic as much.*

(Ryan)

*I enjoyed moving from area to area and experiencing different aspects of the Hajj simulation. I really enjoyed having to change our clothes and also having to participate in the different aspects helped me to get a better feel for the topic rather than if we were just talking about it in a lecture.*

(Lauren)

*I thought it was great when we had to change our clothes at the beginning of the pilgrimage. I found it interesting because it was like we were throwing our avatars into the experience and therefore I felt like I was beginning the experience as well. I would love to visit Mecca however I know this is impossible. Therefore by using SL and with thanks to the creator of the Hajj making this experience as realistic as possible, I was able to immerse myself in the pilgrimage.*

(James)

*I feel from this lecture I have a better understanding of the Hajj, even though I haven't physically gone on this pilgrimage to Mecca.*

(Lauren)

Five key points are apparent in the data. First, students identified the potential of the technology for making the impossible possible. As participants in the module are Christian they cannot participate in the Hajj. The medium provided an opportunity to engage in a simulation of the pilgrimage in a safe and controlled manner. Second, interactivity was central to students' enjoyment and subsequent learning:

*'I felt like I was beginning the experience as well'; 'I really enjoyed having to change our clothes'; 'it was almost like we were actually there in Mecca being able to throw the stones and actually take part in the Muslim rituals through our avatars'; 'I enjoyed moving from area to area'.*

Third, engagement permitted a sense of meaningful learning. The students' evaluation of the lesson suggested it was 'worthwhile' because it helped them to 'remember everything about Mecca in detail, whereas if we just learned about it in a classroom environment I wouldn't have learned as much'. Fourth, students identified participation might enhance their classroom practice because they now 'have a better feel for the topic', 'have a better understanding' and one claimed he would 'remember everything'. In this way, the simulation helped to prepare the students for their future professional role. Fifth, the findings support the idea that effective simulation requires careful structuring and teacher guidance (Cheong 2010). Moreover, in contrast to the findings

from Mahon et al.(2010) students followed directions, and while they had fun they did not disregard my instructions or move too far into ‘play’ mode.

Although students considered the simulation educationally valuable, they acknowledged the reductionist nature of this simulation.

*It is easy to stray away from what you are doing. It will never be as engaging as it would be if you were in a real class, there is large sense of ‘fake-ness’.*  
(Marissa)

When asked to comment further, Marissa ventured:

*I think it is an inferior learning experience because in real life there is much more engagement, on the internet, yes, you are more relaxed to do your own thing, but allowing someone else to sign on or strolling on to facebook is much more easier than when you are sitting in the classroom. I just feel that you don’t get a real sense of being in a class and learning.*

At this point, other participants commented on the reductionist nature of a simulation activity:

*It is just not the same although it is the closest you will get to doing these things without actually going to these places.*  
(Ryan)

*SL is not a substitute for reality.*  
(James)

*Yes, I feel that because it is a virtual experience there is a sense that it is not very real.*  
(Diana)

*Yes because it is just not the same as if we physically there, however you do get a better appreciation for it rather than if we are just discussing it in a lecture. I think it’s the next best thing after Real Life.*  
(Lauren)

*But it still is a great way of learning it is just not as good as experiencing these things first hand.*  
(Ryan)

*And you are constantly reminded that it is not real life, for example, being able to fly.*  
(Diana)

The data suggest students were cautious not to overplay the affordances of such a simulation. They considered it ‘worthwhile’ but not ‘the real thing’. Additionally, students identified they were ‘constantly reminded that it is not real life’. Frequently,

students invoked ‘*virtual world*’ and ‘*the real world*’ dichotomy. In addition, Marissa highlighted external distractions had the potential to undermine the quality of the experience. While my earlier observations focused on physically external distractions, Marissa highlighted online distractions, such as Facebook. One unanticipated comment was Marissa’s reference to the ease of acquiring an accomplice to log on in one’s place. Unsurprisingly, other students did not remark on this. It is interesting to note that while Marissa’s in class comments focused on the ‘*fake-ness*’ of the experience, her later reflections she suggested she found some value to the learning experience.

*When one participates in activities such as the virtual pilgrimage it is essential one must fully participate in the activity to gain certain insights. While participating in the virtual pilgrimage we were able to participate in the various stations which were very symbolic and I found that this was a valuable experiential means of understanding each of the stations – being actively involved rather than just hearing or reading about them.*

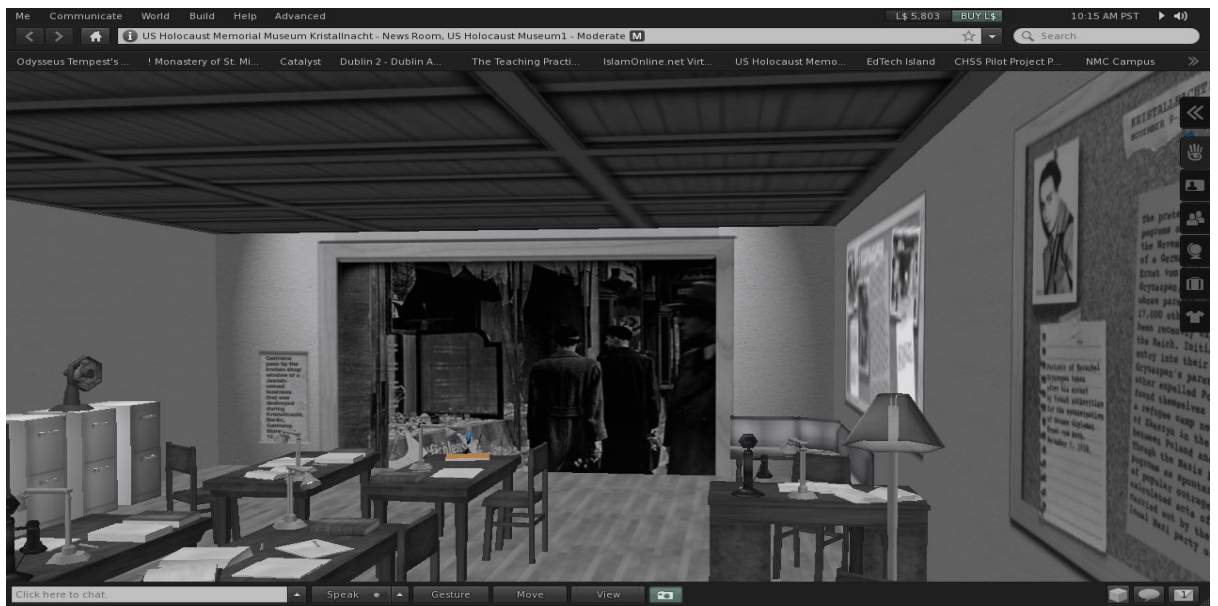
Marissa’s reflection provides one explanation for ineffective simulation. She highlighted the pivotal role participants have in creating their own meaningful learning experience. This explanation is in agreement with Mahon et al’s (2010) findings on the challenges of simulation. Nevertheless, the data suggest students engaged in the activity in a wholehearted manner, and therefore they found the experience to be worthwhile.

### **Activity Based Learning**

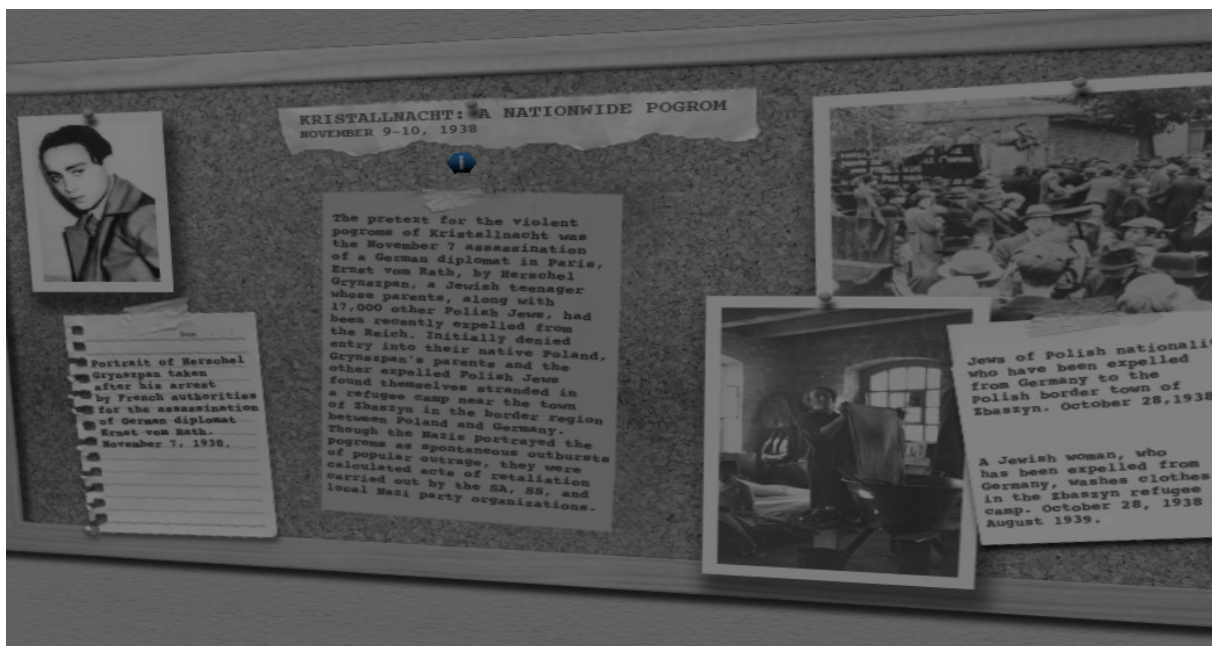
As identified in Chapter 2, the virtual world facilitates activity based learning.

Active learning methods ensure that students are not simply passive recipients of information and give a greater significance to the learning because it arises out of the students own experience, ideas and behaviour (DES 2000, p. 24).

In lesson five, we teleported to the ‘Night of Broken Glass’ simulation, built by the US Holocaust Memorial Museum in conjunction with Involve (Metaverse Company). In this lesson, the students took on the role of an investigative journalist. Through interaction with the exhibit, students established and documented the events that occurred on that night. Documentary evidence included photographs, eye-witness testimony, letters and audio files (Figure 51, Figure 52). Students prepared a field note report and, on return to the class, shared their findings. Students undertook this activity with minimal teacher guidance.



**Figure 51: The Investigation Room**



**Figure 52: Interactive Objects in The 'Night of Broken Glass' Simulation**

Following the lesson, students discussed how the activity would inform their classroom practice:

*When I compared my personal photographs from [Anonymised] museum in [Anonymised] and the Second Life Holocaust museum I found it surprising that some of the images used were duplicates of what I had seen in [Anonymised]. The Holocaust museum showed how you can create a space which plays so much on our emotions, combining different types of media and real life imagery, immersing you into the experience of the space. This is a good way for students to learn. The information is not simply given to them rather they have to take it upon themselves to work and absorb as much as possible. I had implemented*



*this in my own lessons on teaching practice but I definitely would include it in my future teaching as I feel it was an extremely beneficial and fun way of investigating and learning, even though we dealt with emotional subject matter.*  
(Emma)

*I feel like this medium of teaching is invaluable. It felt like firsthand experience. I found that by viewing the old photographs and getting to see the hiding places behind the wall (where the Jews hid from the Nazis) actually opened my eyes to what they went through. The shards of glass on the ground really brought home the whole experience of the terror and violence that was experienced on that night.*

(Diana)

*I had an enjoyable experience at the Holocaust Museum today. I found it to be informative and interesting. I particularly liked how there were lots of items to interact with. I particularly liked looking at the pictures as it gave me a real sense of the people who were affected by the Holocaust. It makes learning about the Holocaust more personal when you actually see the faces of the people, there were also a lot of personal stories that you could read. I would use a lot of these pictures and personal stories if I was to teach this topic to a class. I feel they give a great sense of how the Jews were really treated. It would also affect students emotionally.*

(Ryan)

*I think that by using this activity in your classroom pupils can get a better appreciation for the topic. The visuals and audio bring the topic alive. I think that this is a really beneficial safe and fun way to teach. It can not only help the students understand the Holocaust but they will enjoy learning about it which is vital to encourage learning. By discussing what we had learned during the end of the class I found out more information which I missed in the museum and also got to say my word. I would love to use this in the class to promote active learning.*

(Lauren)

The student reflections suggest a number of interesting points. First, students identified ‘*finding out information for yourself*’ as an important component in the learning process. This highlights their understanding of experiential activity as a sound methodology for learning. Second, students identified the role of the teacher as a facilitator of the activity rather than ‘*giving information*’. Furthermore, they acknowledged that while they learned at their own pace they also may have ‘*missed things*’ during the activity. Students identified the post-activity debriefing session as an important element of the methodology. They illustrated the importance of sharing their experience ‘*to have my word*’ but also provided an opportunity to ‘*find out more information*’ from peers. Again, the importance of collaborative learning was also evident in the findings of Chapter 2. In addition, students emphasised the role of the

affective in their learning experience. Moreover, they recognised how they might harness the power of the affective in their own classroom through the use of visuals or audio.

As a teacher, I described the lesson as frustrating:

*Despite the overwhelmingly positive feedback from students, I found this class extremely frustrating. I had to stop myself from running alongside them to tell them to move on or 'click this'. At one point, I had to intervene. They were fifteen minutes in the initial investigation room. They had to click on a yellow book toward the back of the room to open up the street scene – a highly interactive and visual resource. Nobody was clicking the book. I positioned my avatar beside the book and clicked it, opening up the street scene for them. One ran through. The street scene closed again. I offered assistance 'Here, click the yellow book to open the street scene' 'If you are having trouble let me know', 'Does anyone need any help?' One more ran through. The others wandered aimlessly around it, clicking at the walls and floor. Trying to remain calm, I clicked the book and went on through. They managed to follow.*

(Reflective Journal Excerpt)

Despite the careful planning and structuring of the lesson, I found it challenging to step back and allow students to engage at their own pace. The data in the excerpt highlight two noteworthy points. First, the teacher can potentially undermine the value of the lesson if they are too quick to offer solutions. Second, my observations of students 'wandering aimlessly' and randomly 'clicking the walls and floor' are not supported since the students provided detailed descriptions of evidence collected during the activity. This highlights the complex nature of observation in the virtual world and the importance of triangulation as a research method (see Chapter 3, p. 70). In this research, activity based learning was effective with minimal teacher guidance, although it was a challenge for this teacher.

### **Experiential Case-Study**

Experiential case study, an inquiry-based method, facilitates learners' examination of a real-life situation that illustrates a concept, topic or issue. The data suggest experiential case-study methodology is a valuable tool for the virtual world teacher. In this research, experiential case study provided students with an opportunity to learn together as a class group, to *learn from the expert* and an opportunity to develop their confidence in relation to the subject matter. In class seven, I employed an experiential case study methodology to explore New Religious Movements (NRMs) in SL. In the first phase of this methodology, I presented the topic of the case study, NRMs, in particular, the



Church of Latter Day Saints in SL (Figure 53). I provided background information on the subject. In the inquiry phase of this methodology we teleported to The Church of Latter Day Saints (LDS) simulation in SL. Here, students met with representatives from the LDS Church and participated in a guided tour and discussion.



**Figure 53: Student Led Discussion at The Church of Latter Day Saints in SL**

Case study is ideally carried out using a collaborative procedure. Therefore, we agreed that students would lead the class discussion. On return to the classroom, the discussion turned to the learning experience:

*I learned all about the faith of an NRM in SL, it gave us good basics to start from.*

(Ryan)

*Yes I learned loads about their faith, what they believe in and how they practice their faith. Apart from a few differences, they are very similar to us.*

(Marissa)

*I found it very informative and the guides were excellent in explaining every aspect of their faith.*

(Diana)

*I taught this before and would like to teach it again.*

(Marissa)

*It is easier to relate and recall an experience than to learn about it from a text.*

(Mary)

*Yes I think it was very informative. I have never taught this topic before and I think it would be very interesting to deal with!! In the short space we learned a lot.*

(Emma)

*We learned the basics which are vital in teaching this topic in school. The speakers were really informative, and the difference between their rituals and beliefs from ours really interested me.*

(Lauren)

The initial feedback provided limited evidence to support the value of experience: ‘*I learned loads*’, ‘*We learned a lot*’ and ‘*We learned the basics*’. Noticeably more nuanced comments were presented as the class progressed.

*I found this class extremely informative and helpful for my future classroom experience. I found it very beneficial personally as it helped me to gain more knowledge on this topic. When we undertook the trip to LDS Church we were able to gain a deep insight into their beliefs. If I had to plan a class on NRMs I would like to have guest speakers and let the students ask questions. I would also try to get traditional clothing or religious artefacts from these movements for pupils to examine. I feel that the more visual the class, the more interactive the class, the more interesting it would be for pupils. I am more confident now to teach this topic because of what I learned today.*

(Lauren)

The majority of students voiced similar opinions. First, students acknowledged the role of ‘*the expert*’ in their own learning. They indicated that dialogue with the expert highlighted their lack of knowledge in the subject area. Second, as a result of participation, students suggested confidence with the subject matter was enhanced and related this directly to ‘*learning from the expert*’. Third, throughout their reflections the students emphasized the role the collective played in the learning process ‘*we undertook*’ ‘*we were allowed*’ ‘*we asked*’ ‘*we examined*’. On further discussion of these points with Ryan, he suggested:

*We were uncovering the different aspects of the case of NRMs in SL. We were doing this together. I am going to teach this subject to a class someday, and I know pupils will see me as the expert, so I want to know everything. I learned about LDS from the expert, I also learned from the questions the others were asking and what they were saying. It actually made me more comfortable to hear that the others had the same set of questions as I had.*

In sum, the virtual world experiential case study methodology permitted safe exploration of a new topic. Digging deeper into the data, the students found solace in

the fact that other members of the class were unfamiliar with the topic in question. Next, students highlighted learning as a result of listening to the questions posed by the other students and through the responses given by *'the expert'*. Finally, the experiential case study methodology again highlighted the powerful role of the collective in the virtual world learning experience.

### **Summary**

'Getting to Grips with Methodology' explored three methodologies employed during the delivery of the module 'Religion in Cyberspace'. The methodologies were: simulation, activity based learning and experiential case-study. I identified six factors which contributed to the virtual world learning experience. First, although the activities were not the *'real thing'* they were considered *'worthwhile'* as the experience informed the students' professional practice, as identified in Cheong (2010), Girvan et al. (2010), and Jarmon et al. (2010). The data also suggest that the experience heightened students' consciousness about their own classroom practice. Second, the interplay of observation and participation provided students with *'a greater understanding of the methodologies'*.

*I was aware of the methodology from the beginning of each class so I learned the steps of the methodology from watching and listening but also from participating in the class.*

(Diana)

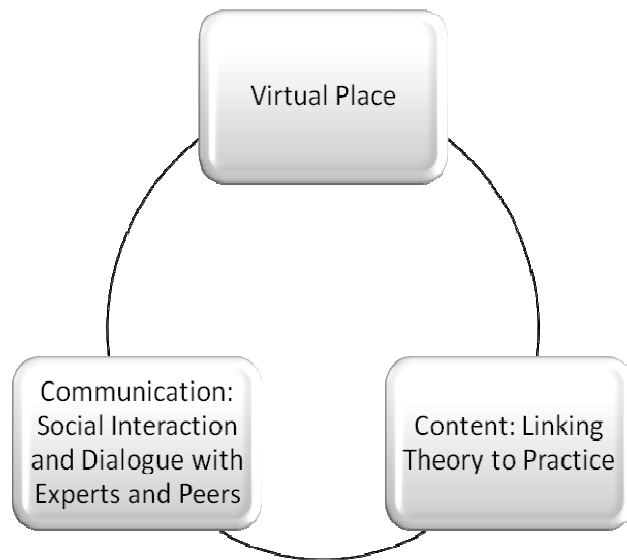
Third, the methodologies required active student participation, subsequently the value of the experience was highly dependent on the participants. Fourth, the data seem to be consistent with findings on the critical role of peers in the virtual world learning process (Girvan et al. 2010; Jarmon et al. 2009; Cheong 2010; Esteves et al. 2011). Moreover, the data show students took solace in the knowledge that they were not alone in their limited understanding of certain topics. Fifth, students again highlighted the affective as an important factor in the effectiveness of the virtual world activities (see p. 133). Sixth, the role of the teacher was significant. All teaching approaches required substantial behind the scenes preparation, supporting Chapter 2 findings. The activity based learning lesson required minimal teacher guidance, although this proved challenging. In contrast, the simulation activity required substantial teacher guidance. Next, Theme 5 explores virtual world place based education.

## Theme Five: Virtual World Place Based Education



**Figure 54: Place-Based Education**

The results of this research indicate the virtual world can provide a rich context for participation in place-based education (Figure 54). Place based education in its broadest sense is education that takes place outside of the physical boundaries of the school building (Dewey 1910). Contexts for place based education have included the great outdoors, ecological landscapes, and rural locations (Sobel 1996; Theobald 1997; Woodhouse and Knapp 2000). Technological advancement provides a new context for place-based education. In the virtual world, place is a virtual location. Nevertheless, it has similar features and characteristics to the offline world (see p. 19). It is apparent from the data that three interconnected actors contributed to an experience of place based education during the module. Figure 55, adapted from Rae and Pearse (2004), illustrates the factors in this conceptualization of virtual place-based education.



**Figure 55: Virtual Place-Based Education Model**

### **Place**

First, the data highlight the critical role the exploration of virtual place had in the learning experience. During the delivery of the module ‘Religion in Cyberspace’, each lesson involved a movement (teleportation) from the class based location (virtual MDI) to a relevant location in SL, referred to as a virtual field trip. Each trip provided a contextual experience. By way of illustration, the topic ‘Virtual Pilgrimage’ was explored through active engagement with the replica Hajj pilgrimage.

*What I enjoyed most about the simulation is the fact that we were constantly moving around Mecca looking at the different attractions. This made the class a lot more interesting as we were not just in the same place all the time. I also thought it was a great idea that we had to dress in typical Muslim clothes, and we also got to cast the devil away by throwing stones at the three pillars which was very good. The thing I enjoyed least about the simulation was the fact that it did take a while moving from the different places in Mecca. I got lost for a while but was able to find my way back a while later, but I didn’t think I would be able to find everyone again as the area we were in was so large.....I think this was a worthwhile activity because I remember everything about Mecca in detail whereas if we just learned about it in a classroom environment I wouldn’t have learned as much or have been interested in the topic as much.*

(Ryan)

The excerpt highlights how the experience of ‘place’, in this case virtual Mecca, significantly contributed to the student’s understanding of the topic. Ryan’s reflection suggests he experienced a degree of presence during the activities. He identified ‘constantly moving’, ‘looking about’, ‘throwing stones’ and getting ‘lost’. Ryan attributed his learning to exploration and investigation of the Hajj replica, ‘we were not

*just in the same place all the time*'. He wore the traditional pilgrimage clothing, participated in the ritual stoning of the devil, and completed the phases of the Hajj pilgrimage with his peers. Additionally, he suggested his understanding was more nuanced and deeper than if he had *'just learned about it in a classroom environment'*. This corroborates earlier findings on the importance of having a sense of being in a believable environment in order to experience presence within that environment (see p. 133). When asked to speak further about this, he reaffirmed the importance of *place* in his learning.

*Before visiting the Hajj in second life I was very naïve about the place. In some ways I would have liked to remain that way. Now I know about it and what happens at the Hajj I would love to visit it however I know that this is impossible. Therefore by using SL and with thanks to the creator of the Hajj making the experience as realistic as possible, I was able to emerge myself in the visit.*

Interestingly, Ryan described how the experience of the virtual Hajj whetted his appetite to visit Mecca. He acknowledges that *'this is impossible'* because of his religious affiliation. This highlights an interesting point. The virtual world provided students with an opportunity to visit and explore places they may never be able to in the offline world. In the virtual context, they overcame the geographic, time, economic, and religious constraints. The cases reviewed in Chapter 2 gave limited attention to such affordances.

### **People**

Second, people played a significant role in students' learning. Throughout the module, students engaged, interacted and dialogued with residents from a wide variety of world views and backgrounds. In most cases, residents shared personal experiences of practicing faith in the virtual world, for example, during lesson four, Christianity in SL, students met with one resident who employs the virtual world as a tool for evangelisation.

*In the last class we had a discussion with an evangelical Christian. He practices his faith in SL and organises events for other Christians practicing their faith in SL. These range from bible readings or social events like a DJ set playing Christian music. He opened my eyes to different types of Christian music that are viewed, as mainstream music however I have to admit the only group that I recognised was U2. He said he sometimes receives criticism from Avatars who do not share his feelings. I feel that if you could arrange a closed event in SL that only invited guest could come, I think it could become a very powerful tool*

*for communicating, developing language and cultural skills.*

(James)

James' interaction with the guest speaker enhanced his understanding of the local reality of practicing faith within the virtual world: *'he opened my eyes'*. In particular, James empathized with the challenges the speaker faces, and attempted to propose a constructive solution to the dilemma *'if you could arrange a closed event'*. The student's solution might be considered somewhat faulty, closing down rather than opening up dialogue. However, he considered that a *'closed event'* could provide *'a powerful tool for communicating, developing language and cultural skills'*. Similarly, Marissa highlighted how in-world dialogue with members of the Church of Latter Day Saints enhanced her understanding of that faith community.

*I feel you always learn the best you can from a story or looking at someone else's life. Today we looked at New Religious movements; we studied the church of latter day saints. The Mormon Church sees God as the Supreme Being of the universe. However, He gradually acquired that position over a long period of time by living a perfect and righteous life; I gathered this when they began speaking of what they believed in. How I would incorporate this into my classroom would actually be that this not a cult, I have believed for years that this Religion is a cult, from speaking with people in this religion I do not feel that now, I feel that they have small differences to us but overall not any major ones. What I found to be most interesting about this Religion in second life would be the fact people would become members to this Religion as they feel too scared in the real world, they are allowed to be welcomed this way and that is something good that people can find faith confidence and friends in second life. I would use this in my class as I would not portray this Religion as a cult and I would encourage my class to ask questions about different Religions and study them so that I would be eliminating this racism barrier in Religion within my class. From the notes that I have recorded from this class too I shall keep these and use them when I am teaching new religious movements again.*

(Marissa)

Marissa's understanding prior to this lesson was myopic *'I had believed for years this Religion is a cult'*. In light of the experience during this lesson, Marissa reconstructed her previous understanding in favour of new understanding that perhaps *'they have some differences to us but overall not any major ones'*. The motivation to alter her opinion emerged as a direct result of social interaction in SL *'from speaking with people in this religion'*. Marissa identifies the experience will impact on her teaching of this topic in the future: *'I would use this in my class as I would not portray this Religion as a cult and I would encourage my class to ask questions about different Religions and study them'*.

## **Content**

Third, the content specific to the SL locations had a significant role in students' learning. In lesson six, we explored the concept Cyber Sangha during a field trip to a Buddhist Temple. In the following excerpt, one student identified openness and community, central characteristics of Cyber Sangha, as prominent features of the location:

*It is a place to gather, share, and connect. It is a place where one can go and explore the rituals and participate in meditation. It is a place where one can speak freely and at ease without being judged. It is really informative and enjoyable. I also found that it was easy to use as there is a schedule for each day and notifications pop up to remind you of such events. And when I was about to meditate a notification popped up reminding me to pray for those in Japan, which showed that it was up to date and also nice that these people are remembered even in SL.*

(Lauren)

In addition, the experiential content present during such fieldtrips helped students to make the connection between the theory of a methodology and its application, for example, an activity based learning methodology was possible in the Holocaust Memorial museum because of the interactive elements in that environment. Moreover, the content within the Holocaust Memorial Museum was rich and engaging; therefore, students invested the time to explore it carefully. As a result, students not only learned about activity based learning as a methodology but also about the events of The Night of Broken Glass. In a similar way, the Hajj simulation delivered the lesson content on 'Virtual Pilgrimage'. Students experienced a virtual pilgrimage and additionally learned how simulation can be employed to deliver content. In essence, exposure to the content in the virtual world assisted students in the achievement of module aims.

## **Summary**

This theme explored the three actors in virtual place based education: place, people and content. First, the virtual world provided access to places not possible in the offline context as a result of geographic, economic or religious factors. The data suggest engagement with such places facilitated learning. Second, exposure to and dialogue with a variety of world views challenged students' assumptions, facilitated reflection and provided an opportunity for one-to-one teaching encounters. Third, the content available during field trips facilitated two levels of learning. First, the data indicate students learned the lesson topic through engagement with content in the virtual world. Second, the data suggest the content enhanced students' understanding of how



methodologies can be applied. Finally, the underlying message encountered from engagement with SL residents strengthened the students' conception of interfaith dialogue and ecumenism. All communities approached to contribute to the module agreed without hesitation. Some contributed as guest speakers and facilitated students on their SL residence. Others invited students to engage in or observe prayer services or other ritual activities. This collegial contribution and open interaction impacted positively on the module, the teaching and the learning experience.

### **Chapter Summary**

In summary then, Chapter 5 presented five themes using an excerpt-commentary framework. The themes discussed were:

- 1) The virtual teacher
- 2) Learner engagement in the virtual environment
- 3) The fear factor
- 4) Getting to grips with methodology
- 5) Virtual world place based education

The data presented within each theme provide multiple routes of theoretical interpretation. It is to this topic that Chapter 6, Discussion and Theorization, turns.

## **CHAPTER SIX: DISCUSSION AND THEORIZATION**

## **Introduction**

This chapter presents a virtual world adjustment theory. It begins by providing an account of how the theory originated and developed. Next, the theory is used to explain how this group of students adjusted to learning in the virtual world. The theory, which draws from the literature on culture shock and cultural adjustment, has five inter-related phases. The phases are:

1. Orientation
2. Euphoria
3. Crisis
4. Survival
5. Transformative Learning

Each phase comprises key moments that reveal stages in students' learning within the world of SL. As no uniform student experience exists, however, this working hypothesis cannot account for every learner in a virtual world context. It provides a theoretical interpretation of the experience of one group of students within one module, Religion in Cyberspace, delivered in one virtual world, Second Life. This theory might be structurally similar for other virtual world teachers, in that it may fit with their experience of teaching and learning in a virtual world, SL or another online context. However, given that online 'learners' experiences are diverse' (JISC 2009a, p.1), the instantiation of it in each case is likely to look very different. Nonetheless, some of the structural elements of the presented theory may transfer. The final Chapter of this thesis draws the implications of this theory together in the form of practical recommendations to support the virtual world teacher and learner.

## **Rationale**

The aim of this thesis is to explore teaching and learning in Second Life. The research data in this thesis were drawn from one optional module, Religion and Cyberspace, offered to third year students on an ITE programme. The module was delivered through the Second Life environment. The findings from the data analysis were presented in terms of five key themes; the virtual teacher, learner engagement in the virtual world, the fear factor, getting to grips with methodology and finally, virtual world place based education. Each theme provided multiple routes of theoretical interpretation. In presenting each theme, connections were made to previous research and relevant theory. In order to deepen my understanding I sharpened focus from 'how' to 'why' (Katz 2001). That is, from descriptive themes to a more nuanced understanding and

‘theoretical argument based on the data uncovered in the field research’ (Wilson and Chadda 2009, p. 551).

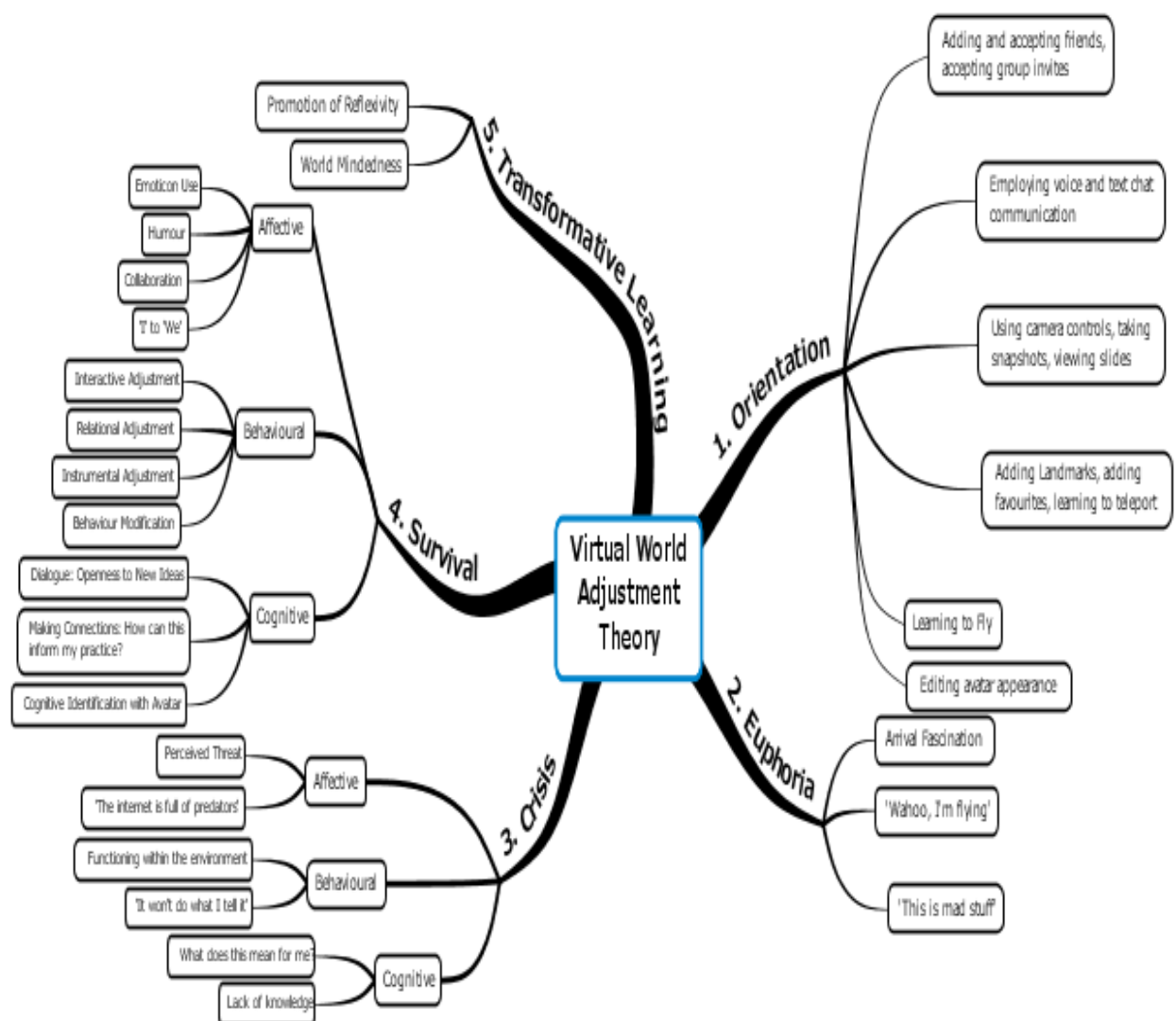
In order to develop a critical interpretation of events, I adopted a three stage approach. First, I critically reviewed the themes presented in Chapter 5. The data suggest a progressive move from orientation, to fear through to survival in the virtual world. Additionally, theories of culture clash, identity, and fear were present. Second, I reviewed the literature on the Millennial learner discourse. I identified a discrepancy between that concept of the ‘digital native’ and the reality I had experienced with my students. I explored literature that made reference to the learner experience in online learning (JISC 2008; JISC 2009a; Child 2010; Sharpe 2010; Salmon 2011). Third, with theories of culture clash, identity and fear in mind, I widened my reading base to include research in the fields of health care, anthropology and psychology. I identified the concept of culture shock as a particularly appropriate starting point. Finally, I identified models of cultural adjustment (Ward et al. 2001; Bochner 2003) and adapted them to present a virtual world adjustment theory. In combination, both culture shock and cultural adjustment provide a spring board for my contribution to knowledge of teaching and learning in a virtual world.

### **Culture Shock**

The causes of culture shock have been widely investigated. Culture shock may be broadly defined as ‘the loss of emotional equilibrium a person suffers when he moves from a familiar environment where he has learned to function easily and successfully to one where he has not’ (Gordon 2001, n.p.). The phenomenon occurs as a result of physical relocation from one environment to another (Ward et al. 2001). Distance between the home and the host environment may include geographic distance, cultural and language distance. A substantial body of research has been published on the experience of international students in relation to this (Furnham and Bochner 1986; Harris 1995; Ward et al. 2001; Bochner 2003). Additionally, the literature proposes that teachers can experience similar levels of culture shock when they physically relocate for educational purposes (Ryan and Hellmundt 2003). Most recently, research has demonstrated the impact of culture shock on international students’ psychology (Xia 2009). The challenges of teaching those who are experiencing culture shock have also been identified (Ryan and Hellmundt 2003). The existing accounts of culture shock provide focus on physical travel to a ‘foreign land’ with most reporting various strategies and solutions for ‘recovery’. In reviewing the literature, the recovery process,

if the individual indeed engages in it, is reported as a progressive movement from disorientation to suspicion to adjustment or assimilation (for long term cultural contact).

Although many researchers have explored culture shock resulting from physical relocation, there is considerably less research on culture shock and adjustment to new virtual learning environments. Nevertheless, culture shock ‘applies to any situation where an individual is forced to adjust to an unfamiliar social setting where previous learning no longer applies’ (Pederson 1995, p.1). The findings from this research suggest that culture shock, and related adjustment to learning in the virtual world, occurred during the module. Therefore, the traditional theory of culture shock and associated adjustment theory provide a valuable lens for understanding this group of students learning experience within the virtual world. In discussing the theory, the role of the teacher is explicated. The remaining section of this chapter draws from literature on culture shock and cultural adjustment to present a virtual world adjustment theory (Figure 56).



## Figure 56: Virtual World Adjustment Theory

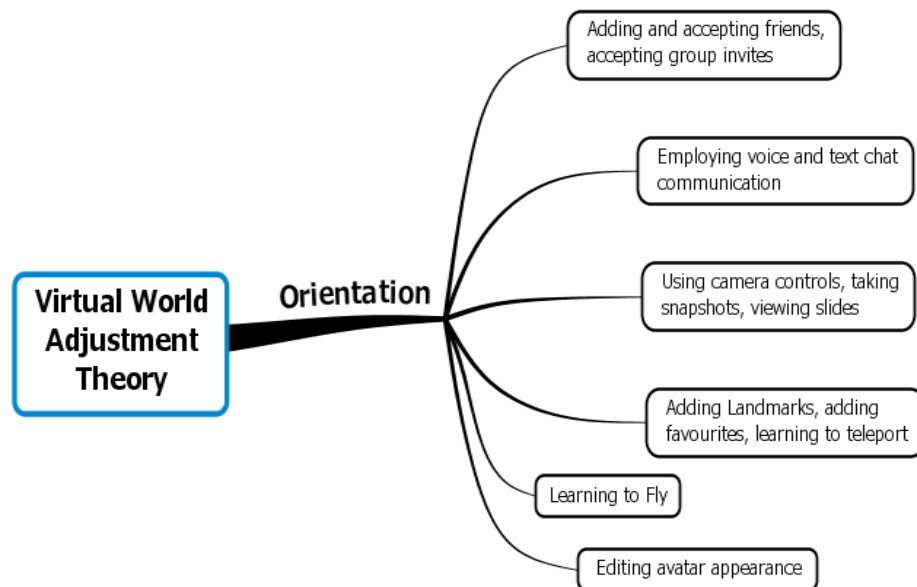
### Phase One: Orientation

Some parallels between international students and the virtual world students were identified in this research. International students engage in physical travel from one culture to another. In this research, however, the virtual world student is better described as a sojourner, a temporary resident in a virtual world. As sojourners, their stay is voluntary and related to a specific goal, that of education. While the international student usually physically relocates for a period of time, the virtual world student moves between two cultures. That is, their culture of origin and the host virtual world culture. As a result, they can be understood as being ‘between-society’ (Ward et al. 2001, p. 7).

First, the participants’ immediate culture of origin is an Institute of Education and a Catholic College. The Institute has a ‘Christian vision that is ecumenically alive and respectful of other religious traditions’ (MDI 2012). While there is openness to diversity and dialogue with those of other faith traditions and none, the student body are predominantly Christian. Additionally, there is a strong sense of community, and a ‘collegiate and collaborative culture evident across the Institute’ (Teaching Council of Ireland 2011b, p. 7). The participants were students within a professional programme of Initial Teacher Education (ITE). By virtue of their common goal to become a teacher, they shared timetables, spaces, and deadlines. Given the small size of the Institute, students were not anonymous to peers or staff of the Institute. Through this lens, there is considerable uniformity to their college experience. As a result, the participants in this research shared a common cultural context.

Second, the virtual world is a pluralistic and diverse context, which contrasts the participants’ offline cultural context in a number of ways. Residents log in from around the globe. They choose to remain isolated or integrate with any number of formal or informal ‘groups’ (Boellstorff 2008, p. 183). Expression of individuality occurs through avatar body and clothing choices. As highlighted in Chapter 1, and field note excerpts, self-expression and individuality is valued, encouraged and in existence (see p. 23). Indeed the SL tagline ‘the only limit is your imagination’ ([www.secondlife.com](http://www.secondlife.com) 2012) sums up the heterogeneous nature of the virtual world. During this research, the participants moved between their offline context and the virtual world contexts. That is, between a close knit community and a diverse, unique and, some might argue, individualist culture.

The cultural-distance hypothesis proposes that the greater the cultural distance between the culture of origin and the host culture the more difficulties a sojourner is likely to encounter (Ward et al. 2001). Therefore, facilitating the movement of students between a collectivist culture and an individualist culture is likely to have an impact (Ward and Searle 1990). As cross cultural transitions can be stressful, an opportunity to engage in learning prior to the movement to a new culture can have a positive impact on an individual's adjustment to the new culture (Ward et al. 2001). Therefore, a carefully designed pre-orientation session is the first phase in this virtual world adjustment theory.



**Figure 57: Phase One Orientation**

‘Factoring in the time it takes for learners to develop their new ICT skills’ is a vital form of support for any online learning activity (JISC 2009b, p. 4). In this research, orientation occurred through a pre-departure class, designed to minimise distress in the initial adaptation period. The orientation learning activities were based on my identification of key variables to enable students to move into and within the virtual environment with ease (Figure 57; see p. 100). The orientation survival skills included:

- Learning to sit down, walk, run and fly
- Adding friends, accepting friendship and accepting invites to groups
- Adding landmarks, adding favourites and teleporting between locations
- Using voice chat, local text chat and instant messaging
- Taking snapshots, using camera controls and zooming to view slides
- ‘Pimp my Avatar’ - Editing avatar appearance

Students completed each survival skill activity as a group, and each assignment had to be completed in order to move on to the next. By making it to final assignment ‘Pimp my Avatar’, students were rewarded with a small quantity of Linden Dollars to purchase clothing for their avatar for the subsequent class. In this way students learned how to edit their avatar, and how to navigate in the virtual world. One student commented *‘each task really enabled us to grasp a firm understanding and gifted us with the basic skills required for the rest of the module’*. Orientation activities continued throughout the early weeks of the module. Through such planned activities, students had carefully structured opportunities to engage with the host culture, discuss shared challenges and engage in reflection on their experiences. Such opportunities ensured students were discussing their experiences, which is an important factor in the psychological well being of between-culture students (Ward et al. 2001).

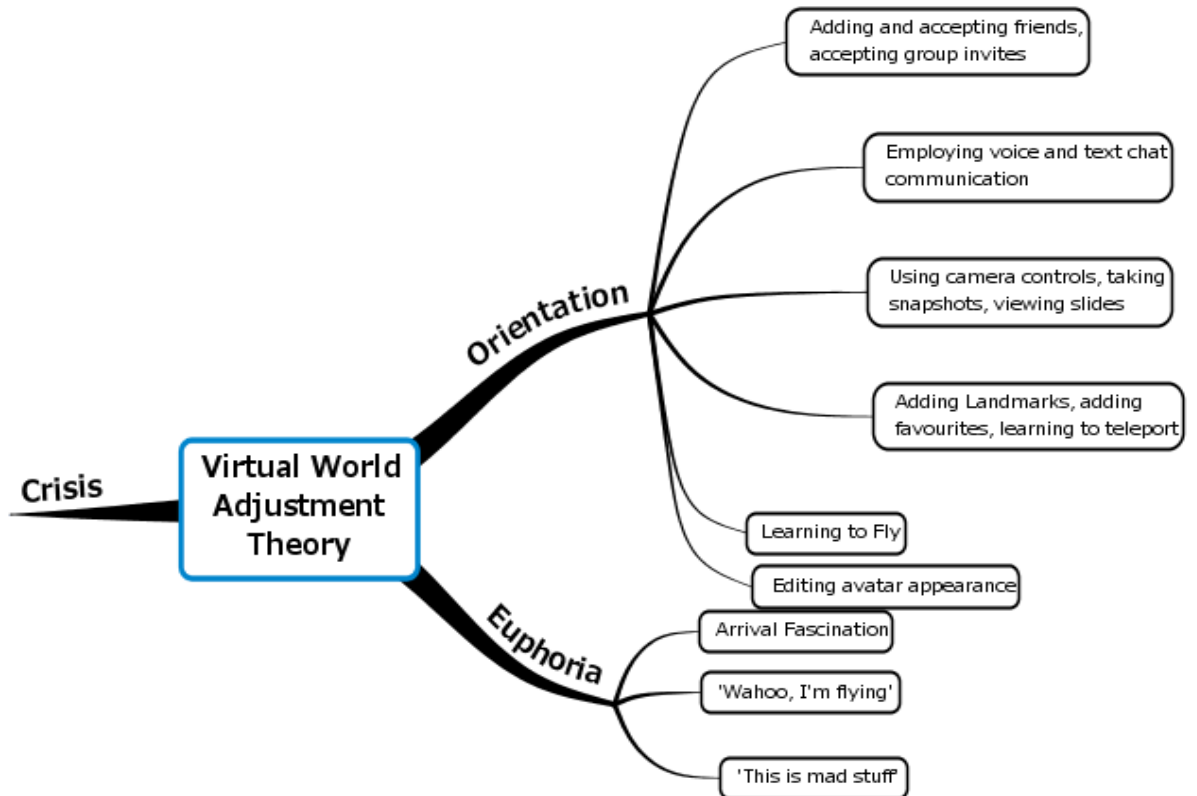
Next, the virtual classroom provided a sense of the familiar in the unfamiliar. This was significant in the orientation phase, since the physical difference between the host culture and the culture of origin can contribute to adjustment difficulties. However, by reproducing the offline in the online environment, students began their virtual experience from a perspective of familiarity rather than difference. As discussed in Chapter 5, this provided students with recognizable environmental cues, which helped their understanding of how to behave in that environment. Indeed the wider literature on online learning highlights the importance of ‘the reassurance of the familiar’ (Salmon 2011, p. 38). If we understand virtual world students as ‘between-culture’ sojourners, then familiarity is something that should be viewed positively rather than negatively.

In sum, the data suggest the orientation activities helped students’ adjustment to learning in the virtual world in four ways. First, students received information about their new host culture prior to departure. As a result, they had some knowledge of the topography, the culture, and the economy of the world they would be exploring. Second, students had a practical orientation class, under teacher guidance, to develop the skills required to negotiate the environment. In this way students started their journey on an equal ‘newbie’ footing. This is important since it contributed to group cohesion. Third, language is linked to well being; therefore, communication with peers, the class teacher, and SL residents through voice, text and instant messaging were encouraged. Finally, the replica classroom facilitated a sense of the known in the unknown, again thought to contribute positively to cultural adjustment (Byrne 1971).



The data suggest the activities outlined in the orientation phase of this theory (Figure 57) eased students into learning in the virtual world.

## Phase Two: Euphoria



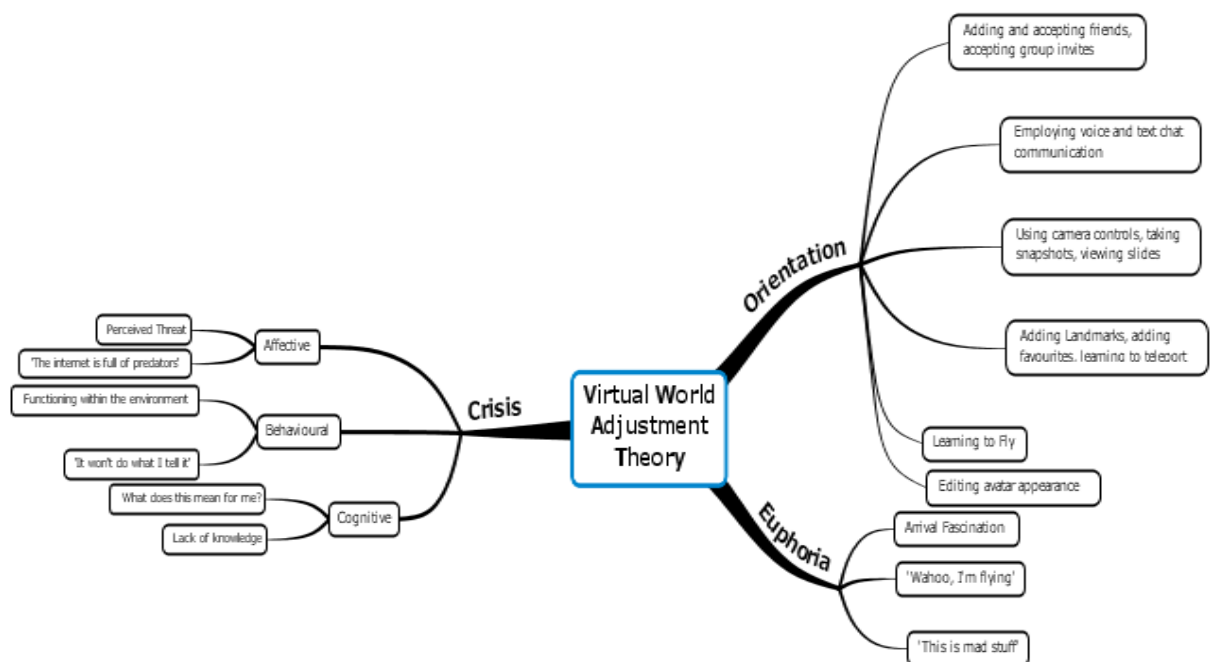
**Figure 58: Phase Two Euphoria**

The second phase of a traditional, cultural adjustment theory is described in terms of entry-euphoria, the honeymoon or arrival fascination (Oberg 1960). In this research, three factors suggest a euphoria stage in adjustment to learning in a virtual world. The factors comprise arrival fascination, enthusiasm and language (Figure 58). First, the data suggest the initial reaction to the module was one of fascination. My earliest field note observations make reference to *'whoops of contagious laughter'* that *'I never experienced in my class before'*. Chat log transcripts capture the euphoric atmosphere: *'This is great craic'*; *'This is mad stuff'*, *'Wahoo I'm flying'*; *'It's just like real life except you can fly'*. On conclusion of lesson one, one student commented, *'it is far removed from any other experience offered in the course, a new direction which I found enjoyable and up to date'*. Another student considered *'the whole process was intriguing, and my high expectations were more than satisfied'*. Second, the data demonstrated the students' enthusiasm for the virtual world experience. They considered the experience *'eye opening'*, *'refreshing'* and *'challenging but challenging'*

*in a good way*'. Third, in describing their experience, students employed affective language, for example, *'I really loved this'*; *'I would love to do this again'*; *'It's great that you can fly around in here'*; *'I love this'*. In combination, fascination, enthusiasm and affective language suggest an initial euphoria phase of adjustment to the virtual world.

However, as the module progressed, the euphoric atmosphere about learning within this environment subsided. The data suggest this coincided with recognition that this environment was the permanent base for the module: *'you mean we won't see you till the end of the module?'* Evidence in the data points to a general shift in students' perception of the virtual world, *'I am finding this process of learning to be very interesting but I don't know if it will stay like this after the novelty wears off...but hopefully it does'*. Next, students encountered crisis.

### Phase Three: Crisis



**Figure 59: Phase Three Crisis**

As the research progressed, students transitioned into a phase that might loosely be mapped to the 'Crisis' phase in Oberg's model of adjustment. Crisis occurs as a result of the loss of familiar signs and symbols:

These signs include the thousand and one ways in which we orient ourselves to the situations of everyday life: when to shake hands and what to say when we meet people, when and how to give tips, how to give orders to servants, how to

make purchases, when to accept and refuse invitations, when to take statements seriously and when to not (Oberg 1960, p. 177)

As presented in the introduction to this theory, the effects of culture shock on international students are well documented (Ryan and Hellmundt 2003). Studies have reported international students can experience stress, anxiety, depression, and helplessness (Xia 2009). Coupled with feelings of isolation and alienation, minor crises can escalate and can decrease an individual's motivation to adjust to a new host culture (Walker-Fernandez 1999, cited in Uzuner 2009; Xia 2009). This can have a detrimental effect on the learning experience. In his work on cross-cultural adjustment, Bochner distinguishes 'between the Affective, Behavioural and Cognitive components of cross-cultural interaction' (2003, n.p.). This ABC model provided a useful framework for this section of the virtual world adjustment theory. In the context of this virtual world research, the findings support the hypothesis that students experienced minor crises. In particular, the data suggest three areas of crises, Figure 58.

They comprised:

1. Affective Struggles
2. Behavioural Struggles
3. Cognitive Struggles

1. Affective Struggles

Minimal group paradigm theory proposes the categorization of students into a group can have psychological implications for the learning experience (Tajfel 1970). Additionally, it is argued that the use of anything that encourages anonymity within the group, such as a uniform, mask (or indeed an avatar) can reduce individuality and a sense of self (Dworetzky 1994). Implications can be both positive and negative. Positive implications of categorization into groups can include loyalty, recognition of group value, and a shared identity. Negative implications can include discrimination, prejudice and perceived threat (Tajfel 1970; Tajfel and Turner 1979; Stephan and Stephan 2000). Recently, research on internationalization at home, has demonstrated that individuals can experience four types of perceived threat. These include: threat to academic success, threat to group identity, anxiety about 'mindful interaction', and passive xenophobia' (Peacock and Harrison 2009). It is reported that such threats arise as cultural contact is both an interpersonal and interactive event (Bochner 2003). In everyday life, an individual has an understanding of the established rules and norms. However,

internationalization can fracture one's understanding of 'the norm'. Consequently an individual can experience feelings of threat and can react negatively to the source of perceived threat.

In this research, students were part of an offline, and online group. All module activities were engaged in as a group, for example, student led discussions, virtual world trips and engagement in group learning activities. Such activities helped the online socialization of the group, which Salmon suggests is vital to the promotion of 'authentic and purposeful e-learning activities' (2011, p. 36). Students created and maintained relatively homogenous humanoid gender aligned avatars. Moreover, there was little deviation from the group norm during the research (see p. 133). As a consequence of participation, students transcended international boundaries through the medium of the virtual world. The results of this research show students were introduced to a form of internationalization at home. As the module required socialization with the wider SL community, the students could not remain solely within the confines of their virtual classroom, in 'perfect isolation' (Williams et al. 2007, p. 431).

As the class developed their group identity, they voiced concern about the 'out-group'. Although the data does not suggest extremes of perceived threat, perceived symbolic threat was identified. Symbolic threat occurs when a group feels their values, morals, standards and beliefs are threatened by an out-group (Stephan and Stephan 2000). The experience of symbolic threat and associated social anxiety in a virtual world context is empirically founded (James et al. 2003). In this research, symbolic threat is likely to have occurred as a result of the move between a known and unknown culture. That is, between a collectivist culture of origin and a relatively unfamiliar host culture. Indeed the virtual world brings the fear of the unknown into a new realm.

One affective struggle evident in the data is fear of the online predator (see p.144).The stereotypical online predator is one who lurks on sites visited by young children and adolescents (Wolak et al. 2008). Predators use information that is publically divulged to identify potential targets: '*Unfortunately the internet is full of predators and SL is no exception to this*'. The '*predator*', while never named or identified, was perceived to be an out-group member, as opposed to a member of the class group. As authentic identity is difficult to ascertain in the virtual world, students commented on the lack of security: '*You know people could log in and have lots of accounts, you can't trust who you are*

*talking to*'. The '*predator*' caused fear among students from the outset: '*I would be afraid to bring students in here*'; '*if this (SL) was to grow the threat of malicious people to students would be greater than ever*'. Students identified virtual world anonymity as a mechanism that could enable '*malicious people*' and become a '*tool for deception*'.

This jars with the conceptualization of this generation as digital natives (Prensky 2001). In so doing, the findings here add to the growing body of empirical research that questions the validity of the digital native/digital immigrant divide (Bennett et al. 2008; Bennett and Mahon 2010; Jones et al. 2010; Bennett and Mahon 2012). As a result of life online, one would expect that students regularly meet diverse characters. It is reported, however, that the digital generation exercise careful control over who to invite into their online world, ultimately who to 'add as friend' and who to 'reject' (Turkle 2011). In this way, an individual can surround themselves with those of similar values, morals, standards and beliefs. Ultimately, the openness and diversity of the virtual world challenged this sense of security. These factors may provide an explanation for fear of the '*predator*'. Next, behavioural struggles were identified in the data.

## 2. Behavioural Struggles

When an individual moves to a new culture they must work to acquire culturally relevant skills in order to function in that culture:

that is, they have to learn about the historical, philosophical and socio-political foundations of the target society, and acquire and rehearse some of the associated behaviours (Bochner 2003, p. 9)

Attainment of skills occurs in an interactive manner, for example, learning the language through dialogue with locals. Behavioural approaches to motivation suggest that students require an incentive, or reward to encourage or discourage behaviours (Woolfolk et al. 2008). It follows then that behaviours reinforced by reward or incentive will develop. The reward for attaining such skills is that the individual 'fits in' with others in that context, either online or offline. The initial lack of basic social abilities experienced by students can contribute to feelings of social incompetence which can further decrease motivation to adapt to a new culture (Xia 2009). In this research, it was important that students learned the relevant skills in order to have a productive learning experience. However, some behavioural struggles are evident in the data.

Initially, learning how to navigate in the virtual world was challenging for both students and teacher (see p. 99). Students described learning basic virtual world skills as

*'frustrating'*. Various examples of this included challenges with editing their avatar, *'Help! I'm an egg! ☹'*, and locomotive difficulties: *'How do I get it to stand up?'* It is interesting to note that students verbally attributed their lack of in-world skills to their avatar. In this way, they shifted the responsibility for acquiring skills from themselves to *'it'* (the avatar). From the outset, there were references to the avatar as *'a puppet'*; *'it'*; *'that thing'*. The data suggest students sought to attribute their virtual world abilities, or lack thereof, to a malfunctioning or autonomous avatar *'doing what it wants'*. Some described the avatar as having *'a mind of its own'*, attributing a level of consciousness and personality to *'it'*. Many emotive examples of the avatar *'not doing what I told it'* were evident in the data.

Undoubtedly, difficulties with communication and movement within the virtual environment may have contributed to a sense of fear, as earlier identified. Moreover, the utilitarian understanding of the avatar suggests the participants viewed the avatar as a tool rather than another form or expression of the self in a virtual world (Galaxhi and Nah 2007; Bailenson and Yee 2005). Chapter 2 findings also identified such struggles. Additionally, the literature from both virtual world and online learning research concurs that the quality of the learner's experience can hinge on the development of relevant in-world skills (Jarmon et al. 2009; JISC 2009; Child 2010; Sharpe 2010; Mayrath et al. 2011; Salmon 2011).

### 3. Cognitive Struggles

Next, the results of this research indicate that students experienced cognitive struggles. Cognitive struggles occur when different cultures come into contact and established truths *'lose their apparent certainty'* (Ward et al. 2001, p. 10). In this research, students were between-cultures, between the virtual world (host culture) and their culture of origin. In this research, cognitive struggles were identified in two related areas.

#### (a) *'What does this mean for me?'*

First, the data suggest the virtual world experience fractured students' understanding of what it means *'to be'* a teacher. As a between-culture group, students were aware of the traditions and expectations of teaching and learning in the *'the real world'*. However, the virtual world presented an entirely new set of challenges and demands for the teacher and the students. Consequently, it provoked reflection. As students were at an early stage in their professional identity formation, they became focused on *'what does this mean for me?'*. It has been suggested that young people *'fundamentally meet all*

learning initiatives – consciously or unconsciously – with such questions’ (Illeris 2009, p. 18). An interesting parallel is evident here to the digital immigrants supposed fear of technology ‘commoditizing education, deprofessionalizing the educator and commercializing universities’ (Weller 2006, p. 6).

Indeed the mode of module delivery may have heightened such concerns. Learners were encouraged to collaborate and learn from the wider virtual world community. Consequently, the hierarchical knowledge transmission model of tertiary level teaching was discarded in favour of a virtual place-based approach to learning. This model of teaching and learning may have presented challenges for the student teacher. At the very heart of the research, the virtual world challenged assumptions and understanding about both teaching and learning. As the virtual world presented new ways of doing things, it raised questions about professionalism, identity and, ultimately, the role of the Institution.

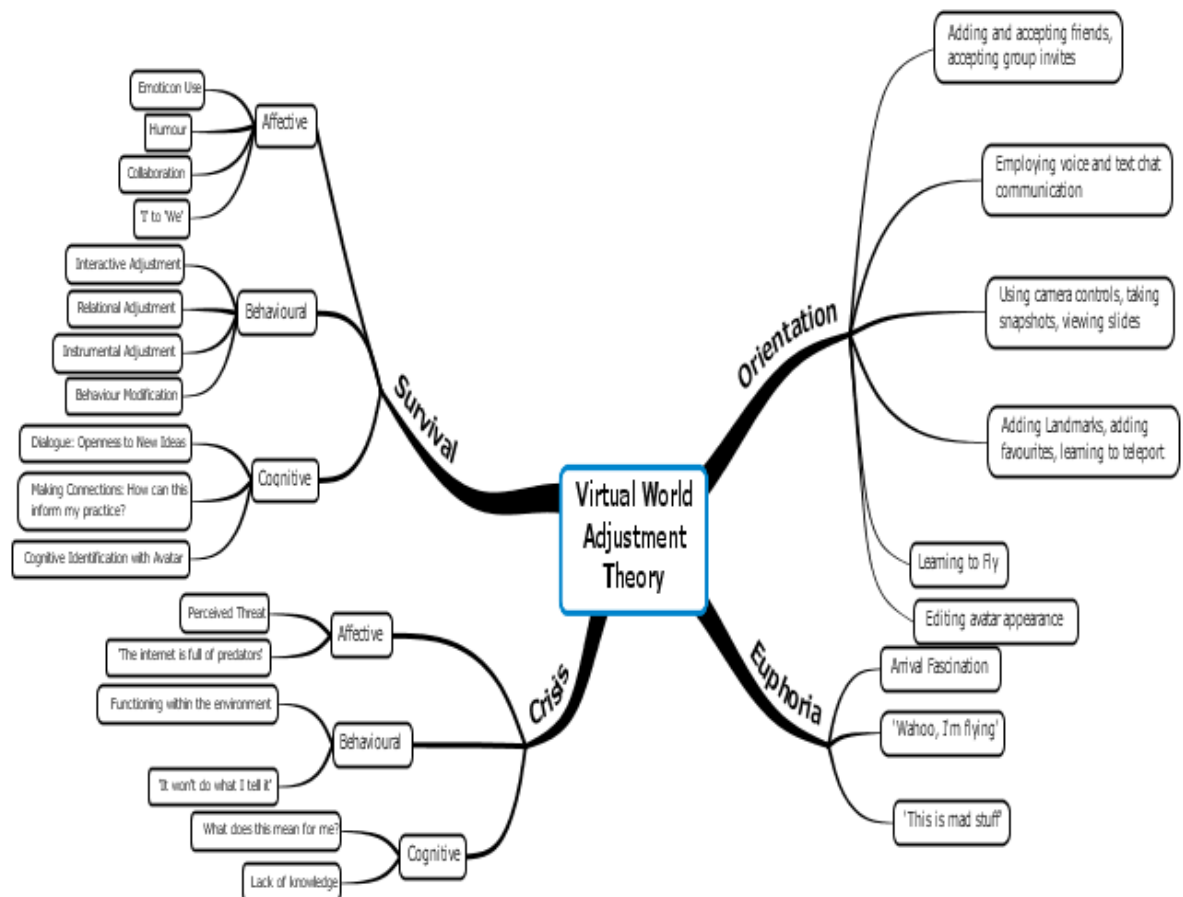
(b) ‘I feel that they have small differences to us but overall not any major ones’

The results of this research indicate a second cognitive struggle; students’ struggle with their opinions and beliefs. This is a common theme in the literature on adjustment (Ryan and Hellmundt 2003; Bochner 2003). This struggle was related to the struggle with ‘outsiders’. Within the virtual world classroom, students encountered a variety of divergent opinions, much more so than in the face-to-face classroom. The paradox of the global virtual classroom is that while it allows for greater innovation and possibilities, it also shakes one’s security. This tension was evident in the data. In the virtual world, there are more possibilities for firmly held ideas, values and beliefs to be questioned.

In this research, some students identified how the presence of other ‘virtual’ individuals in their classrooms exposed their own lack of knowledge, for example, some students commented that they now ‘*looked differently*’ at other faith traditions, indicating a change in opinion. One student went further to comment, ‘*I have believed for years that this Religion is a cult, from speaking with people in this religion I do not feel that now, I feel that they have small differences to us but overall not any major ones*’. This cognitive struggle involved re-consideration of firmly held beliefs in light of structured interaction within the virtual world.

In summary, the findings support the hypothesis that students experienced minor crises during their virtual world learning experience. In particular, the data suggest three interrelated areas where students struggled (Figure 59). Firstly, students experienced affective struggles. This included perceived threat, in the form of the ‘online predator’. Secondly, students experienced behavioural struggles. Such struggles included learning the basics of communication and locomotion in the virtual world. The data show students were quick to attribute their challenges to the avatar. Thirdly, cognitive struggles were identified in two areas. In the first instance, as a result of their experience students’ were forced to reflect on their growing teacher identity. In the second instance, the experience fostered reflection on their opinions, values and beliefs. In the next phase of the virtual world adjustment theory I address how students overcame such challenges.

### **Phase Four: Survival**

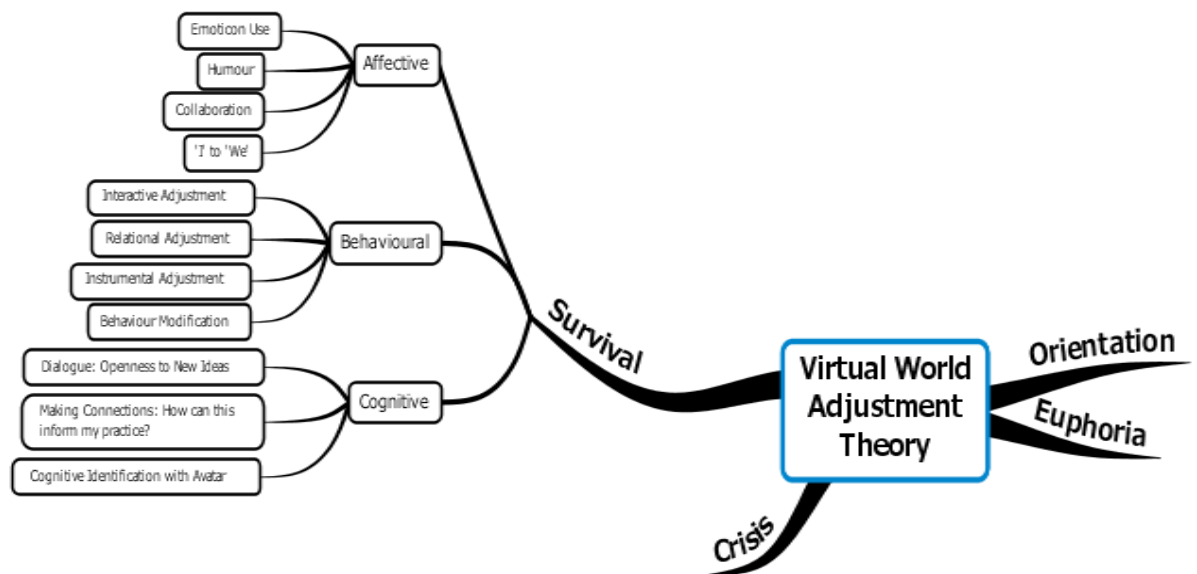


**Figure 60: Phase Four Survival**

To overcome challenges in a new environment an individual must engage in a process of adaptation. Adaptation is the ‘active process of dealing with change’ (Bochner 2003,



p. 7). Frequently, the sojourner engages with challenges on their own (Ward et al. 2001 p. 16). In order to overcome challenges, individuals must engage in a variety of adaptation techniques (Xia 2009). It is through active engagement that the effects of culture shock become less and less. Ward refers to this process of active adaptation as ‘the recovery phase’ (1996). However, recovery has clinical connotations and, therefore, is inappropriate for describing this phase of adjustment in a virtual world context. In this research, I employ the term survival in its broadest sense to refer to the dynamic process of overcoming challenges in the virtual world (Figure 60). If we accept that students overcame challenges in the virtual world then we have to identify how this occurred. As Toffler proposed, ‘we employ a variety of tactics to lower the levels of stimulation when they threaten to drive us above our adaptive range’ (1971, p. 374). In this research, I draw on the ABC framework proposed by Ward et al. (2001) to explore how students overcame challenges. In this section, I propose that activities in the affective, behavioural and cognitive domains contributed to survival in the virtual world (Figure 61).



**Figure 61: Virtual World ABC Model (Adapted from Ward et al.2001)**

### 1. Affective Survival

As earlier identified, studies on adaptation to new environments have highlighted the crucial role of friendship in providing support and enhancing well-being (Furnham and Bochner 1982). In this research, the evidence indicates that friendship and collaboration played a prominent role in overcoming affective struggles. Four examples of this collaborative approach are evident in the data. First, students employed emoticons to

circumvent the loss of physical cues and provide positive reinforcement for the group. Second, students adopted a collaborative approach through self-initiated sharing in order to determine how best to overcome challenges. Third, humour employed in a structured and unstructured manner created an affable classroom environment, conducive to learning. Fourth, the collective nature of this endeavour was demonstrated through change in language use from 'I' to 'We'.

#### Emoticon Use

A common challenge for international students is language learning, both verbal and non-verbal (Ryan and Hellmundt 2003). As identified in Chapter 5, non-verbal cues can provide us with useful social cues. In the virtual world, learning how to communicate is compounded by the loss of a physical body: *'It's difficult when you can't see the persons face, they might mean things in a different way than you heard it'*. According to the literature 'when nonverbal cues are unavailable, communicators adapt their interpersonal (as well as instrumental) communication to whatever cues remain available through the channel they are using' (Walther 2011, p. 458). In this research, the data show students adopted emoticon use in two ways to circumvent the loss of identifiable non-verbal cues. First, students employed emoticons to counter possible misinterpretation and lessen the embarrassment caused by faux pas, for example, the smiley face ☺ was employed in advance of making a statement, or directly after a statement. Second, students employed emoticons as a form of non-verbal affirmation, social support and validation for group members, for example, when a student contributed to class discussion other students would provide support through the use of a smiley face ☺. This strategy to circumvent the loss of physical cues had a positive effect on group morale.

#### Collaborative Approach

Next, in response to struggles, students responded through further group cohesion. The data indicate group cohesion occurred in a number of ways. First, it began with the identification with the comparable other (Adelman 2002). Students began their virtual world lives as equal, as 'newbies'. As a result, they encountered similar challenges; how to move, how to fly, how to teleport. Self-initiated sharing became a bond for the group. In order to overcome challenges, students helped one another and worked as a team. This networked approach is evident in the data. First, without prompting from the class teacher, students went to the assistance of peers who were experiencing difficulties:

James: Look, you point at the box and click it. See (*student demonstrates*), try it.  
Lauren: How did you do that? It won't do it.  
James: Point at it, then click it and it will open a little menu bar. Then select wear.

(Lesson Three: Hajj)

Additionally, students pointed out if others were 'left behind' and would offer to send a teleport link to return the student to the group. When the individual returned to the group, he or she was welcomed with a round of applause. Second, collaboration was again evident in students' validation of other. In some cases, contributions did not qualify for validation; nevertheless, students provided positive affirmation.

### Humour

The evidence suggests strategic and unstructured humour played a key role in overcoming struggles. In order to understand this further, I explored Krashen's Affective Filter Theory (1982). In his study of learning second languages, Krashen identified that affective obstacles can act as barriers to potential learning. Affective obstacles can include low self-esteem anxiety and lack of motivation. When the affective filter is 'up', the learner can be influenced by negative emotional variables. In this research, it could be argued the transfer of students into an unfamiliar environment had the effect of raising their affective filter, as identified in 'Crisis' (see p. 176). To reduce such affective filter obstacles the teacher should promote a positive and inclusive classroom atmosphere using a variety of methods.

We are aware that fun and laughter are pedagogic tools which can enable learning in anxiety producing environments (Powell and Andresen 1985; Saltman 1995; Shatz and LoSchiavo 2006). In this research, structured and unstructured humour, were identified as methods that facilitated a positive learning environment. First, structured, fun tasks were employed to help students to learn basic skills and adapt to the environment, for example, during the first orientation session students engaged in a 'Pimp my Avatar' exercise (Figure 62). On completion of the lesson activities, students had to type 'Show me the Money' (after the movie *Gerry Maguire*) in order to receive their prize, which was a quantity of Linden Dollars. During this exercise, students learned how to edit their avatar, how to teleport, and how to use the in-world communication tools. This facilitated their understanding of functions of the SL interface. As the task was game-like, it made something that could be challenging, fun. In this way the lesson activity

drew on the play characteristics of the virtual environment (see Chapter 1). Students commented on the experience as *'fun and interesting'*; *'enjoyable and refreshing'*; *'I found the whole process intriguing and my high expectations were more than satisfied'*; *'It is far removed from any other experience offered in the course, a new direction which I found enjoyable and up to date'*. The emphasis here was on having fun rather than the teacher being funny, which does not necessarily promote learning (Morrison 2008).

## ASSIGNMENT FOUR 'PIMP MY AVATAR'

In your best Gerry Maguire style type  
'Show me the Money'



**Figure 62: Final Orientation Activity**

Next, the data provide evidence that unstructured humour also fostered a collegial classroom atmosphere, which helped students to overcome in-world challenges. In particular, students employed visual humour, which is thought to be an effective tool in online classes (Shatz and LoSchiavo 2006). Without a physical body to communicate non-verbal humour, students employed their avatar in amusing ways. In effect, they created 'a scene' (Goffman 1959, p. 204). This lightened the atmosphere during the class. Students engaged in strategic gaffes such as accidentally sitting on another avatar, or standing under an avatar as he or she attempted to land after teleporting (cue avatar with flailing arms and legs). Other activities included dance-offs at the beginning or end of class. During such activities, the group encouraged one another through clapping and laughing. The use of visual humour had the effect of strengthening group cohesion by promoting interaction, and facilitating 'mental breaks' (Shatz and LoSchiavo 2006).

### 'I' to 'We'

Finally, the collaborative approach adopted to overcome affective struggles was evident in the students' use of language. As the students spent longer periods of time in the virtual world, a change in their use of language was noticed. That is, from the employment of independent pronouns such as 'I' and 'me' to interdependent pronouns

such as 'we' 'our' and 'us'. Chapter 5 highlights the development of psychological electronic propinquity, which is the feeling of *being there together* (Korzenny 1978). The data suggest the students experienced a feeling of closeness to others in the virtual environment. This experience of closeness to others in the virtual world is primarily evident through the development of a friendship network.

The friendship network evident in the data is consistent with some elements of the functional model of friendship (Ward et al. 2001; Neri and Ville 2008). This model classifies international students' friendship into three categories and functions. The first category is friendship with co nationals, whose function is to uphold and express the culture of origin values and beliefs. The second category of friendship is the network of host nationals, whose function is to encourage academic achievement, for example, a teacher in the host country. The third network of friendship is the multinational network, 'whose function is largely recreational, as well as providing mutual social support based on shared foreignness' (Ward et al. 2001, p. 148). The friendship network enhances understanding of the new culture through discussion, social interaction and mutual exchange of emotional support. The co-national friendship model, however, can also have negative side-effects, which include lack of integration with the host culture, adverse affects on language acquisition, with subsequent implications for adjustment (Maundeni 2002).

In this research, the friendship network of co-nationals had positive consequences. In particular, compatriot relationship within the virtual world had the role of the enhancing student morale through validation, and the provision of social and academic support. In overcoming challenges, students became interdependent, which is thought to contribute to heightened sensitivity to others (Jin 2010). Moreover, it is reported that 'people with a high interdependent self-construal think and behave in ways that emphasize their connectedness to others and strengthen existing relationships' (Jin 2010, p. 333). The move from 'I' to 'We' language highlights the common bond (attachment to the group) and a common identity (collective identity as a group) (Prentice et al. 1994).

In summary, this section identified four ways in which the affective domain activities helped students to overcome virtual world challenges. First, students employed emoticons to circumvent the loss of physical cues and contribute positive reinforcement to the group. Second, students adopted a collaborative approach to overcome

challenges. This involved a sharing of the problems encountered with subsequent offers of support to others in the group. This concurs with other recent empirical research on online learning that suggests active collaboration is critical to the learner experience (Ruey 2010). Third, the literature argues anxiety can have a detrimental effect on learning. In this research, the data suggest humour employed in both a structured and unstructured manner assisted in the alleviation of potential anxieties. In essence, humour helped to facilitate a friendly classroom environment conducive to learning. Finally, the collective approach to overcoming challenges was illustrated through a subtle change in language use from 'I' to 'We'. In sum, the approach adopted by students to overcoming virtual world struggles echoes an approach evident in computer gaming where 'to be successful you need a team' (Betz 2011, p. 117). Next, I identify how students overcame challenges related to the behavioural domain.

## **2. Behavioural Survival**

In order for participants to operate in an effective manner in a new host-culture, they must acquire culturally relevant skills and knowledge. Behavioural learning theories suggest 'that the outcome of learning is a change in behaviour, and it emphasises the effect of external events on the individual' (Woolfolk et al. 2008, p. 244). Bochner explains the behavioural dimension of adjustment through three sub-categories, which are instrumental, interaction and relational adjustment (2003). The data in this research show some evidence of all three types of adjustment, which are briefly explored. Finally, as a result of the use of an avatar, the data suggest one student experienced some in-world behavioural modification (Yee 2006).

### **Instrumental Adjustment**

Instrumental adjustment refers to 'the ability to navigate within the environment' (Bochner 2003, n.p.). As identified earlier, students identified some challenges with learning how to move and communicate in the environment. Students overcame such challenges, however, by engaging in structured and unstructured tasks. First, through set tasks, students learned how to find their classroom, how to sit down, how to teleport and how to return to the classroom base. Second, in an unstructured manner, students learned skills through personal exploration of the environment:

*'Since class one, I have logged into second life three or four times. I wanted to make sure I could navigate my way around before class two. I thought it was interesting and I visited lots of places. I even went to the world trade centre memorial site, it was sad to hear them read out all the names of the people that had lost their lives. I also visited Mecca, which we will coincidentally be visiting*

*next week. As well as that, I rambled around Dublin visiting Dame Street and Grafton Street’.*

As a result of engaging in such structured and unstructured activities, the students were able to navigate the virtual world with ease by the end of the module. The wider literature on online learning concurs that such activities are critical to the effectiveness of the learning activity (Salmon 2011; Child 2010).

#### Interaction Adjustment

Next, interaction adjustment ‘is defined as casual interactions with the host culture’ (Bochner 2003, n.p.). During this research, students interacted with virtual world residents during field trips and class discussion (see Virtual World Place Based Education, p. 162). In addition, students explored the virtual world outside of class time. Many indicated, however, they did not interact with members of the SL community. This is quite interesting as SL is a multi-user world and essentially a social space. One student commented ‘*I seen [sic] many people but was too scared to talk to them as I am only new*’. Introduction to SL residents within the virtual classroom environment facilitated a ‘safe’ introduction to the wider SL community. While Salmon (2011) argues that socialization within the class group is an important factor in adjusting to the online learning environment, this research goes further to suggest that socialization with the wider online community is an important consideration when designing learning activities within a virtual world. Some students considered the interaction with SL residents enhanced their learning experience ‘*Having the opportunities to seek knowledge from guest speakers, such as John, despite being in a different country can be beneficial. Also, I think after a while you become completely immersed in SL, so despite the physical distance between lecturers, guest speakers, and other students you really feel like they are in the room with you*’. Others suggested the ability to interact with SL residents strengthened the relationship within the group: ‘*It was so cool to talk to a real life ordained minister from an Anglican church and ask him questions that you might never get to ask in real life*’. The student concluded by making reference to the relational aspect of the experience: ‘*The group has a good dynamic, and everybody asked really good questions which John, the minister, was more than happy to answer*’.

#### Relational Adjustment

Finally, relational adjustment ‘is defined as maintaining non-trivial friendships and social networks with host members’ (Bochner 2003, n.p.). While students were not in

the environment for long enough to establish relationships with host members, the data suggest students developed a collective identity, and adopted a collaborative approach to problem-solving, for example, some considered that compatriot relationships enhanced their understanding: *'Interacting with my classmates was extremely enjoyable as I learned a great deal from their views on particular aspects of a lesson and as a result found the information easier to comprehend'*. This is consistent with the findings from the literature review and consistent with the wider research on the 'often unacknowledged role' of peers in the online learning experience (Farren 2008; JISC 2009b, p. 4; Crotty 2011).

### Behaviour Modification

The study of behaviour modification as a result of avatar use is beyond the scope of this study. It is interesting to note, however, that despite reference to the avatar as 'it' and 'that thing' there were some elements of behaviour modification evident in the data. In his work on the relationship between human and avatar behaviour, Yee (2007) draws on the presentation of the self theory (Goffman 1979). Yee argues the creation of an avatar is a deliberate transformation and representation of the self in the digital environment. Moreover, Yee argues that self-transformation, through the use of an avatar, can lead to change in attitude and behaviour (see p. 144).

In this research, while the students identified frustrations with the use of their avatar, they also identified how the use of an avatar permitted them to behave in a way they would not '*normally*' behave during a class. One student identified the dual role of the avatar as something he could '*hide behind*' but it also permitted him to be '*more open*' in his interaction with others. As a consequence of the transformation and subsequent presentation of the self through an avatar, the student engaged with his classmates in a way he '*normally*' would not engage. In discussing this further with the student, he identified his fear of '*speaking up*' in the offline classroom. His argument was he did not want to '*sound stupid*' in front of '*the others*'. Additionally, he commented '*they know me*'. This might suggest the offline class group had already pigeon-holed the student into a certain category.

The student identified the creation of the virtual world avatar as a '*new*' creation of the self, which permits escape from the '*real*' self. The '*virtual*' version of the student had no prior history (Yee 2007). Through the avatar, he appeared confident, happy and



agreeable to others. This performance was acceptable. In ways, the virtual version of the student was an opportunity for the creation of *'a better self'* (Turkle 2011, p. 160). Additionally, students' commented on being more *'open'*, *'honest'* and *'expressive'*. Ryan reported: *'you can be more open because you feel safer...behind the avatar, I mean behind the screen'*. This concurs with Yee's argument that the avatar provides an opportunity for an individual to strategically alter his or her behaviour and appearance for social advantage (2007). In this way, the avatar provided a tool for survival in the virtual world. As, however, only one student is involved, this finding must be treated with caution.

In this section, I drew on Bochner's behavioural dimensions of cultural adjustment (2003). First, students learned to navigate the environment through structured and unstructured tasks. This facilitated their learning of the SL interface. Second, through interaction with peers and the host community, the students learned more about the environment and the module content. Third, the experience of interaction provided the group with support. Finally, the data in relation to one student suggest some aspects of online behaviour modification.

### **3. Cognitive Survival**

Earlier in this chapter I identified two cognitive struggles students encountered as a result of participation in the module. First, the virtual world experience challenged students' assumptions and understanding about both teaching and learning. Second, the data suggest that the experience caused students to reflect on their opinions and beliefs. Students overcame such challenges through an interactive process of gaining knowledge and reflecting on that knowledge.

First, the data suggest a move from anxiety about *'all sorts in here'* to willingness to understand why people join SL. James commented: *'the avatars we met are real people and there was a real sense of belonging to the Church in the SL community. They have bible readings, bible discussions and even Mass in SL'*. He then reported that once acquainted with SL, people are *'more prone to open up to avatars than to their closest friends in the real world. The reason being they are less likely to be judged in SL'*. As a result of the virtual world experience, James stated he is now *'much more open to new and modern ideas...I will take a much more positive outlook when someone approaches me with a new idea'*.

Second, and in a related way, the data suggest increased tolerance for people of different cultures and world views. As Williams points out ‘an initiation into a culture can involve an encounter with a religious tradition’ (2011, p. 231). In this research, the encounter took place in a virtual space. Diana argued her interaction with those of other world views encouraged her to reflect on her beliefs: *‘I would not portray this religion as a cult and I would encourage my class to ask questions about different religions and study them so that I would be eliminating this racism barrier in Religion from my class’*. Through reflection the student extended her understanding. Other students also discussed how they found the experience of dialogue with others *‘extremely informative’*, *‘thought provoking’* and something they will *‘definitely incorporate within the classroom’*. The positive attitude toward the SL culture and subsequent identification of the worth of the experience suggests a move away from struggling to cope with difference within the environment. While it was beyond the scope of this study to ascertain, it is quite likely that the module participants will continue to model such non-discriminatory behaviour. It is argued that modelling such behaviour is likely to have a positive impact on others (Dworetzky 1994).

Third, the data suggest that through participation and observation, students grew in their knowledge of teaching methodologies (see p. 151). Students made connections between their virtual world experience and their classroom practice. This shifted attention away from *‘what does this mean for me?’* to reflection on how the knowledge and experience could inform their teaching practicum.

*This is a good way for students to learn. The information is not simply given to them rather they have to take it upon themselves to work and absorb as much as possible.*

*(Emma)*

*I would use a lot of these pictures and personal stories if I was to teach this topic to a class.*

*(Ryan)*

*If I had to plan a class on NRMs I would like to have guest speakers and let the students ask questions. I would also try to get traditional clothing or religious artefacts from these movements for pupils to examine. I feel that the more visual the class, the more interactive the class, the more interesting it would be for pupils. I am more confident now to teach this topic because of what I learned today.*

*(Lauren)*

*It showed me the power of activity based learning and the importance of involving students in the learning process and allowing them to find out*

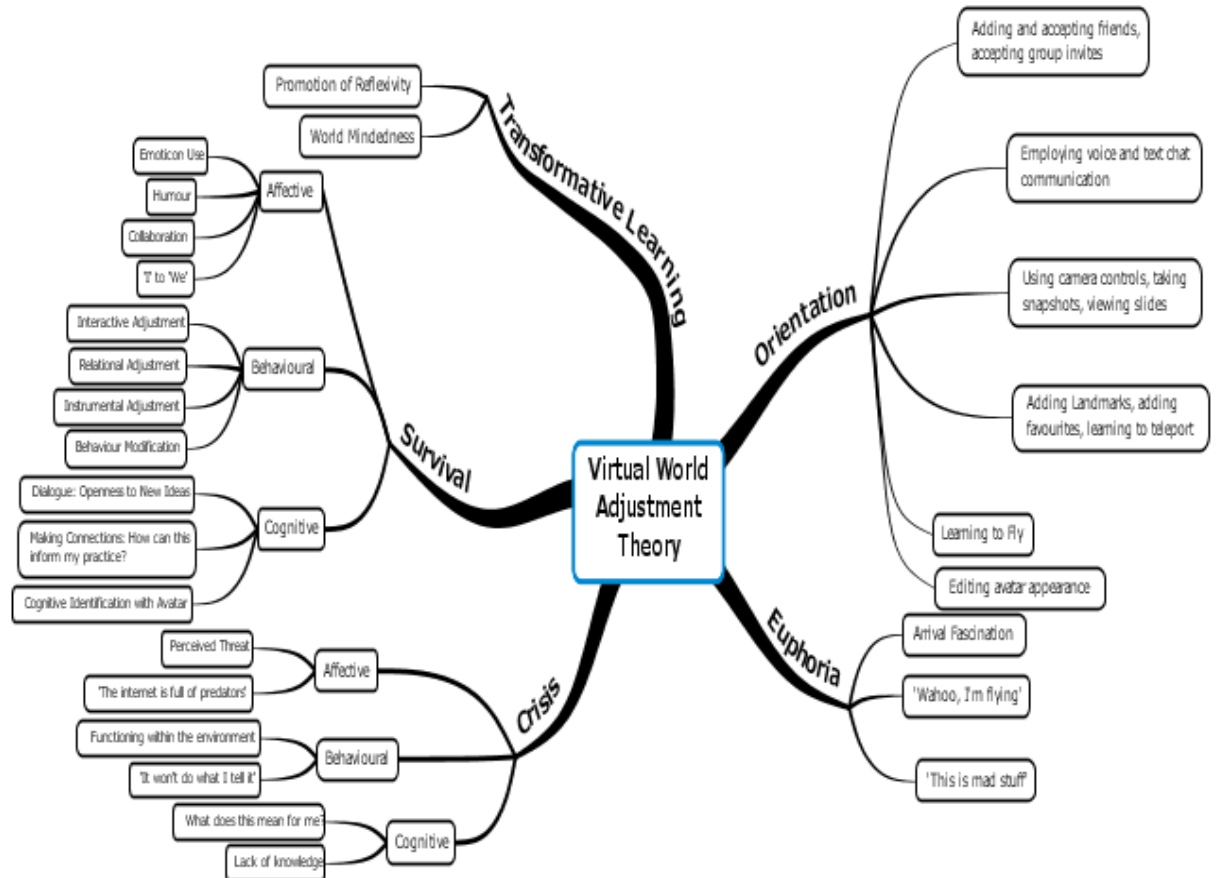
*information on their own and not just by the teacher giving them the information.*

*(James)*

Finally, the data suggest there may have been some levels of cognitive identification with the avatar, which may have assisted adjustment to learning the virtual world. Avatar identification theory argues that ‘an avatar that looks much like the user will influence the usage and usefulness of the avatar because the user has a cognitive connection with it’ (Suh, Kim and Suh 2011, p. 715). In this research the students maintained ‘cookie-cutter’ avatars of their own gender (see p. 133). Limited changes were made to their avatars. Although students referred to their avatar as ‘it’, they referred to their experience as ‘*being absorbed*’, ‘*actually being there*’, and ‘*being immersed*’. A possible explanation for this is that students might have experienced a cognitive connection to the virtual world through their avatar, such experiences are described as ‘being a part of the phenomenal environment created by a medium’ (Kim and Biocca 1997, n.p.). However, the connection was not static. Students indicated an awareness of external distractions and ‘*being at my computer*’. Nevertheless, an individual’s sense of present can oscillate between environments ‘from moment-to-moment the user may feel present in the physical environment, the virtual environment, or the imaginal environment’ (Kim and Biocca 1997, n.p.). If such cognitive identification with the avatar did indeed occur, it likely played a role in the experience of ‘*being absorbed*’.

In summary, this section identified the role of cognition in the students’ adjustment to learning in the virtual world. There was a progressive and cumulative move from seeing everything as different and chaotic, to an understanding of the richness of the learning experience. Students overcame challenges through an interactive process of gaining knowledge and reflecting on that knowledge. In addition, I identified students may have experienced some level of cognitive connection to the avatar which may have played a role in their experience of presence in the virtual world and thus, contributed to the quality of learning. It has been suggested that on return to the culture of origin a traveller (virtual or otherwise) is ‘somewhat changed by the journey’ (Gerrig 1993, p. 10). Were the students ‘somewhat’ changed by the virtual world experience? It is to this topic that this chapter now turns.

## Phase Five: Transformative Learning



**Figure 63: Phase Five Transformative Learning**

Technology and transformation go hand in hand. Political, social, cultural and education sectors frequently call on the wider community to ‘harness technology for transformation’. The impetus to harness technology arises from an understanding that technology is a powerful tool for leveraging us toward our potential. As highlighted in the Introduction to this thesis, decisions to employ technologies in the classroom, however, should be carefully considered on their educational affordances. A seismic shift toward a new way of doing things must be evidence based. It is to this end that this research activity was directed.

In this research, the final phase of the proposed adjustment theory is ‘Transformative Learning’ (Figure 63). The very concept of transformative learning, however, might be considered problematic, as it can imply ‘visionary notions of radical reform’ (Plenderleith and Adamson 2009, p. 6). In this research, transformative learning occurred as a result of progression through the inter-related phases of orientation, euphoria, crisis, and survival. Interaction and engagement with the virtual world

stimulated this progression. Here, transformation is not an overnight metamorphosis. Rather, it is understood as a process, which occurred as a result of participation in one virtual world module. Through this lens, transformation is a move toward deeper knowledge and understanding. No grand claims can, however, be made. Not all participants made it to this phase of the adjustment cycle; for some there was a definite movement toward transformation, for others there was partial transformation but for yet others no claims of transformation at all can be made.

Given the social and collaborative nature of the module, I draw on Mezirow's social constructivist understanding of transformative learning. Mezirow defines transformative learning as:

The process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumptions and expectations – to make them more inclusive, discriminating, open, reflective and emotionally able to change.

(Mezirow 2009, p. 92)

In this research, the data suggest that perspectives, assumptions and expectations were tested. Student struggles included, consideration of what technology means for their teacher identity, perceptions of threat, and challenges to opinions and beliefs. It is my argument that the module provided students with an opportunity to reflect critically on their assumptions and 'arrive at more justified beliefs by participating freely and fully in an informed and continuing discourse' (Mezirow 2009, p. 94). Through this process, there was a noticeable move from fear to familiarity. In the following section, I propose two identifiable ways in which transformative learning occurred:

- (1) Promotion of Reflexivity
- (2) Global Competency

### **Promoting Reflexivity**

In meeting the demands of the teaching profession, teachers should be open to learning at all stages of their career path, and reflective practices are considered central to this task (Runhaar 2010). Reflective practice is, however, at best, 'patchy' (Killeavy and Moloney 2010, p. 1071). As a result, there is general welcome for inventive ways to promote and improve reflective practice. In this research, reflection occurred through reflective journaling and student led class discussion. In this research, the motivation for reflectivity was traced to the recurring fundamental concern: '*What does this mean for me?*'. The process of creating an online identity, and engaging with a new world, moved

students out of their comfort zone from thoughts of just *'playing a game'* to engagement with more complex matters.

The data suggest participation in the module facilitated reflection on the evolving role of the teacher, and the changing nature of the classroom. In this research, the virtual world acted as a classroom, a space for collaboration, discovery and exploration. The teacher was the coordinator of the virtual world experience, a *'guide on the side'*, and facilitator of group interaction. Through participation, students experienced how new technologies can be employed without undermining the vital role of the teacher, or the quality of the lesson content. In addition, the students were privy to the challenges and potential affordances of education in a virtual world. The interactive nature of the module provided students with an opportunity then, to re-imagine their own practice. This occurred through a cyclical process of engagement and reflection. On conclusion of the module, many reflected that the experience had informed their growing understanding of what it means to teach and be a teacher:

*'you can't be a sage on the stage anymore'; 'I want to be creative in my class, these are things that we would never get to do in a real life college situation, it just would not be possible, it has brought the information we are learning to life, right in front of our eyes'; 'I want to be that creative in my own classroom'.*

In particular, the data show students reinterpreted their virtual world experiences for their own classroom practice (see p. 151):

*You could use video, pictures or even a timeline on the wall. This idea of using the visual to bring the pilgrimage, or indeed any topic, to life is definitely something to consider for future classes.*

*I would use a lot of these pictures and personal stories if I was to teach this topic to a class as I feel they give a great sense of how the Jews were really treated. It would also let them (students) have an emotional opinion on what the Nazi's really did, as they could read accounts of people their own age whose families and lives were torn apart.*

*From completing today's lesson, I now understand how effective newspapers are in the classroom and will be recording this for teaching practice in September.*

As a result, it might be argued that students were *'somewhat changed'* by their virtual world experience. In her model of learning and teaching in virtual worlds, Salmon suggests that with this type of reflection *'there is potential for sophisticated individual learning'* (2011, p. 80). On personal reflection, however, students' reflexive skills might have been further enhanced in two interrelated ways. First, opportunities to teach in the

virtual world might have facilitated students' further understanding of the technology, but also provided an opportunity for students to practice the methodologies. Second, structured reflection on such activities through in-world recordings, as evidenced in the work of Cheong (2011), might have also proved beneficial.

### **World Mindedness**

Worldminded individuals are more likely to see viewpoints that differ from their own ethnic, national, or religious perspectives as valuable. A worldminded individual both recognizes and appreciates cultural differences (Jones-Rikkens and Douglas 2000, p. 2)

To teach in 'an increasingly diverse Ireland, Europe and global society' the skills of world mindedness are a requirement (NCCA 2006, p. ii). Preparing student teachers for such skills, involves presenting them with opportunities to:

Investigate the world beyond their immediate environment, recognize perspectives other than their own, communicate ideas effectively with diverse audiences and further to this, improve situations by becoming active and reflective global participants (Mansilla and Jackson 2011, p. 11).

Such activities provide students with an opportunity for 'dynamic learning *about, with, in and for* a complex connected world' (Mansilla and Jackson 2011, p. 2). The paradox is, however, that while more possibilities for global connection are available, programmes of ITE are underperforming in preparing student teachers to address such issues (Koziol et al. 2011; Merryfield 2003). As a result of compacted timelines, and substantial placement components, programmes of ITE often have the least time, and subsequently opportunities, for global awareness and internationalization (Mansilla and Jackson 2011).

One way to encourage world mindedness and associated global competency is through technology. It is argued that technology can provide 'opportunities to participate in societies not defined by nations, borders or regions' (Merryfield et al. 2008, p. 5), for example, virtual worlds provide a new medium for participation in international immersion trips (Rodriguez 2011). Additionally, as the data in this research highlight, the virtual world provides a creative space for reconceptualising place-based education (see p. 162). Other researchers have argued that role-play and simulation in the virtual world provides an experience of levelling. That is, through the use of an avatar an

individual has an opportunity to interact without prejudice, which may ‘have liberating effects’ (Ball and Pearse 2008, p. 17).

In this research, the virtual world provided the student teachers with an opportunity to explore a world beyond their immediate, and familiar surroundings. As a result, they experienced a world of multiple, overlapping communities, without borders. It was an opportunity to be ‘with one another of a multitude of persons’ (Buber 1961, p. 51). The data suggest the experience provided a degree of levelling, for example, students started their virtual lives as equal, as ‘newbies’. There was a sense of ‘a level playing pitch’ (Suler 2004, p. 324), which had a positive impact evident in enhanced peer relationships as identified in phase four of the adjustment theory (see p. 183).

On a broader scale, however, students had an opportunity to interact with people from a variety of backgrounds and worldviews, those ‘*they normally would not have a chance to*’. Through dialogue with virtual world residents, students encountered differing opinions, which tested some students’ firmly held assumptions. This cultural dialogue is a central component of the Religious Education syllabus that seeks to ensure ‘students are exposed to a broad range of religious traditions and to the non-religious interpretation of life’ (DES 2003a, p. 4). Students identified how participation in the SL module challenged their assumptions, expectations and perspectives. This progressive exposure to, and dialogue with, new perspectives facilitated students critical analysis, and in some cases, encouraged students to reformulate their assumptions in light of the new experience. Student-led in-world discussions provided an opportunity for students to communicate and work through their new knowledge in a safe manner.

Students explored their new understanding in light of their role as teachers of Religious Education. As teachers, they will encounter pluralism and diversity in their classrooms. The module provided a model of how to manage dialogue and difference in their classroom. The module was not designed with the objective of facilitating world mindedness; however, it is clear that this competency may have developed in some students as a result of participation in the virtual world. In this way, it can be argued that engagement and interactivity in the virtual world helped students ‘transform problematic frames of reference’ (Mezirow 2009, p. 92).



## **Summary**

In this chapter, the contribution to new knowledge of the thesis is explained through a virtual world adjustment theory comprising five phases: orientation, euphoria, crisis, survival and transformation. Each phase of the theory represents a movement toward new knowledge and understanding. As such, the theory has a contribution to make to the understanding of teaching and learning in a virtual world. Readers can judge if the theory concurs with their experience, and it has thrown up some questions that future research might explore. Chapter 7 presents the overall summary of the research, with the implications of this theory for future educators conceptualized in ten points. After acknowledging the limitations of this research, the dissertation concludes by reference to the research exploration that has been addressed and answered in this work.

## **CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS**

This thesis presents an exploration of teaching and learning in Second Life (SL) in the context of a programme of Initial Teacher Education (ITE). The research process was a journey into the virtual world, as both a researcher and a teacher. In starting this journey, I had little knowledge of teaching or researching within a virtual context. By completing and documenting this journey, it is hoped that this research will be of practical use for future teacher educators. This chapter presents the overall summary of the research, with the implications of the virtual world adjustment theory for future educators conceptualized in ten points. After acknowledging the limitations of this research, the chapter concludes by reference to suggestions for future research.

The Introduction and Chapter 1 of this thesis provide an outline of the framework for this research. This framework is constituted by a programme of ITE and the virtual world of SL. The introduction draws attention to the current demand in higher education for innovative pedagogy in terms of curriculum design and delivery, to the digital native debate. In providing an account of SL, I explain the virtual context within which this research is situated.

The second chapter in this thesis identifies and reviews seven cases where SL was employed for pedagogic purposes in higher education contexts. The findings suggest that, in general, activity based learning methods with minimal teacher guidance are the favoured pedagogic approach within the virtual world. Subsequently, the reviewed cases give limited attention to the role of the teacher in the process and, while some guidelines are provided, frameworks for understanding teaching and learning in the virtual world are not presented. The evidence suggests the role of teacher in pedagogy in virtual worlds needs further consideration.

Chapter 3 of this thesis is presented in two sections. Section 1, outlines the paradigm that frames this research. Firstly, the study is situated by defining the research focus and research field. Secondly, Section 1 demonstrates the manner in which this research is consistent with the ontology, epistemology, methodology and ethics of a constructivist paradigm. Thirdly, quality of this research is illustrated under two headings: the appropriateness of research design and the demonstration of trustworthiness and rigour. This section concludes by outlining the usefulness of the research to the research community. Section 2 outlines the process of thematic analysis adopted in the thesis.

Five synergetic phases in the analysis process are identified: data management, coding, selection of themes, checking for credibility, and data presentation.

A transparent account of the process of immersion, and subsequently the *preparation* for teaching in the virtual world is provided in Chapter 4. Through presentation of this journey, considerations for teacher educators within the virtual world are illustrated. Considerations include the creation of a professional teacher identity, the construction of a virtual classroom, and the process of designing a virtual world module. To assist teacher educators, two templates are provided. The first template presents the challenges encountered during the development of the module and an outline of the approach that was taken to resolve same. The second template provides a comprehensive outline of the module 'Religion in Cyberspace'. This includes reference to the pedagogic approach, assessment approach, and connections to the Religious Education syllabi content. Taken together, the templates can act as a reference point.

Following this, Chapter 5 provides a descriptive account of the *processes* of teaching and learning in the virtual world. The data are presented through five themes:

- (1) The virtual teacher
- (2) Learner engagement in the virtual world
- (3) The fear factor
- (4) Getting to grips with methodology
- (5) Virtual world place based education

Together, the themes provide an account of the virtual world teaching and learning activities, with each theme providing multiple routes of theoretical interpretation. In presenting each theme, connections were made to previous research and relevant theory. In order to deepen understanding, I sharpened focus from 'how' to 'why', that is, from descriptive themes to a more nuanced and theoretical argument. In so doing, Chapter 6 draws together the themes to provide a virtual world adjustment theory. The theory provides insight into how one group of student teachers, in one virtual world module adjusted to learning in the virtual world. Other virtual world teacher educators can consider if it fits with their experience. The theory identifies why, and in what ways, the participants struggled during the module. It also identifies how, and in what ways, participants overcame their struggles and moved toward new knowledge construction.

In this way, the theory may be of assistance to other virtual world or online educators and contributes to the wider discourse of understanding the online learner's *experiences* (Sharpe 2010).

### **Recommendations**

The implications of this theory for teacher educators are conceptualized in the following ten points:

#### **1. Observation of Virtual World Educational Practice**

Observation of virtual world teaching is a useful starting point for those wishing to teach in the virtual world. Observation should be undertaken in the spirit of collegiality and should be focused and informed by theory, that is, theory from the literature on SL usage at higher education level, and the virtual world adjustment theory presented in this study. The following questions might be considered useful for guiding observation.

- Teaching and learning process skills – How is the lesson managed? What other resources are employed during the lesson? For example, media boards, field trips, and guest speakers.
- Classroom management skills – How does the teacher facilitate dialogue in the classroom? Is there a roll call system and how does it work? How is turn-taking facilitated? How does the class teacher guide a group during a virtual world field trip? How are technical difficulties overcome?
- Teacher communication skills – Does the teacher employ voice or text chat or a combination of both? Are they employing a prepared script? How is the lesson delivered?
- Subject content engagement skills – How is the teacher motivating their learners? Which tools are they employing to make the lesson engaging?
- Methodological skills – Which methodology or strategy is employed? Can phases within the methodology or strategy be identified? Is the methodology appropriate to the lesson content? How might such a method be employed with lesson content?

(Adapted from MDI, 2012)

#### **2. Providing Students with Opportunities to Learn The SL Interface**

Two methods can provide students with opportunities to learn the SL interface. Firstly, an orientation class comprising theory and practice should be provided. Secondly, orientation activities should be built into in-world assignments and class activities.

#### (a) Orientation

Initial class periods should be given to orientation sessions to assist students' transition in the virtual world. It is worthwhile to divide the session. Firstly, students should be provided with an overview of the virtual world before bringing them online. This might include information about demographics, economy, locomotion, communication, in-world groups, and geography. Short video demonstrations might assist. Secondly, students require a practical orientation session. During the first orientation session it is preferable if the teacher be physically present in the room with the students. Some things can be explained more quickly in-person, or with a rapid 'hands-on' demonstration. Orientation activities should include:

- Creating an avatar
- Choosing a name
- Learning to walk, run and fly
- Teleportation
- Using voice and text chat (public and instant messaging)
- Adding landmarks and favourites
- Learning how to use camera controls
- Capturing, saving and emailing snapshots
- Adding and accepting 'Friend' and 'Groups'
- How to use the inventory, and maintain folders

In this research, students engaged well with such activities when they were presented as a game-play activity. Relevant game play activities should be considered as a useful pedagogic tool for the virtual world teacher. Additionally, throughout the virtual world experience students should be provided with guidelines for reporting their technical difficulties to the instructor. Technical support resources such as video demonstrations should also be provided on a web based medium.

#### (b) Orientation through Assignment and Activities

Competence with the virtual world interface can be facilitated through carefully structured in-world assignments and class activities. This might include, for example,

identification of locations using the SL search finder, teleportation to the location, photography of that location, and appropriate tasks relevant to the module. Other suggestions include asking students to source guest speakers or field trip locations relevant to the subject content. This can help students to identify suitable in-world resources and dialogue with SL residents. Additionally, pairing students for introductory in-world assignments is one structured way to have students share their technical skills.

### **3. The Learning Space**

The teacher educator should engage with the resources available in the virtual world, sourcing the particular within the universal. This includes hospitable destinations (that relate to the line of study), community members (who can enhance practice by bringing voice to the content), and the SL community message boards (for assistance with making connection and technical issues). The research findings suggest that students would benefit from having an identifiable base classroom in the virtual world. Students should add this location to their 'favourites' folder.

The design of the class space is worth consideration. Students should be able to sit down with ease. Slide viewer boards should be locked down for teacher use only during the class. The integration of media boards linked to web pages or video links is optional, but they can prove useful for facilitating the development of students' in-world skills. Consideration should be given to seating arrangements. The research shows that students were more likely to discuss and contribute if seats were positioned in a semi-circular fashion. This is something that might be explored further by other researchers.

### **4. Teaching Methodologies**

A range of activity based methodologies should be employed in the delivery of lesson content in SL. When working with student-teachers, the modelling of methods they will use in their own practice is beneficial to their learning of such methods. The following recommendations are made:

- Teachers should present the chosen methodology, and the rationale for choice at the start of the class. The phases of the methodology should be outlined, and where possible, make reference to each phase during lesson delivery. This helps to provide a lens into the virtual world teaching activity.

- Students should be provided with an opportunity to critique the methodology, and suggest alternatives.
- Students should be provided with an opportunity to make connections. This might include, for example, assessment on how they would employ such methodologies for different lesson content, class groups, and abilities. This provides an opportunity for structured reflection by students on the implications of their learning.

## **5. Content**

Substantial resource preparation is required for teaching in a virtual context. The preparation of lesson plans, a teacher script, teleport links and note cards prior to the lesson is a recommendation. It is useful to have a printed version of this material during class delivery. In addition, the teacher script and a text list of procedures for overcoming technical difficulties should be opened on a background screen. In case of voice chat failure, the teacher script is available to employ in the text chat communication channel. Likewise, should students require assistance with technical difficulties or using the SL interface the teacher can draw from the bank of appropriate solutions.

For teacher educators, the adoption of a curriculum-led approach provides student teachers with insight into how syllabus content can be delivered creatively in the classroom. Students should be facilitated to consider how the lesson content could be delivered creatively in their own classrooms, with or without the use of such technologies. In sum, there is merit in adopting a virtual place based approach through the use of the wider SL community resources for enhancing the learning experience.

## **6. Supporting SL Module with Other Technologies**

The findings of the literature review and this thesis concur that the support of other web based technologies for a virtual world module is highly recommended. Other technologies prove useful for keeping attendance, facilitating post-class discussion and collating assignments, for example, SLOODLE (Second Life and Moodle).



## **7. Module Assessment**

Assessment activities should assist student teachers in making the connection between the module content and their own classroom practice. Teacher educators, following a curriculum-led approach, should draw on assessment methods that could be employed in the classroom. Assessment methods should also include further engagement by students within SL. This has a dual effect of assessing learning but also enhancing the student teachers virtual world skills, with the subsequent effect of enhancing their ICT skills repertoire.

## **8. Student Activity**

The theory presented in this research demonstrates that interactivity plays an important role in the overcoming challenges and adjustment to learning in the virtual world. Given the nature of the environment, interactivity should be encouraged and expected. The teacher should model best practice in this regard and engage in virtual world activities with students. This provides the teacher with an opportunity to learn *from* and *with* students. Virtual world modules should include opportunities for students to lead discussion and to develop their presentation and leadership skills.

## **9. Collaboration**

The findings of this literature review and this thesis provide evidence that collaboration is critical to the learning experience. Firstly, it reduces the ‘fear-factor’ through socialization and acknowledgement of shared experiences. Secondly, it empowers the group to take an active role in the virtual world experience. Thirdly, collaboration within the group and with the wider SL community provides a rich opportunity for dialogue and reflection on one’s own practices, opinions and beliefs. The present study confirms virtual worlds also have a contribution to make toward the promotion of world mindedness and intercultural education. Opportunities for group activities and socialization with the wider SL community are highly recommended.

## **10. Challenge**

The virtual world adjustment theory presented in this research highlights the challenges this group of students faced during their virtual world experience. In this research, challenge led to learning, and in some cases, transformative learning. The

role of academia is to challenge. The purposeful use of virtual world modules can assist in challenging students and broadening their horizons.

### **Limitations of the Research**

In conducting this research I am conscious of its limitations, summarized here in three points.

Firstly, the research methodology employed is adapted for use in the virtual world of SL. Further consideration to the interrogation of choice of data collection methods might have enhanced this study, for example, further exploration of potential in-world data collection methods, such as the use of in-world student video diaries, filming of in-world lessons and filming of student interviews. Such methods might have provided more nuanced data for analysis and may have provided for a more descriptive, holistic account.

Secondly, there was an inconsistent level of contribution from students during the module. Some participants were more vocal than others, and subsequently some voices may have found their way to the fore.

Finally, I am aware that this research study is one among many that specifically consider the use of virtual worlds for teaching and learning at higher education level. It has, however, its own unique contribution and originality of voice.

### **Further Areas of Research**

- Further research might explore how virtual place-based education could be employed in the senior cycle post-primary context in relation to teaching Religious Education or Intercultural Education.
- A further study could assess if the virtual world, SL or another, opens students up to a deeper sense of dialogue within their own religious tradition, and with other religious or philosophical traditions.
- With regard to the methods of this research, another author might choose to focus on in-world photo and video analysis.

## **Summary**

This research provides an example of research-driven teaching and innovative curriculum design and delivery. Throughout this thesis, I demonstrated how my understanding of teaching and learning in the virtual world developed through the process of experience, discovery and reflection. In answering *what is going on here?*, the research began with a panoramic exploration and immersion into one virtual world, Second Life. Subsequent to this, the research focused on teaching and learning within my own virtual world classroom. My experience and that of the participants provide a rich source of data. Through the presentation and analysis of a virtual world adjustment theory, this thesis has made a contribution to knowledge.

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## APPENDICES



## Appendix 1: ICT Policy Ireland

<b>YEAR</b>	<b>PUBLICATION TITLE</b>	<b>AUTHOR</b>
1997	Schools IT 2000	DES
2001	Report and recommendations to the Minister for Education and Science on the Impact of Schools IT2000	National Policy Advisors and Development Committee, DES
2001	A Blueprint for the future of ICT in Irish Education	DES
2004	Progress Report of ICT in Schools	DES
2007	A review paper on thinking and policies relating to teacher education in Ireland	Dr. John Coolahan, The Teaching Council of Ireland
2007	National Development Plan 2007-2013: Transforming Ireland, A Better Quality of Life for All	DES
2008	Smart Schools = Smart Economy, a report of the ICT in Schools Joint Advisory group to the Minister for Education and Science	Joint Advisory Group to the Minister for Education and Science, DES
2008	Investing Effectively in Information Communication Technologies in Schools (2008-2013)	ICT Strategy Group, DES
2008	ICT in Schools Inspectorate Report 2008	Inspectorate, DES
2009	Teacher Registration Regulations 2009-2013	The Teaching Council of Ireland
2009	Learning to teach and its Implications for the continuum of teacher education: a nine cross country national study; Report commissioned by the Teaching Council	The Teaching Council of Ireland
2010	Building Ireland's Smart Economy: A framework for sustainable economic renewal, progress report, March 2010	Department of the Taoiseach

## Appendix 2: Cases of Higher Education Pedagogic Use of SL

Author, Date	Title	Research Method	Data Collection	Pedagogic Approach	Context
Girvan.T and Savage.G (2010)	<i>Identifying an appropriate pedagogy for virtual worlds: a communal constructivism case study.</i>	Descriptive Research: Multiple Case Study Approach	Chat logs of text discussion Observation Semi-structured interviews Analysis of five learning artefacts	Communal Constructivism	<b>Trinity College Dublin, Ireland.</b> 2 day course, 2 hours per day, 5 groups Qualified teachers engaging in continuing professional development in the area of Development Education (specifically North South interdependence) Activities took place on a specifically designed development education island, Murias.
Mayrath, M., Traphagan, T., Heikes, E.J., and Trivedi, A.(2011)	<i>Instructional design best practices for Second Life: a case study from a college level English course</i>	Descriptive Research: Mixed method evaluation	Survey (Likert type scale) 10 semi-structured interviews Informal observation over two semesters Adapted questionnaires Flow experience questionnaire Writing confidence questionnaire	SL Building Activity Role play Activity Role Model Discussion	<b>University of Texas, Austin</b> 2 semesters, 18 students (6 male, 12 female), Honour English freshmen Professor with 20 years experience and team of IT specialists Private Island as some of group under 18 Researcher developed a manual to help students. Two one hour classes provided to train students to customise avatars Semester One: Building activity (writing essay to persuade, competition) Semester Two: Role model activity – chose role models (Martin Luther King, Mother Teresa) ‘to engage themselves with their role model’s perspectives and to understand other role models’ perspectives (1 hour and 15 minute class) Students worked in groups – log chat, reflection paper after session.

Jarmon, Traphagon, Mayrath and Trivedi (2009)	<i>Virtual world teaching and experiential learning and assessment</i>	Descriptive Research: Mixed research methods	Content analysis of student journals. Student surveys. Focus group discussion. Content analysis of students' final public statements in SL.	Experiential Learning	<b>University of Austin Texas</b> Graduate communications model Cites Monaghan CLEV-R (Collaborative Learning Environment with Virtual Reality) 5 graduate students. Met online first. Alley Flats project – make a 3D model in SL, invite RL, houses made in RL, project continued outside of semester.
Cheong, D. (2010)	<i>The effect of practice teaching sessions in second life on the change in pre-service teachers' teaching efficacy</i>	Quantitative Research	5 point Likert scale Repeated Measure ANOVA	Experiential Learning	<b>University of Korea</b> 99 pre-service teachers 15 week course 2 hour session per week 2 groups 15 Individual Teaching Groups (ITP) (59) 16 Collaborative Teaching Groups (CTP) (51) 3 Activities for preparation (exercise on functions of SL, observation of model teaching, preparation of practice – lesson planning, instructional tools design and plan) 2 Actual practice sessions – students choose topic, reflect on lesson 1 <sup>st</sup> model observation took place in ICT lab with lecturer present – to see avatar on screen and lecturer in room
Esteves, M., Fonseca, B., Morgado, L. and Martins, P. (2011)	<i>Improving teaching and learning of computer programming through the use of the Second Life virtual world.</i>	Descriptive Research: Action research	Triangulation – questionnaires, classroom images, daily session reports, student teacher communication, researcher as instrument	Project based learning Pair work	<b>Portugal</b> Using LSL to teach computer programming to 1 <sup>st</sup> year third level students. Creation of visual object as part of project, out of lecture time, in pairs.

<p>Andreas, K., Tsiatsos, T., Terzidou, T. and Pomportsis, A. (2010)</p>	<p><i>Fostering collaborative learning in Second Life: Metaphors and Affordances.</i></p>	<p>Descriptive Research: Case Study and Blended learning evaluation</p>	<p>Data collection: pre-analysis questionnaire, text chat recording, interviews, final questionnaire (cycle).</p>	<p>Collaborative Learning: Computer Supported Collaborative Learning (CSCL)</p>	<p><b>University of Thessaloniki, Greece</b>  Post graduate students participating in an educational virtual environments course. Blended learning approach using Jigsaw and Fishbowl Collaborative learning techniques. Each group given a set task.</p>
<p>Mahon, J., Bryant, B., Brown, B., Kim, M. (2010)</p>	<p><i>Using SL to help teachers gain experience to manage pupil behaviour.</i></p>	<p>Descriptive Research: Mixed Method Approach</p>	<p>Observation, Instructor Notes, Questionnaire (Likert Scale)</p>	<p>Simulation</p>	<p><b>University of Nevada, Reno, United States of America</b>  One semester; 20 pre-service teachers, 13 female, 7 male  Private SL island  Students engaged with 'an imaginary student developed by the professor with an in-depth academic and behavioural profile' (p122)</p>

### Appendix 3: Field Note Template

<b>Participant Observation in Second Life – Field notes</b>
<b>Date:</b>  <b>Participant Observation Method:</b>  <b>Permission, if sought (attach):</b>
<b>Location / Island:</b>  <b>Snapshot:</b>  <b>Group Name:</b>  <b>Landowner:</b>  <b>Time:</b>
<b>Layout of Educational Space:</b>  <b>Actors:</b>  <b>No. Of Teachers:</b>  <b>No. Of Pupils:</b>  <b>Situation of Teacher:</b>  <b>Situation of Pupils:</b>  <b>Objects Present:</b>
<b>Lesson Topic:</b>  <b>Lesson Aim:</b>  <b>Methodological Approach (if evident):</b>  <b>Activity:</b>  <b>Resources Available:</b>

**Lesson Length:**

<b>Attachments for this Group</b>	<b>Observations</b>
(1) Chat Log <input type="checkbox"/> Yes <input type="checkbox"/> No	
(2) Digital Images <input type="checkbox"/> Yes <input type="checkbox"/> No	
(3) Digital Video Clips <input type="checkbox"/> Yes <input type="checkbox"/> No	

## Appendix 4: Religion in Cyberspace Module Outline

Week	Lesson Topic	Learning Outcomes and Assessment of Learning Outcomes	Teaching Methodology	Link to JCRES/LCRES
<b>One: Orientation</b>	<p>This class provides an introduction to Second Life. The class begins an introduction to the module, an overview of Second Life and its educational uses. Having set up their Second Life account, students create their avatar, learn to edit appearance and learn basic Second Life communication and movement skills. Each activity is takes the form of a task that must be completed in order to proceed to the next learning level. Tasks include:</p> <ul style="list-style-type: none"> <li>• Adding friends</li> <li>• Editing appearance</li> <li>• Teleporting</li> <li>• Adding landmarks</li> <li>• Receiving a notecard</li> <li>• Using in-world communication</li> <li>• Movement skills</li> </ul>	<p><b>Intended Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Students will know what the Second Life programme is.</li> <li>2. Students will understand how Second Life is currently used in other fields of education</li> <li>3. Students will understand the purpose of this module</li> <li>4. Students will understand how the module is linked to my doctoral studies</li> <li>5. Students will understand the basics of Second Life movement and communication</li> </ol> <p><b>Assessment of learning outcomes:</b></p> <ul style="list-style-type: none"> <li>• Through achievement of key orientation tasks students will demonstrate their ability to communicate in-world, move in-world, add friends, teleport to locations and take snapshots.</li> <li>• An assignment assessment sheet will be completed by each student teacher that will indicate how far they have progressed on the assignment tasks.</li> <li>• An after class assignment task is designed to further these important basic SL skills.</li> </ul>	Activity based learning	JCRES Section A, Part 1.
<b>Two: Religion Online / Online Religion?</b>	<p>In this class we discuss the PEW Internet and American Life Report. The concepts of religion-online and online-religion will be introduced. Students participate in a field trip to St. Catherine's Monastery, Mount Sinai.</p>	<p><b>Intended Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Students will understand the concepts 'online religion and religion online'</li> <li>2. Through participation the students will gain a</li> </ol>	Interpretation of Data	<p>JCRES Section D, Part 4</p> <p>LCRES Unit 1, Section A</p>

		<p>deeper understanding of the general teaching method 'Interpretation of Data'</p> <p>3. Students will enhance their SL communication and movement skills</p> <p><b>Assessment of learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will participate in the 'Interpretation of Data' assignment at St. Catherine's Monastery Mount Sinai (SL) and discuss findings at the end of class</li> <li>Through participation in the assignment students will further their basic SL skills, including SL communication, movement and teleporting skills</li> <li>Students will complete assignment one 'Finding Faith on the Internet' and upload their findings to Moodle.</li> </ul>		
<p><b>Three:</b></p> <p><b>Virtual Hajj</b></p>	<p>In this class we learn about the concept of virtual pilgrimage. In particular we ask is it possible to participate in an online pilgrimage? Can we journey to a 'centre out there' from the confines of our office or study? As a group, we will participate in the Second Life simulation 'OnIslam Virtual Hajj'.</p>	<p><b>Intended Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>gain a deeper understanding of the concept of virtual pilgrimage (from the perspective of another religious tradition)</li> <li>know the steps of Virtual Hajj</li> <li>gain an understanding of the teaching strategy 'simulation' from the perspective of a learner rather than a teacher</li> </ol> <p><b>Assessment of learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will participate in the Virtual Hajj in SL.</li> <li>Students will complete a short Moodle assignment 'identify three areas from your experience today that might help you in your own classroom practice' (Moodle Assignment).</li> <li>Students will complete their weekly reflection on their class experience.</li> </ul>	Simulation	<p>JCRES Section A, Part 3</p> <p>JCRES Section C, Part 3</p> <p>JCRES Section E, Part 1, 4</p> <p>LCRES Section A, Part 1.1, 2.2.</p> <p>LCRES Section G 1.2.</p>



<p><b>Four:</b></p> <p><b>Christianity in Second Life</b></p>	<p>In this class we learn about the practice of Christianity in the virtual world. We begin by exploring key Vatican publications including the response to ‘Cyber Culture’. We are joined by a guest speaker, an evangelical Christian who practices his faith through the medium of Second Life. The students lead this discussion. We then meet with the founder and caretaker of the Church and Monastery of Saint Francis, Monastics of Saint Michael, Taliesin Shores. During this class we have the opportunity to participate in morning prayer and speak to numerous residents about their practice of faith online.</p>	<p><b>Intended Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify key Roman Catholic Church teaching relevant to the topic ‘Religion in Cyberspace’</li> <li>2. Students will be able to identify examples of Christian denominations who practice faith with the Second Life environment</li> <li>3. Students will demonstrate the ability to comprehend a variety of perspectives on the Christian faith in cyberspace</li> <li>4. Students will learn the case study method from the perspective of a student which will inform their future teaching.</li> </ol> <p><b>Assessment of learning outcomes:</b></p> <ul style="list-style-type: none"> <li>• Students will complete a moodle assignment</li> <li>• Students will lead the discussion with our guest speakers.</li> <li>• Students will complete a reflective journal statement</li> </ul>	<p>Case-study (Experiential)</p>	<p>JCRES Section A, Part 1,2,3. LCRES Section A part 1.2, 2.1,2.2. LCRES Section B, Part 5.1. LCRES Section C, Part 3.</p>
<p><b>Five:</b></p> <p><b>Judaism in Second Life</b></p>	<p>The ‘Night of Broken Glass’ simulation was built by the US Holocaust Memorial Museum in conjunction with Involve (Metaverse Company). It is an impressive exhibit that shows the power of virtual worlds to combine various forms of media into a powerful, immersive, emotional experience for the visitor. In this lesson the student takes the role of a journalist investigating what happened on the Night of Broken Glass. The student is required to investigate by touching notecards for information and interacting with the objects in the simulation. As you approach the end of the Newsroom, you touch a book that opens up a street view. As you travel down through the streets you experience sound, video and photographs from the Holocaust Museum. (Narrative storytelling in an immersive environment). You learn what life was like for Jews during that time – you hear the stories of the survivors from your computer. It is a powerful way to experience what it was like to be around during that period. The multiple tools create</p>	<p><b>Intended Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. The student will gain a deeper understanding of the events of the Night of Broken Glass through participation as an investigative journalist.</li> <li>2. The students will identify how the events of the Night of Broken Glass unfolded by listening to the survivors stories and viewing the photographic testimonies.</li> <li>3. The students will demonstrate how they might teach this subject to a group of 2<sup>nd</sup> year Religious Education students based on their immersive experience.</li> </ol> <p><b>Assessment of learning outcomes:</b></p> <ul style="list-style-type: none"> <li>• The students will discuss their experiences of the simulation through a round table discussion</li> </ul>	<p>Activity based learning</p>	<p>JCRES Section A, Part 3. JCRES Section D, Part 5. LCRES Section D, 1.1, 4.2. LCRES Section C, 2.1, 2.6.</p>

	a more immersive experience for the participant.	<p>which is lead by the students</p> <ul style="list-style-type: none"> <li>• Students will come up with ways they would teach this topic to a group of 2<sup>nd</sup> year students</li> <li>• Students will complete the Reflective Statement based on the concept of discovery based learning.</li> </ul>		
<b>Six:</b> <b>Cyber Sangha</b>	During this lesson we explore the concept of <i>Cyber-Sangha</i> . Students will participate in discovery based learning groupwork (pair work) activity followed by a student-led discussion on the purpose of <i>cyber sangha</i> (communities online)	<p><b>Intended Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>• The student will gain an understanding of <i>cyber sangha</i></li> <li>• The students will identify four examples of <i>cyber sangha</i> in Second Life</li> <li>• The students will identify the structure and merits of communities online</li> </ul> <p>(key terms: levels of participation, motivations and barriers, perils and promises of communities online, rules and regulations,</p> <p><b>Assessment of learning outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Through a group work (or pair work) activity students will identify four <i>Cyber Sangha</i> communities</li> <li>2. Through a student led discussion students will identify the common structure and merits of communities of faith/conviction online.</li> </ol>	Teacher Exposition and group work activity followed by student-led discussion	JCRES Section A, Part 3. JCRES Section E, Part 1, 2, 3.  LCRES Section C, 2.3. LCRES Section E, 1.2. LCRES Section F, 2.3, 3.2. LCRES Section J, 2.3.
<b>Seven:</b> <b>New Religious Movements in Second Life.</b>	This lesson provides an introduction to the practices of New Religious Movement (NRMs) within the Second Life environment. The class will give particular focus to the tradition of the Universal Unitarian Church and The Church of Latter Day Saints. We begin with an overview of NRMs and then move to explore both communities in SL.	<p><b>Intended Learning Outcomes:</b></p> <p>Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Define the concept ‘New Religious Movement’</li> <li>2. Identify how two New Religious Movements practice their faith through the medium of Second Life.</li> <li>3. Critically evaluate how NRMs have found a home in an online environment.</li> </ol>	Case-study (experiential)	JCRES Section A, Part 4. LCRES Section B, 1.1. LCRES Section C, 3.1.

		<p><b>Assessment of Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>Through student led discussion students will define the concept of NRM and how such communities find themselves in SL.</li> </ul>		
<p><b>Eight: Module Conclusion</b></p>	<p>In this class we recap on the topics covered over the course of the module and make explicit the links to the JCRES and LCRES syllabus areas. We conclude the lesson with a graduation ceremony.</p>	<p>Intended learning outcomes</p> <p>Students will be able to:</p> <ol style="list-style-type: none"> <li>Demonstrate their knowledge of suitable RE methodologies appropriate to the lesson content covered during the module</li> <li>Evaluate the importance of creativity in lesson planning and delivery</li> <li>Plan how relevant subject content could be effectively translated within the post-primary classroom.</li> </ol> <p>Assessment of learning outcomes:</p> <ul style="list-style-type: none"> <li>Through group work activity students will identify ways in which lesson content could be effectively taught in to the post-primary RE classroom.</li> <li>Students will present their field note diaries and findings in a final presentation in the last class.</li> </ul>	<p>Teacher Exposition</p> <p>Student led discussion</p>	

Dr. Margaret Farren  
School of Education Studies

5<sup>th</sup> November 2010

**REC Reference:** DCUREC/2010/092

**Proposal Title:** **An exploration of teaching and learning in Second Life in the context of higher education**

**Applicants:** Dr. Margaret Farren, Ms. Sabrina Fitzsimons

Dear Margaret,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal, subject to receipt of approval from MDI REC. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'pp Fiona Brennan', is written over a horizontal line.

Dr. Donal O'Mathuna  
Chair  
DCU Research Ethics Committee



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MDI/REC/2010/14

“An exploration of teaching and learning in Second Life within the context of Initial Teacher Education”

The REC has reviewed your amendments and clarifications in response to our correspondence (09.12.2010). The REC approves the above application.

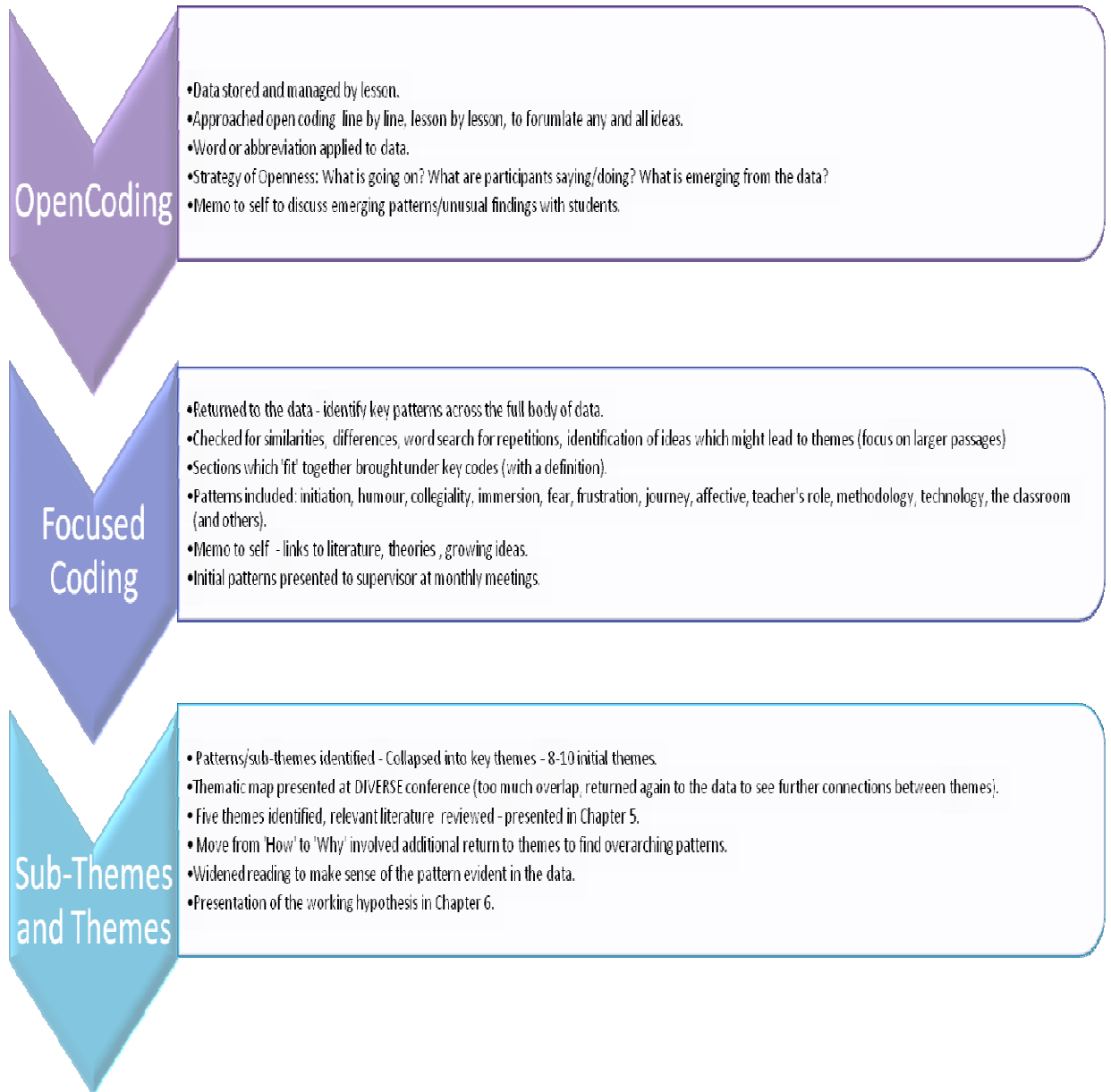
Best wishes with your research.

Dr Alan J. Kearns

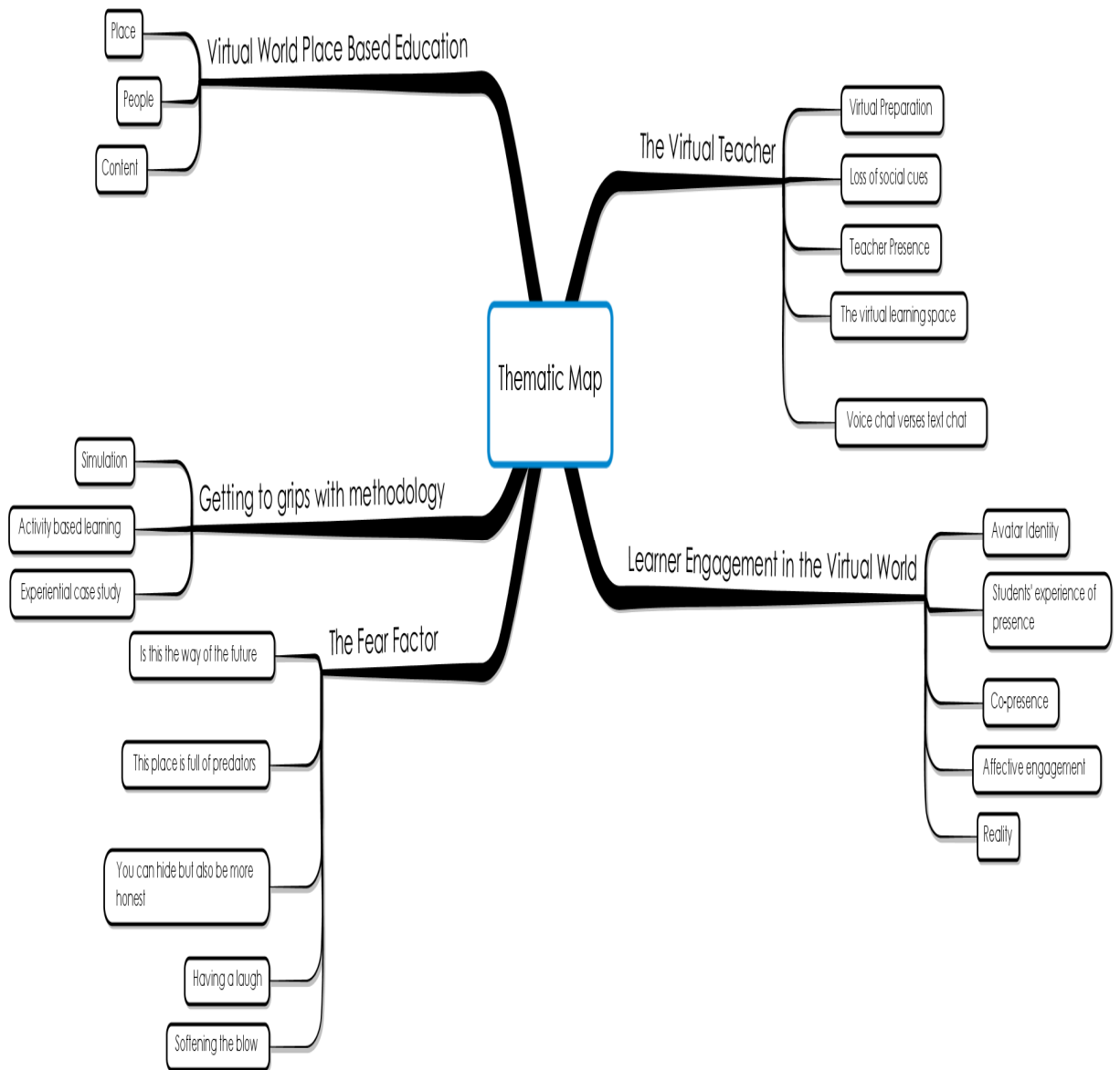
Chair

13.12.2010

## Appendix 5: Approach to Coding



## Appendix 6: Thematic Map



## Appendix 7: Sample Coding

### SAMPLE DATA – LESSON TWO

#### Sample Transcript with initial codes - Marissa

*It felt as if we were tourists visiting this monastery. My bedroom was not what surrounded me anymore, I felt as though I was actually in the monastery. I arrived late as I was figuring out how to be able to listen but I soon got it and was visiting the burning bush and walking all around the monastery and seeing the different paintings*

#### **Open Coding of Data Sample:**

<b>We were tourists</b>	Collegiality, collective identity, visitors, on a trip, immersion, 'we'
<b>Visiting</b>	field trip, once-off visit? Sight-seeing, tourists
<b>This monastery</b>	real entity
<b>My bedroom was not what surrounded me anymore</b>	immersion, external world to virtual world, surrounded by something else, part of something else, movement from one world to another, no longer 'in' the physical world
<b>I arrived late</b>	Confessing
<b>I felt as though I was actually there</b>	affective engagement, her opinion, personal view Real experience, immersion, presence, Reference to 'actually' being there
<b>I was figuring out how to be able to listen</b>	technical difficulties, trial and error approach, personal pronoun
<b>I soon got it</b>	not a big deal, no need for advice? personal pronoun
<b>Was visiting the burning bush / different paintings</b>	immersion, presence, identification of objects on the sim



<b>Walking all around the monastery</b>	immersion, presence, locomotive skills, exploration of the environment, interactivity, engagement, movement, walking
<b>Seeing</b>	spectator

**Sample Image from Marissa:**



Student at the icon gallery

- Appears to be viewing the image
- Cookie Cutter - Avatar unchanged
- Image suggests student is using 'over the shoulder' eye view, student is able to use viewer controls?
- 3 images uploaded, suggests movement around the simulation and engagement with set tasks

**Sample Reflection – Emma**

*I spent some time in Second Life as I wanted to get more familiar with how to work in Second Life, I wanted to improve on how to teleport to locations and how to use the microphone and be able to voice activate my account. I found the medium much more engaging than a real life lecture. I felt that it was eye opening and refreshing. It helps in various ways. It allows you to become more familiar with using computers in technology and also introduces you to a completely different manner of teaching. I felt that it was very beneficial on many levels. I found moving around in virtual world sort of confusing. I kept on getting lost and at one stage I teleported back to the arena by accident. I think once you get more used to Second Life these problems will eliminate themselves. I definitely felt that it was a great help knowing the teaching methodologies being used in each lecture as this greatly helps to familiarise me with the different methodologies and gives you a greater awareness to how they can be utilised in the classroom.*

### Open coding of data sample

<p>I spent some time in Second Life as I wanted to get more familiar with how to work in Second Life, I wanted to improve on how to teleport to locations and how to use the microphone and be able to voice activate my account.</p>	<p>Identifies practical reasons for wanting to improve SL skills (teleport, use microphone, voice activate my account)</p> <p>Engagement, 'more engaging'</p> <p>Personal pronoun</p>
<p>I found the medium much more engaging than a real life lecture. I felt that it was eye opening and refreshing.</p>	<p>Real life lecture – suggests this is not real?</p> <p>Eye-opening – different, unique, not the norm</p>
<p>It helps in various ways. It allows you to become more familiar with using computers in technology and also introduces you to a completely different manner of teaching.</p>	<p>Identifies ways SL 'helps' – ICT skills, new manner of teaching</p> <p>Completely different – something new, not experienced before</p>
<p>I felt that it was very beneficial on many levels.</p>	<p>Worth of experience</p> <p>Doesn't elaborate 'on many levels?'</p>
<p>I found moving around in virtual world sort of confusing. I kept on getting lost and at one stage I teleported back to the arena by accident.</p>	<p>Difficulty moving</p> <p>Ref. To virtual world</p> <p>Confusion – 'getting lost'</p> <p>Figuring out things 'by accident'</p>
<p>I definitely felt that it was a great help knowing the teaching methodologies being used in each lecture as this greatly helps to familiarise me with the different methodologies and gives you a greater awareness to how they can be utilised in the classroom.</p>	<p>Validates the methodology first approach</p> <p>Awareness of methods</p> <p>New way of learning methods</p> <p>Classroom application</p>