

# Second Life as an Arts Education Environment

**Jason Zagami**

School of Education and Professional Studies Gold Coast  
Griffith University, Queensland, Australia  
j.zagami@griffith.edu.au

## **ABSTRACT**

While some students are engaging with online 3D virtual environments as creative social spaces, Virtual environments such as Second Life also provide opportunities to facilitate arts education in a flexible, connected and creative medium. Using a Second Life environment developed for Griffith University this study explored the use of a Second Life virtual environment to support the development of primary school arts education concepts. The study found that for some concepts, such as drama and dance, a virtual environment could assist in the development of these concepts, while for other concepts, such as visual arts; a more traditional environment achieved greater understanding of the concept.

## **Keywords**

Arts Education, Primary School, Virtual Worlds, Second Life

## **INTRODUCTION**

Some students are engaging with online 3D virtual environments as creative social spaces [2] and virtual environments are being explored for a wide range of educational uses [1,5,6]. This paper describes the range of the educational applications being explored within the Second Life environment and highlights the issues involved in the development and implementation of a virtual environment for Griffith University. Presented are the findings of a study into the application of virtual environments to support arts education through collaborative engagement with dance, drama, media, music and visual arts.

## **Second Life**

Second Life is one of several dozen virtual worlds [3] currently available for use or under development. As a Virtual Learning Environment (VLE), Second Life is being used for a wide variety of educational applications. Current categories include Distance and Flexible Education; Presentations, Panels and Discussions; Training and Skills Development; Self-paced Tutorials; Displays and Exhibits; Immersive Exhibits; Roleplays and Simulations; Data Visualisations and Simulations; Libraries, Art Galleries and Museums; Historical Re-creations and Re-enactments, Living and Immersive Archaeology; Computer Programming; Artificial Intelligence Projects; Artificial Life Projects; Multimedia and Games Design; Art and

Music Projects; Literature, Composition and Creative Writing; Theatre and Performance Art; Photostories and Photo Scenarios; Machinima; Treasure Hunts and Quests; Virtual Tourism, Cultural Immersion and Cultural Exchange; Language Teaching and Practice, and Language Immersion; Social Science and Anthropological Research; Awareness/Consciousness Raising and Fund Raising; Support and Opportunities for People with Disabilities; Politics, Governance, Civics and Legal Practice; Business, Commerce, Financial Practice and Modelling; Real Estate Practice; Product Design, Prototyping, User-testing and Market Research; Interior Design; Architectural Design and Modelling; and Urban Planning and Design [4].

## **GUSL**

Development of the Griffith University Second Life (GUSL) environment was focused on supporting a range of educational activities. It comprised a virtual island containing lecture facilities and tutorial spaces (Figures 1, 2 and 3). While the Griffith University Second Life (GUSL) environment contained other facilities such as experimental zones, social spaces and a database of links to other Second Life educational locations, this paper focuses on the use of the tutorial spaces in which students completed arts education activities and projects. The GUSL environment was developed with the support of an eLearning Fellowship in Semester 1, 2007 and used for courses in Semester 2, 2007.



**Figure 1. GUSL**



**Figure 2. GUSL Presentation Space.**



**Figure 3. GUSL Tutorial Space.**

The development of the GUSL environment provided a range of learning and teaching opportunities available through facilitated virtual environments. In order to focus participation within the environment on discussions and learning activities, minimal use was made of traditional building structures beyond that necessary to assist in identifying locations and bounding the purpose of specific locations such as a discussion spaces, presentation spaces, recreation spaces or resource spaces. To provide these boundaries, natural formations such as ridges, plateaus, and canyons were used with bush land foliage providing screens between locations. With the predominant navigation mode within Second Life being to fly between locations, this provided an effective means of participant transition between locations and in establishing the form of interaction that would occur in various locations. It was found however that during initial orientation with the GUSL environment, participants needed additional assistance in learning the location and purpose of each location. This was facilitated by prominent signage and a

system of teleportation booths that enabled participants to select from a list of locations and instantaneously move to that location. In addition, participants were provided with Second Life Location Based Links (SLURL) which functioned as a website URL, provided in their course notes they allowed participants to enter the GUSL environment at specified locations.

## STUDY

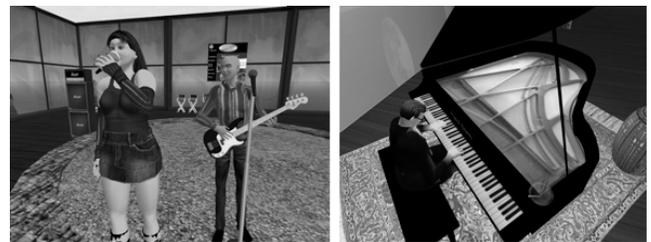
In this study, the Second Life Virtual Learning Environment (VLE) was used to facilitate the teaching of fundamental concepts in arts education to students studying to become primary school teachers. The students developed understanding of concepts in five areas of primary school arts education – Dance (Figure 4), Drama (Figure 5), Media, Music (Figure 6), and Visual Art (Figure 7 and 8). Within the VLE students are able to create their own artistic works (Figures 9, 10 and 11) and performances.



**Figure 4. Second Life Dance**



**Figure 5. Second life Drama**



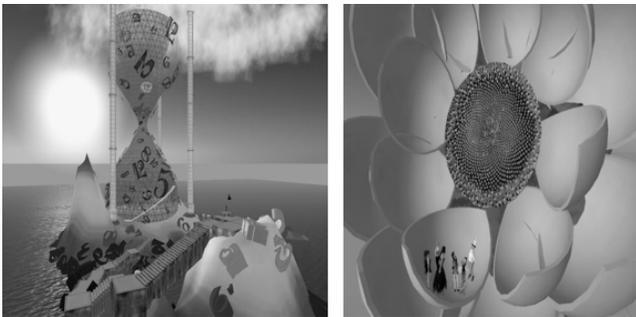
**Figure 6. Second Life Music**



**Figure 7. Second Life Dresden Art Gallery and Sistine Chapel reconstructions**



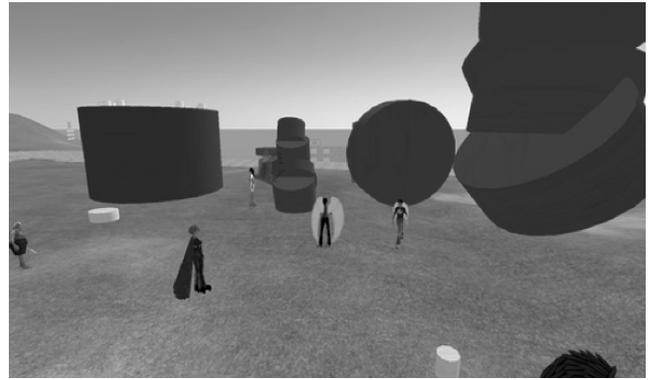
**Figure 8. Virtual Starry Night, Van Gogh exhibit**



**Figure 9. Student sculptures**



**Figure 10. Virtual representation of a physical sculpture**



**Figure 11. Students creating virtual sculptures**

210 undergraduate second year primary education students undertook tutorials in which the fundamental concepts of the Queensland Arts Essential Learnings curriculum were introduced. Before they began, all students completed a short multiple-choice test of their understanding of arts education concepts as defined by the Queensland Arts Essential Learnings. Then 108 students completed a workshop using the Second Life environment to explore arts education concepts, and the remaining 102 students completed a tradition workshop tutorial to explore arts education concepts. Both groups were again tested using the same instrument to measure improvement in their understanding of the concepts.

The traditional workshop group used a combination of lecture, practical activities and tutorial discussion. They used physical and digital musical instruments, costumes, sets, puppets, computer animation tools, clay, digital imaging tools, video edition software, crayons, paint and a range of art education supplies to explore primary school concepts in arts education. Each group of approximately 25 students rotated through six activities each conducted by a specialist in one aspect of primary school arts education. The results of the Traditional group are presented in Table 1.

Concept	Pre-test	Post-test	Change
Dance	16.7%	67.2%	+50.5%
Drama	12.2%	62.9%	+50.7%
Media	26.0%	68.2%	+42.2%
Music	18.2%	70.1%	+51.9%
Visual Arts	22.4%	75.6%	+53.2%
Overall	19.1%	68.8%	+49.7%

**Table 1. Traditional Group**

The second life group used a combination of online presentation, online excursions, online practical activities, and online discussion. They used a series of locations within the second life environment, used physical and digital musical instruments to stream audio into the second life environment, created and used a range of costumes and virtual avatars, used and created a range of sets for digital storytelling and drama performances, used digital imaging

tools and video editing software to create artworks to be displayed within the virtual environment, selected and created animation scripts to replicate dance movements and generate individual and collective performances. Each group of approximately 25 students was rotated through six activities each conducted by a specialist in one aspect of primary school arts education. The results of the Traditional group are presented in Table 2.

Concept	Pre-test	Post-test	Change
Dance	16.5%	72.1%	+55.6%
Drama	12.0%	80.0%	+68.0%
Media	26.3%	69.9%	+43.6%
Music	18.0%	69.8%	+51.8%
Visual Arts	22.2%	64.2%	+42.0%
Overall	19.0%	71.2%	+52.2%

**Table 2. Second Life Group**

Concept	Traditional	Second Life	Difference
Dance	+50.5%	+55.6%	+5.1%
Drama	+50.7%	+68.0%	+17.3%
Media	+42.2%	+43.6%	+1.4%
Music	+51.9%	+51.8%	-0.1%
Visual Arts	+53.2%	+42.0%	-11.2%
Overall	+49.7%	+52.2%	+2.5%

**Table 3. Difference between Traditional and Second Life**

### FINDINGS

The study suggests that both Traditional and Second Life approaches to the development of primary arts education concepts have instructional advantage depending on the concept studied (Table 3). For the participants in this study, Drama concepts were more successfully developed using the Second Life approach than the Traditional approach. However, Visual Arts concepts were more successfully developed by participants in this study using the Traditional approach than by using the Second Life approach.

The success of the Second Life approach to develop concepts in drama, and to a lesser extent dance, could be attributed to the structured nature of how students approached the development of these concepts in the virtual environment. Students reported that the use of formulaic procedures to the development of performances and their ability to rapidly manipulate the environment to trial and perfect their work as the greatest advantages of the environment.

The success of the Traditional approach to the development of Visual Arts concepts was attributed by students to the constraints of software tools in the Second Life approach and their inability to master complex tools within the timeframe. Students within the Traditional approach were able to utilise prior experience in drawing, painting and sculpture, providing greater time for development of this concept.

Overall, both approaches produced similar results in developing primary school arts education concepts as derived from the Queensland Arts Essential Learnings curriculum. Each environment highlighted particular conceptual challenges for the students in the study and provided guidance towards improvements to the study of concepts within both approaches.

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