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Exploring the past through the future: a case study of Second Life for Archaeology education

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Introduction

This article introduces a pilot study of integrating Second Life (http://secondlife.com) – an online Multi User Virtual Environment (3-D MUVE) into a distance learning course in Archaeology. The research is conducted at University of Leicester, UK within a JISC (Joint Information Systems Committee) funded research project called MOOSE (MOdelling Of Secondlife Environment) (www.le.ac.uk/beyonddistance/moose/).

The Horizon Report forecasts that 3-D MUVEs become 'closer to mainstream education year by year' (ECUCASE, 2007, p.25). Through socializing and interacting with other people via avatars, the 3-D virtual worlds offer great pedagogical potential in supporting distance learning, game-based learning, simulation, learner participation and engagement, and reflective practice (Boulos et al, 2007).

In this pilot study we designed, developed and piloted activities in SL. We focus especially on the socialization opportunities enabled by SL for distance learners, which is considered a very important aspect for achieving successful learning in online environments (Salmon, 2004).

This article first introduces the teaching and learning challenges faced by this distance learning course in Archaeology and how SL can be used in a more productive way to enhance student learning. It then describes the development of artefacts and the teaching and training activities that have taken place in SL. A discussion of the initial findings, particularly with regard to the socialization opportunities enabled by SL for distance learners is included.

SL approach to teach Archaeology

Teaching Archaeology involves introducing students to the landscape, religion and rituals, social structure and practices of a society or culture. Conventionally, teaching of these aspects has been done through written descriptions, diagrams and 2-D images, largely relying on students' imagination and visioning abilities. SL offers a medium where artefacts and landscapes can be built and created easily, allowing students to see, explore, and interact in role.

The table below compares the current teaching and learning approach and the new approach enabled by Second Life:

Current approach	Second Life approach
Read description of the use of landscape and space and social structures	Immersion in simulated experience
Written description and diagrams of a Saami tent and Kalasha valley	Artefact of Saami tent and Kalasha valley in-world for exploration and interaction
Visioning and thought experiment about the term 'landscape' and verbal exploration of cultural context	Interpretations of a vision and created landscape in-world and exploration of history, ideals and aspirations
Individual reflection on module experience	Group discussion in-world

SL developments and activities

The artefacts were built and the teaching and training activities took place on the University's Media Zoo (www.le.ac.uk/beyonddistance/mediazoo/index.html) island in SL.

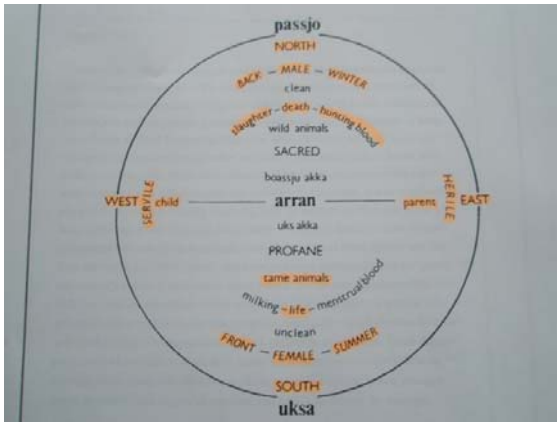
SL Training

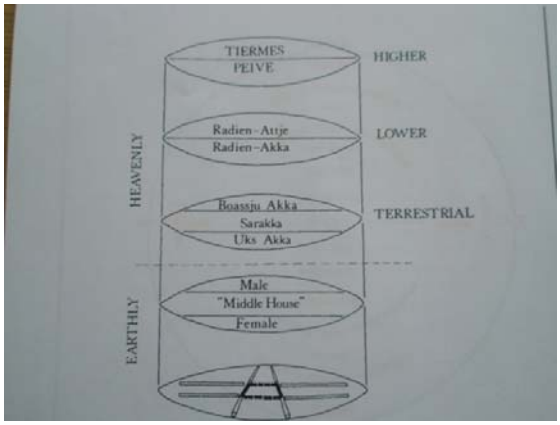
The training guides were developed for students and tutors (Wheeler and Salmon, 2008a; 2008b), both are available at (http://tinyurl.com/mooseSLguides). The guides included a number of YouTube videos that demonstrate the core technical skills to use SL. We also provided in-world training for the students and face-to-face training for the tutors. The in-world training for the students lasted about an hour and covered the technical skills. The face-to-face training with the tutors lasted for about two hours and covered both the technical and moderation skills in SL.

The picture below shows our Media Zoo keeper's avatar is demonstrating the skills to some student avatars during a training session in SL.

Development of the artefacts and SL activities

We created two artefacts in SL. One is a Saami tent to simulate the life style of Saami people who live in Northern Scandinavia. Previously, teaching the use of social space by Saami people was largely dependent on the textbooks and 2-D images (see the two pictures following below).





The following two pictures show how a Saami tent has been replicated in SL.

We designed two activities in SL associated with the Saami tent, each is about an hour long. In these activities, students were given the opportunity to navigate around to see the layout and division of the space, explore where they can go and where they can't, according to gender, and interact with each other about what they found and thought.

Another artefact we build is the Kalasha valley lived by a group of minority people in Northwest Pakistan. Again, teaching of the use of landscape and space by Kalasha people is largely dependent on text-based material and 2-D images. The following two pictures were taken by a tutor on a field trip to Kalasha valley.

The following two pictures show how the Kalasha valley and village have been replicated in SL.

We designed another two activities in SL associated with the Kalasha valley, each is about an hour. Again students were given the opportunity to explore different parts of the valley by themselves to experience where they can go and where they can't, according to gender, and they had the opportunity to interact with each other and discuss their experiences.

Initial findings

We collected data from four students and two tutors who participated in SL activities. We interviewed them, observed their in-world training and activities and analysed the chat logs recorded from each in-world session. We had some initial findings based on the research we have carried out.

An immersive environment for teaching Archaeology

Data from interviews with the tutors and students suggest that SL is suitable for teaching subjects such as Archaeology, where the uses of space and landscape require visual 3-D elements that are not easily replicated or demonstrated in real-life. Participants described how being in the Saami tent and Kalasha valley allowed them to see the layout of the place, touch the artefacts, and experience where they can venture and where they can't. They reported that this immersive experience extended and reinforced what they had learned from the textbook.

A meeting place for distance learners

SL offers distance learners a place for meeting. Students who participated in SL sessions appreciated the opportunities for synchronised communication with the tutors and other students. They expressed their experience as having enjoyed and engaged, and a feeling of belonging to a group and no longer distant from others. One said,

> *"It's really interesting and I … enjoyed it! Before, I usually sat at home and read the text and thought about things on my own. It's good to meet others who study the same things in Second Life, and I do not feel alone. It's good to meet the lecturer. You do not feel distant anymore."*

In-world socialization opportunity for distance learners

Students enjoyed the opportunity for socializing with others in SL. They usually joined the session 5-10 minutes before it started, and socialized with each other just like what they do in real life. We recorded various forms of in-world socialization between the students and tutors and among students themselves.

The following example shows students socializing on course and personal matters.

> *DM: EA, which essay question have you chosen?*
> *EA: I haven't yet as I defered my course 'til the summer session...*
> ***DM: Oh, sorry, you were ill, weren´s you?***
> ***EA: Yes, :)***
> *EA: Which did you choose?*
> *DM: Neo-Darwinian approaches...*
> *EA: Sounds like a good one. :)*

The next is an example of a student avatar helping the tutor avatar.

> *YU: Well, I feel like a prune standing up here*
> *AC: It's less anonymous*
> *EA: ha ha*
> *AC:* ***Sit down!***
> *DM: :)*
> *YU: I'm not sure I know how to yet! It might be embarrassing!*
> *EA: We won't laugh. :)*
> *AC:* ***Right-click on 'Sit'***
> *YU: Thanks - that's helpful. But I might fly instead ...*
> *AC: That would give you a different impression of space …*

We found that the socialization opportunity enabled by SL allowed groups of distance learners who never met and talked to each other before to get to know each other better and faster. This socialization opportunity may lead to more productive information exchange and knowledge construction among these distance learners at a later stage.

We also found that some students got in touch with others via email to build further collaboration after they met in SL. This finding provides some indications that students' in-world socialization can go beyond the virtual world.

Complex presence through avatars

Students and tutors have enjoyed the opportunity for interacting and communicating with each other in SL. However, there is a mixed feeling about presence through avatars. Some felt quite easy and comfortable. One said,

> *"Using the avatars is a very creative idea, you can choose your appearance, cloth and hair..."*

Others expressed some frustrations. They felt the interaction was slower and perhaps more restricted in SL compared to real-life due to missing body language and facial expressions. This may potentially slow down the process of building confidence in each other. Some of their comments include,

> *"People don't know each well enough in SL."*

> *"SL is a neutral space - everybody behaves nicely and politely."*

> *"It's difficult to make joke in SL, funny can become shocking."*

Conclusions and future work

This pilot study identified the potential of SL for teaching archaeology. It particularly emphasized on the socialization opportunity enabled by SL for distance learners and how this opportunity has had a positive impact on the overall experiences of a group of distance learners. We will continue to model of SL activities and in-world socialization for formal HE teaching and learning. The team worked with a different group of students studying Digital Photography at London South Bank University in October 2008.

References

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