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How to cite:

Peachey, Anna and Yanacopulos, Helen (2008). Integrating Second Life in humanitarian and development training. In: SLEDcc 2008 Second Life Education Community Conference, part of the Official Second Life Community Convention 2008, 5-7 Sep 2008, Tampa, FL, USA.

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Version: Accepted Manuscript

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Integrating Second Life in Humanitarian and Development Training

Anna Peachey and Helen Yanacopulos

Abstract

The paper will address an opportunity for mixed-reality learning in Second Life by discussing the training needs and restrictions for humanitarian and development workers as met by the Open University course TUXR873: *Working with conflict: tools, skills and dialogue*. The paper will map these needs to the affordances of Second Life, in a context of realistic, practical and sustainable course development, and consider the potential for Second Life collaboration to replace the residential aspect of the existing course. This paper aims to open discussion around the issues involved in developing such a course. This work is relevant to all sectors of education who might consider embedding virtual world role play into a course. The work is particularly relevant to providers of distance learning, especially in developing countries.

Introduction

Across the globe, the last 50 years alone have seen more than 200 wars. These wars, along with natural disasters such as the recent cyclone in Myanmar and earthquake in China, leave devastation in their wake. Hundreds of thousands of aid and humanitarian workers are located around the world aiming to alleviate manmade and environmental disaster, poverty, cultural conflict and suffering and to execute actions for long term support and sustainable development. A variety of formats are used to address the very specific training needs of these workers but one tried and tested model of supporting humanitarian workers, used by organisations such as the Red Cross, Medecins Sans Frontieres, other humanitarian NGOs, international organisations and various militaries, is that of role play simulations. Unfortunately, the face to face (f2f) training of humanitarian workers is financially and environmentally expensive as well as logistically difficult, as these learners are by nature globally distributed and frequently in remote locations. Therefore whilst rich in learning content, role plays are often limited by the feasibility of getting a sufficient number of participants to be co-located over an adequate period to enable not only the diorama itself, but preparation, debrief and evaluation. As humanitarian training involves participants who are not only based internationally, but whose work is international in nature (e.g. humanitarian workers, army, international business workers, etc), online courses are a current and popular solution to many training needs.

Over the last eighteen months there has been considerable growth in enthusiasm around the potential for teaching in Second Life, and studies have already emerged from the frontrunners, with projects such as Virtual Morocco, Salamander, Schome etc. As Second Life has the potential to cause us to rethink the ways we learn and teach, so it is also affecting the ways we train and develop. The Play2Train project, based at Seton Hall University, has already developed scenarios and training for emergency response procedures on their Asterix, Obelix and Getafix Islands, providing proof of concept for training in large-scale disaster response. By combining this sort of activity with the existing material we have on courses in international development,

environmental decision making, humanitarian and emergency relief, do we have the potential to make a significant step forward in training/educating for humanitarian aid workers?

As we are based at the Open University (OU), an open and distance learning university based at Milton Keynes in the UK, our experience of teaching at a distance is the foundation of our pedagogy. The OU is the largest university in Europe with over 220,000 students and the teaching methods used at the OU are diverse, particularly as teaching is done at a distance. The only students on campus are studying at postgraduate level, but this doesn't mean that there is little student / tutor contact. Depending on the particular course, students use course materials in various forms, such as text-based materials, audio files, video files, web based materials, and increasingly web based applications such as wikis, blogs, etc. Students also interact with their tutors online through electronic conferences as well as face to face tutorials and now, in some cases, through tutorials in Second Life. Historically, residential schools (varying between 4 -7 days) were a key element of OU courses but increasingly these have been discontinued for a variety of reasons.

During the production of OU courses, the use of appropriate media is explored and discussed within a course team, and any decision to use a particular medium, be it for text, audio or residential school, is dependent on the learning outcomes of the particular course. For example, searching and research skills could be best developed through using the web and students would be taught how to discern valid, good, and appropriate information. The particular skills around students' presentation of ideas, negotiations and teamwork skills are better developed through residential schools.

This paper is a think piece which explores how these skills are best achieved in using a non traditional residential school - a mixed-reality residential school that is taught in Moodle and Second Life, where participants are not resident in any sense of being co-located in the real world. In the first section of the paper, we will briefly explore ideas around role play and simulations, issues of identity and pedagogy. In the later part of the paper, we will take a residential school course piloted at the OU - TUXR873 *Working with conflict: tools, skills and dialogue* - and examine some key technological, social and pedagogic issues in converting this course to a mixed-reality residential school taught on Second Life. This aim of this school is that it is used as a simulated training forum for humanitarian workers. In the paper, we argue that it is essential to use simulations when working in humanitarian work, and simulations are key both practically and pedagogically; we propose an appropriate, blended mix of preparation, theory, virtual world scenario-based role playing, debate and evaluation in this training and teaching, which will combine to elevate courses into a far richer learning experience.

Role play and simulations in virtual world environments

Just like any other form of teaching, it is essential to substantiate the selection of role play as the best and most appropriate means of achieving the desired learning outcomes. One primary reason for f2f scenario based role playing is that it allows students to develop particular skills such as negotiation skills, collaborative working and presentation skills whilst constructing context-based knowledge, especially when integrated with other forms of learning material. By enabling students to suspend their own attitudes and beliefs, well managed role plays can

encourage exploration of attitude and actions beyond the personal and familiar in a safe environment. F2f simulations have been widely used in training and formal education, through 'model UN's', military simulations, and in a wide variety of distance learning courses. These simulations can have the additional effect (depending on the diversity of the group) of potentially challenging assumptions students/participants may have of other sectoral participants. For example, even though military personnel, NGOs and government employees may work in the same humanitarian emergency situation, they may not always appreciate the others' positions, and simulations could potentially break down barriers between actors.

Kate Fannon (2002:7) argues that role-play simulation can transform the participants because it "engages both cognitive and affective domains equally within a whole reality. Each participant is proposing and defending agendas which are meshed in a personality outlined in their role and executed through the worldviews and communication capabilities of each individual participant. As a consequence of such strong emotional and mental involvement with the roles, many learners will experience a range of both positive and negative feelings as they would in a conflict situation in real life." Pedagogically, role play and simulations fit nicely within a social constructivist approach to learning (Dougiamas), which proposes:

- All of us are potential teachers as well as learners - in a true collaborative environment we are both.
- We learn particularly well from the act of creating or expressing something for others to see.
- We learn a lot by just observing the activity of our peers.
- By understanding the contexts of others, we can teach in a more transformational way (constructivism).
- A learning environment needs to be flexible and adaptable, so that it can quickly respond to the needs of the participants within it.

A clear advantage of role play in a virtual world over role play in a f2f context is the ability to present with any physical characteristics, changing body size and shape, age, gender and race at will, significantly enhancing the visual aspects of the immersive experience. As Hine (2000) discusses, people can "exploit the disjuncture between offline and online identity to explore different roles and personae quite deliberately". However Cheng et al (2002) propose, not surprisingly, that without persistent identities users of virtual worlds find it difficult to form lasting impressions of each other and to create and maintain lasting relationships, whereas "persistent user identity allows users to invest in their online reputation, encouraging them to be accountable in their interactions with others and to act more 'responsibly'". This distinction may have some significance in a course which is predicated on the development of a learning community, but where students are being asked to explore a variety of roles over a relatively short period. Conversely the strong sense of identity that many people experience with their avatar can lead to a tension between what they perceive as emotive in the virtual world, and transfer as real emotion to the real world, and this duality must be acknowledged and managed sensitively with careful briefing and debriefing of any role play / simulation exercise. In a virtual residential school simulation which requires students to assume roles they do not normally hold (for example, an aid worker taking the role of a local government official, or a peacekeeper taking on the role of an international NGO worker), there could

potentially be greater empathy with the role and thereby further understanding that position in future real world encounters.

Gibson (1977) defined affordances as all “action possibilities” latent in the environment, objectively measurable and independent of the subject’s ability to recognize them although always relative to the subject and hence dependent on their abilities. There are numerous affordances to virtual world environments, particularly if they support avatar based, user driven interactions as in Second Life. Students can meet in world at a specified time and place and role play as they would in the real world. The environment is interactive and reflexive, enabling all the positive elements of role play as identified above, with the additional benefit of the levels of anonymity afforded by performing through an avatar, potentially allowing students to explore alternative roles and identities with greater freedom. The positive aspects of the environment also bring some drawbacks. Adjustments would be necessary for the practicalities of in-world duration, addressing not only the location-based issues and bandwidth restrictions of participants, but confidence with the environment, allowance for absence, health and safety aspects of prolonged computer use etc. However, there have been considerable steps forward in using virtual worlds for immersive training, with some recent examples being found on Ceasefire Island (conflict resolution in Chicago), and IDAHO (the IBAPP project), and there are lessons to be drawn from all such examples.

Potentially virtual environments such as Second Life could make simulations much easier and more effective. In May 2008 Gartner, a leading ICT research and advisory company, issued a press release about the 90% failure rate of corporate forays into virtual worlds. The release argued that there is a “meaningful corporate use of virtual world platforms that organisations can embrace ...organisations could start using virtual worlds in role-based scenario-driven training exercises or complex situational simulation. They could be used in training emergency services (such as medical, fire and police) and military/law enforcement services to simulate real-world scenarios, including public order control and medical emergencies”. However, we exercise a caution drawn from observation of early case studies in 'online learning', where authors have simply converted existing materials into the simplest format for delivery; this new environment is often mistaken for new learning. Just as putting a PowerPoint presentation on a website doesn't make for a rich learning experience, neither does putting it onto a prim. Integration of Second Life into any training programme requires an underpinning pedagogy to address how the training needs of humanitarian aid workers can be classified by skills, knowledge and experience, and examine what can be extracted from this classification to map against the affordances of the environment.

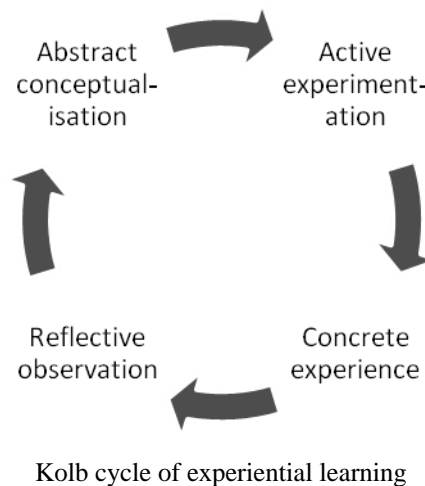
A mashup model

The metaphors for virtual world teaching and learning do not necessarily reference a fully rounded learning experience – rather they offer a mature option against f2f tuition, with opportunities for collaborative and community-based interaction and learning in a situated constructivist environment. A virtual learning environment can offer documented learning paths, social bookmarking and networking options, act as an

information repository, enable class planning (calendar, assignment deadlines etc) and offer assessment facilities, online learning activities and SCORM compliant assessment data. (Bennett and Peachey, 2007)

The open source mashup Sloodle - Second Life Object Oriented Distributed Learning Environment - combines the uniquely immersive features of Second Life – avatars, 3-D construction, interactive scripts, immersive settings and virtual manipulatives – with the traditional VLE functions of Moodle, namely structure, threading of discussions, assignment drop-boxes, self-scoring quizzes and a schedule. Sloodle has the potential to embed any inworld role-play in a sound context of collaborative preparation and debrief in an asynchronous forum (particularly important if students identify strongly with their avatars position in the role play), with the added advantage of capturing all text-based communication generated during the in-world activity. This provides a transcript for post-activity evaluation and assessment, and also supports those students who are on restricted bandwidth and unable to participate in the fully immersive elements of the experience.

The Kolb cycle of experiential learning demonstrates that course participants can enter the learning process at any point.



Kolb stresses that there is no 'standard' starting point in this cycle, for example some course participants may read a learning module and be prompted to reflect on their current practice before thinking about how they might effect change, which then becomes a plan on which they act (most of the concrete experience takes place outside of the learning environment). Others may find themselves in a position in which they can act immediately, reflecting afterwards on the results of their actions in the context of what they have read. (Peachey & Walshe, 2008). Provision of self directed study material and asynchronous discussion forums within a Moodle environment, bookending the role play activities in Second Life, enables participants to engage with all points of the learning cycle, with the additional benefit of auditable activity and archive potential for course cohorts. This approach can be mapped against the model proposed by Mason, Pegler & Weller (2003), who approach learning object centered course design with the assumption that each object represents a holistic unit of study. The concept of 'extended' learning objects allows for narrative flow through the objects so they are not isolationist, hence an object comprises:

- a discursive element
- an interactive element
- an experiential element
- a reflective element

to make up a single, fully rounded unit of study that maximizes the potential of Moodle and Second Life functionality to provide a more immersive and reflexive learning experience. Thus a learning object can be considered a constructivist tutorial activity with built in asynchronous activities for example, providing a briefing for the immersive role play element and with a reflexive, blogged discussion afterwards. The extended learning object itself is both standalone and transportable – the structure, approach, flow, constructivist activity and progression model can be used in more than one context. This is important for immersive blended learning to provide a balance for course designers in terms of time and effort involved to produce these syntheses (Bennett and Peachey, 2007).

Accessibility

We acknowledge that the cost of internet access can be prohibitive, particularly in developing countries, but we suggest that compared to the costs inherent in a student attending the equivalent residential school in Europe or North America, this is still a highly viable economic solution. The primary drawback to the potential for using Second Life to support humanitarian aid worker training is the problem of having access to the right technology: without reliable electricity, a fast, reliable Internet link and a viable graphics card, all other issues are redundant. In most cases this means an environment that is not only wired for broadband but is completely spike protected and with its own backup generator - often available for example in hotels.

Whilst there are perennial issues such as bandwidth problems in many areas where humanitarian workers are based, primarily on the African continent, the new SAT-3 undersea cable will open up African competition and will hopefully lower prices and widen access to rapid internet connections. Devices such as the Ndiyo system, enabling the use of one computer by several workstations through ultra-thin client computing and open source software, are also focusing on widening computer access in developing countries. No one project alone will solve the problem, but the combination of efforts could allow a larger number of students from developing countries to participate in online training of the sort proposed in this document.

An alternative to PC-based Internet access is offered by the Second Life client for mobiles (see <http://www.vollee.com/secondlife>). This software is at early stages in its Beta release and needs a high-end phone to provide clear graphics, but otherwise all the adaptation happens on Vollee's servers enabling mobile-friendly transmission to the individual handset. In countries where internet access may be expensive and/or unreliable, many 'first world' activities are being enabled by the dramatic growth in mobile phone usage. For example in Africa, where cell phones outnumber cash machines by thousands to one, mobile banking means that hundreds of thousands of consumers are able to access banking and financial services for the first time in their lives. According to a report by the Wireless Federation on the 8th of May this year, Africa now surpasses North America in numbers of mobile subscriptions, with users in Africa exceeding 280 million in the first quarter of

2008 with a 2007 rate of growth at 38%, ahead of the Middle East (33%) and Asia Pacific (29%). The combined number of subscribers in Canada and North America totals 277 million. (<http://wirelessfederation.com/news/category/wcdma/>). For Second Life however it remains to be seen whether the mobile client is a viable option for long periods of play, where regardless of the technological limitations there will be physical restrictions to the sustainability of operating with a small screen and console.

TUXR873: Working with conflict: tools, skills and dialogue

In looking at setting up a mixed-reality based residential school, it is helpful to refer back to a pilot f2f residential school set up by the Open University. TUXR873 was set up as the residential component of its sister course TU875 *War, Intervention and Development*, which was funded by the UK's Conflict Prevention Pools, made up of three ministries - by the Ministry of Defense, the Foreign and Commonwealth Office, and the Department for International Development. TUXR873 was piloted in 2006 as a residential school, and it was decided that there was not sufficient demand for a f2f school. There were various reasons why demand for this course was low; primarily, many students who had taken the sister course TU875 have been based overseas and the cost of coming to the UK for a week to do the TUXR873 residential school is prohibitively expensive. Additionally, students would need to be away from their jobs and families for that time which also impacted on student numbers. When advertising TUXR873, many students commented on how useful they would find the course, but these factors would stop them from attending.

TUXR873 was set up with two aims: to enhance and develop practical and professional skills relevant to conflict situations, enabling the student to appreciate and apply these techniques to their own situation; and, to enable students to reflect on the challenges for teamwork in conflict situations. There were five primary learning outcomes of the course which developed students' abilities to learn about and be able to examine critically:

- the processes of intervening in conflict
- the potential for processes of development to be initiated during conflict and post-conflict situations
- the range of stakeholder perspectives of intervention in conflict, notably (but not exclusively): United Nations organisations, states, military interveners, non-governmental relief and development organisations, displaced-person groups
- some essential tools, techniques and skills in relation to analysing conflict situations, considering options for intervention, and negotiation and brokering with other stakeholders
- and, to develop communication and team-working skills through structured team activities.

The f2f residential school took place over the course of six days where students used real-world scenarios (the primary simulation was on Afghanistan) where they engaged in teamwork on applying team mapping and modelling techniques, and developing negotiation and brokering skills through a simulation exercise. Students also engaged in a presentation and structured discussion from different perspectives on a relevant conflict theme. Three main themes formed the cornerstones of the course:

Mapping and modelling conflict

Based on pre-residential school work that developed the 'technical' skills of mapping and where students were expected to familiarise themselves with one or more case studies; this activity involved working in teams and 'learning by doing' the processes of mapping and modelling. Students mapped conflict situations, broadly defined from different perspectives, and use these to model possible courses of action and agendas for negotiation. Part of the activity involved 'standing back' and discussing the potential and limits of such tools for working with conflict on the ground.

Negotiation and brokering in an 'extreme' situation

Before the start of residential school, students familiarised themselves with a specially commissioned case study based on the situation in north-east Afghanistan. The residential school activity involved a simulation of the negotiating and brokering process necessary for a successful outcome. Students were allocated to a 'role-team', which ranged from the local to the international; in these teams, they then had to negotiate with other role-teams on the issue of re-integration of ex-combatants.

Learning and presenting

This activity brought together students from diverse professional backgrounds into integrated groups to discuss a conflict-related issue. Students had previously done some reading for the activity as part of their preparatory work. The activity ended with each group presenting the result of its deliberations, followed by a discussion.

Students benefitting from this course were diverse. The student population's professions ranged from individuals working in the field of violent conflict for NGOs, the military, international organisations, as well as other working for development organisations.

TUXR873 in Second Life

The primary aim of this paper is to explore the advantages and disadvantages of teaching a course such as TUXR873 in a mixed reality environment of Moodle and Second Life. The popularity of Second Life, as well as the ease of downloading software and its operational ease, make it an appealing platform. The OU, like other major universities, has started teaching tutorials in Second Life, and this medium could be one way of dealing with problems of achieving the learning outcomes associated with residential schools. Additionally, as students have a social presence in this environment, this potentially means that they will engage with the teaching and each other in a much different way than in a f2f environment. Unlike other web based teaching (forums and conferences), they are visible to others through their avatars and with the introduction of voice into Second Life, the speed of their interactions will increase.

The course TUXR873 requires students to complete two weeks of preparatory work (20-24 hours) prior to the residential school in order to be up to speed on techniques and information necessary for the school. The f2f residential school component of this course was 6 days long and students would normally spend 36 hours or learning time during these 6 days. As it would not be feasible or practical to ask students to spend 6 full days

live in Second Life, students would spend the 36 hours in Moodle and Second Life over a two week period. They would be required to log in at specific time (they will have to either negotiate this time off with their employers, or they will need to take the time off work) and they would follow a very strictly guided time schedule of events. As a key learning outcome is working with others, if students are late or absent, they will disrupt others in their groups. During the course of the 14 days, they would be required to work with other students in groups, do a presentation of their work, do a conflict analysis using mapping and modelling techniques, and negotiate and make key decisions in the Afghanistan simulation. Students will then end the 'residential school' in Second Life and complete an assignment based on their experiences in the residential school. This assignment will be graded, and if they pass their assignment, students will be given 15 points of masters level credit towards a formal Open University Post graduate Certificate, Diploma, or MA (European MAs are based on 180 points).

The advantages of using a virtual world such as Second Life are that it allows students a form of engagement with each other and with the course materials that would not be possible in any other forum other than face to face. The virtual world medium is also advantageous in that it becomes possible to achieve the learning outcomes which are generally achieved through f2f interaction, such as presentation skills, negotiation skills, and working as part of a team. Potentially more students would have access to a course if it was offered or presented in a virtual environment, as it would be significantly cheaper, less disruptive, and more environmentally beneficial. Potentially, the use of this medium could address the problems encountered in conventional residential schools.

However, the point of this paper is to also take a critical view. There are significant potential limitations which need to be considered and addressed around social and technological issues in teaching a mixed-reality school. The technological issues are numerous and mirror similar limitations we find with other ICT innovations of the past. Access and bandwidth are perhaps the most obvious of these – Second Life requires fast broadband and even though there is a new fiber optic cable going to Africa, it is not going to be equally available to all; given that Africa is potentially where a large number of students will be based, this is a significant problem. Additionally, internet connectivity is prohibitively expensive and frequently unreliable. Another issue is that the OU cannot control when Second Life does technical maintenance and this could be disruptive to the teaching schedule. Interactions will be synchronous and this will mean that the allocated work times will be more suitable for some students than others. Socially, there are issues around student commitment – students may feel less pressure to miss a session than they would in a face to face residential school. Additionally many students may struggle with the lack of f2f interaction, particularly the ones that are less use to interacting in an online environment.

Ways forward

This think piece has outlined some of the key potential issues in teaching a mixed-reality residential school in the environment of Moodle and Second Life. The particular learning outcomes needed for working in violent

conflict and development situations are best taught in a f2f residential school. However, the limitations of f2f mean that taking such a school is challenging for a number of students. A mixed reality residential school would allow students to develop the key skills required from such a course at a fraction of the price, inconvenience and environmental impact. The conversion of a course such as TUXR873 to a mixed reality environment appears feasible; most of the issues identified in this paper around the limitations or potential problems are not insurmountable, but we must remember that they are the first layer of issues. Our suggestion is to take TUXR873 as a starting point and to then use a heuristic approach in developing the school. One helpful tool in this heuristic approach would be to use de Freitas and Oliver's (2005) evaluative questioning. Their evaluative tool consists of four categories – the context, the learner specifications, the pedagogic considerations, and the modes of representation.^[i] Under each category, they ask questions which enable reflection for not only the students, but for teachers of the course. This approach would move us forward in further investigating the potential for mixed-reality residential school learning.

^[i] See Appendix 1

Appendix 1

Context	Learner specification	Pedagogic consideration	Mode of representation (tools for use)
What is the context for learning? (eg school, university, home, a combination of several)	Who is the learner?	Which pedagogic models and approaches are being used?	Which software tools or content would best support the learning activities?
Does the context affect learning? (eg level of resources, accessibility, technical support)	What is their background and learning history?	Which pedagogic models and approaches might be the most effective?	What level of fidelity needs to be used to support learning activities and outcomes?
How can links be made between content and practice?	What are the learning styles/preferences?	What are the curricula objectives?	What level of immersion is needed to support learning outcomes?
	Who is the learner group?	What are the learning activities?	What level of realism is needed to achieve learning objectives?
	How can the learner or group be best supported?	How can the learning activities and outcomes be achieved through existing games or simulation?	How can links be made between the world of the game/simulation and reflection upon learning?
	In what ways are the groups working together (eg singly, partially in groups) and what collaborative approaches could support this?	How can the learning activities and outcomes be achieved through specially developed software (eg embedding in to lesson plans)?	
		How can briefing/debriefing be used to reinforce learning outcomes?	

Taken from de Freitas and Oliver (2005)

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Anna Peachey, A.Peachey@open.ac.uk

Anna is a Teaching Fellow with the Centre for Open Learning in Maths, Science, Computing and Technology at The Open University, and is responsible for co-ordinating the University's activities in virtual worlds. Anna has developed 3 islands for the University in Second Life as well as being a core team member for the Schome Project, the first UK educational project island in the teen grid. Anna is Chair of the Researching Learning in Virtual Environments conference (ReLIVE08), to be held at the Open University campus in Milton Keynes in November 2008.

Dr Helen Yanacopulos, H.Yanacopulos@open.ac.uk

Helen Yanacopulos is a Senior Lecturer in International Politics and Development at the Open University. She is award director of the Global Development Management MSc programme and has an interest in researching and teaching in virtual worlds. She is on the academic committee of the Researching Learning in Virtual Environments conference (ReLIVE08) to be held at the Open University campus in Milton Keynes in November 2008.