



## Shared spaces in a 'safe' urban jungle: Juggling pedagogical goals and student needs and expectations

**Graham Steventon**

Faculty of Health and Life Sciences  
Coventry University

**Paul Grove**

E-Learning Unit  
Coventry University

**Mark Childs**

The Centre for the Study of Higher Education  
Coventry University

This paper reflects on the tensions inherent in higher education between institutions taking advantage of the pedagogic opportunities afforded by new Web 2.0 technologies and yet remaining aware of the diverse e-needs of all students. The aim of this paper is to discuss how these tensions have informed the development of a virtual community in Second Life (R) for use by second year Criminology students on a community safety module. The module is currently run on a workshop basis in which students map on paper a physical neighbourhood environment on which they overlay social characteristics and problems intended to simulate a typical dysfunctional community. The virtual community in Second Life is currently being designed to provide a more immersive environment, in which students can explore issues in a simulated real-life context without the ethical dilemmas associated with field experience. However, since not all students are interested in, or competent with, the technologies involved in this type of e-learning, the virtual community is intended to complement these existing arrangements rather than replace them. Furthermore, the freedom of constraints afforded by the inherent lack of structure in Second Life may be disorientating for students, especially those used to more didactic methods of teaching and learning. Thus, scenarios are designed in stages of relatively simple and prescribed to increasingly free, complex and cognitively demanding as the module progresses and students become more confident and technologically able. In this way it is hoped to harness the opportunities of Web 2.0 technology whilst optimising the learning experience of the whole group.

Keywords: Web 2.0 technologies; *Second Life*; virtual community

### Introduction

It can be argued that Web 2.0 technologies have changed the lives of students entering higher education in two main ways. One is the exposure to a range of technologies; the "net generation" is familiar with receiving media across a variety of channels and in communicating with their peers using many different platforms, often in parallel (Prensky 2001). The other is that they are producers of media, not just receivers, sharing content through Web 2.0 technologies such as YouTube and Flickr, or blog, or contributing to websites. A recent study by Luckin et al (2008) of 300 thirteen and fifteen-year-old children in fifteen English schools found that:

Over 78 per cent of all respondents had participated in sharing artefacts (through uploading pictures, video and/or music) with photographs the most common product being shared. Posting one's own videos, voice communication using Voice over Internet Protocol (VoIP) and communication via a webcam are less common (Luckin et al 2008: 3)

An online survey carried out in 2007 of 500 sixteen to eighteen year-olds in the UK also found a high usage of Web 2.0 technologies with, for example, only 9% rarely or never, using instant messaging (Ipsos MORI 2007: 11). Although this was a self-selected sample (being online), these

surveys do indicate the degree to which undergraduates, and those soon to be undergraduates, are familiar with Web 2.0 technologies.

This familiarity with technology raises expectations of access to these technologies when they become students. For example, three quarters (74%) of the online group expect to have unrestricted access to the internet on the university's system (Ipsos MORI 2007: 23). It also raises expectations of the use of technology within their learning:

Levels of access to and use of technology are high among young learners – especially out of school. However, their experience of technology in formal education generally differs from that at home and there are increasing indications that learners' expectations of technology, and, as a result, of learning, are not being met (BECTA 2008: 23).

However, there are dangers in overstating this case. Despite the high usage of Web 2.0 technologies, there is a sizable minority of students who have not engaged with them (Childs and Espinoza-Ramos 2008: 496) and those that do, may not necessarily apply the skills they have learned when using technology to support their learning. Despite this, the expectations of learners, and the potential of developing new forms of student engagement, have led many educators to experiment with using Web 2.0 technologies to support learning and teaching.

A Web 2.0 technology that is being developed across many institutions is the immersive virtual world Second Life (R). Educators are finding that the skills students are called on to employ through engaging with its social networking features and user-created content match their pedagogical goals. The pedagogical advantages an immersive virtual world such as Second Life has over other learning environments are:

- The ability to embed complex three-dimensional objects, and for users to generate their own content
- The greater sense of presence that users have through being embodied within the environment due to their avatars
- The pseudonymous nature of the environment, enabling greater opportunities for role-play (Childs 2007).

Ryan (2008) lists activities that employ a range of different approaches to using Second Life within learning and teaching. However, she also notes that the literature on how students learn with Web 3D technologies has yet to be established. Balancing the need for research in this field with the requirement to not expose students to the possibility of diminishing their educational experience through exposure to unproven technology is a tension faced by many working in e-learning. In addition, immersive virtual worlds have their own institutional needs and user expectations to juggle. One of these is that it is not a familiar technology to most students. The majority have never taken part in an online community (Ipsos MORI 2007: 13) and see social networking as having value only to support face-to-face socialising:

The benefits most frequently cited by young people were that Web 2.0 technologies are free and facilitated communication with friends at school as well as those who lived elsewhere or attended a different school (Luckin et al 2008: 3).

Hence they may see the use of virtual world technologies as 'weird' or 'sad' (Ipsos MORI 2007: 13).

In addition, many institutions report reluctance to facilitate the use of immersive virtual worlds due to concerns over firewalls and the supply of the necessary resources such as sufficient bandwidth or high enough specification computers (Kirriemuir 2008: 2), although this was not an issue for the authors.

A further difficulty is that immersive virtual worlds use a three-dimensional space which must be navigated through. Navigation through the space is made up of various elements: way-finding, motion and travel (or motion control of one's viewpoint) (Darken and Peterson 2002: 494; Bowman 2002: 281), and manoeuvring. Way-finding is the cognitive element of navigation, an essential part of which 'is the development and use of a cognitive map, also called a mental map' (Darken and Peterson 2002: 494). Motion is the act of movement through the space. Manoeuvring is the smaller set of movements such as 'changing the orientation or perspective, as in rotating the body or sidestepping' (Darken and Peterson 2002: 494). It requires the environment to provide

information enabling spatial awareness (Bowman 2002: 282). Locomotion techniques can be divided into naturalistic (walking, vehicular, etc) or magical (flying, telekinesis, teleportation) (Bowman 2002: 283). These each separately require the user to learn and practice how to read these elements and manipulate their avatar through interaction with the software. Learning these techniques presents another barrier that must be overcome.

## **The virtual community in *Second Life***

Bearing in mind these issues, a decision was made to utilise *Second Life* as a learning tool in a second year Criminology module, Community Safety and the Environment, at Coventry University in the UK. The intention was to create a virtual community that represented an interactive model of a typical dysfunctional neighbourhood. Funding for the purchase of a *Second Life* island and the development of the virtual community was provided by the Centre for Inter-professional e-Learning (CIPeL) at Coventry University based on the following specific aims and objectives from the funding bid:

The virtual community would integrate both social and physical environments and allow students to map in social and physical problems, which they would then analyse, try out and evaluate solutions in terms of practical and theoretical applications of existing and new knowledge with regard to community safety, crime prevention and community policing. Critical engagement with key concepts of 'community' and 'citizenship' and theoretical issues such as individualisation and moral minimalism will enable students to interrogate the general assumptions that underpin much social policy on crime management and control in community settings, particularly the often conflictive nature of communities which presents barriers to successful implementation of crime prevention strategies. While developing students' awareness of the powers and responsibilities of the various agencies (police, local authorities, social services, health and mental health professionals, youth offending teams, drugs projects, and so on) and the requirement for inter-agency co-operation brought by community safety legislation, the virtual community will also highlight the challenges of inter-professional collaboration as seen from the different viewpoints.

In line with Coventry University's teaching and learning strategy, the module currently operates a student-centred pedagogy, which is structured around a series of themes on issues such as defining community safety and its theoretical and legislative framework, community safety interventions and community penalties. Weekly workshops allow students to explore issues and present ideas around briefings that relate to the module themes. In order to situate this process in some sort of community context students 'create' their own neighbourhood on paper by drawing a physical environment on which they overlay social characteristics and particular social issues and problems. This context is then used throughout the module to test out theoretical and practical ideas and solutions relating to those issues and problems.

It was intended that these same themes would be used to structure the learning in the *Second Life* Web Based Learning Environment. The aim was to provide the type of immersive learning context that Hartley (2007: 28) refers to as a 'playground', a collaborative, informal, exploratory world of facilitation and enquiry as somewhere between the institutional world of control and the personal, private and exclusive world of the student. *Second Life* with its high level of interactivity provides an ideal environment in which students can conduct unfettered exploration, emphasising the role of the student in thinking and learning rather than that of the teacher (Cannon & Newble 2000). However, Groves and Steventon (2008) have argued that while traditional teaching may provide too much structure by packaging information for students in a prescribed way with little encouragement to 'think outside the box', too little structure can be disorientating for students with the potential that they do not see the point of the exercise, or they go off at tangents such that the intended learning outcomes of the session, module or course may not be met. Drawing on the principles set out by Biggs (2003), the establishment of a clear structure to the student activity in *Second Life* that aligns with the intended learning outcomes of the module should still leave the possibility of maximising the learning experience without eliminating creativity. Carefully designed learning activities, or scenarios, place knowledge creation in the domain of the student, but in a controlled rather than randomised way.

A further benefit for students in using *Second Life* was their ability to engage with simulated 'real-life' scenarios in a setting that mirrors a typical dysfunctional community without having to negotiate difficult practical and ethical issues associated with actual 'real-life' situations (Childress and Braswell 2006). By assigning different identities to avatars within the *Second Life* learning environment at critical stages of

the module, students would be able to explore, define and create knowledge around pre-determined scenarios using role play, thus encouraging students to develop a multi-perspective and multi-disciplinary awareness of the issues they encounter.

## Methodology

Based on a subjective epistemology and interactionist theoretical framework, the learning experience of students derives from the meanings and interpretations they bring to the scenario issues and scenario design has needed to reflect that. Scenario design has been also based on experience of students' learning through self-direction in the module so far. To elicit their views, two focus groups were conducted with twelve students and eight students respectively from the module cohort in the 2007/08 academic year. From those focus groups the following key issues have been used to inform the design of the virtual community:

- Knowledge and experience of Second Life was extremely limited (only one student had heard of it but never used it) suggesting the need for what McLoughlin and Marshall (2000) refer to as 'scaffolding' whereby ample support and guidance is provided at the inception of the module and beyond according to the skills and abilities of individual students
- While the students enjoyed the dynamic experience of self-directed learning, they also felt more comfortable with a clear sense of what is expected of them, which aligns with Hartley's (2007) observation that students prefer not to be self-regulated learners, they want to be told what to do.

A small pilot involving three students was then conducted in Second Life in which they were required to navigate around a simple test scenario. None of the students were familiar with the virtual learning environment. While they felt that the environment stimulated active engagement with the material being learned, each confessed to 'technophobia' in respect of the avatars and needed time to accommodate to them.

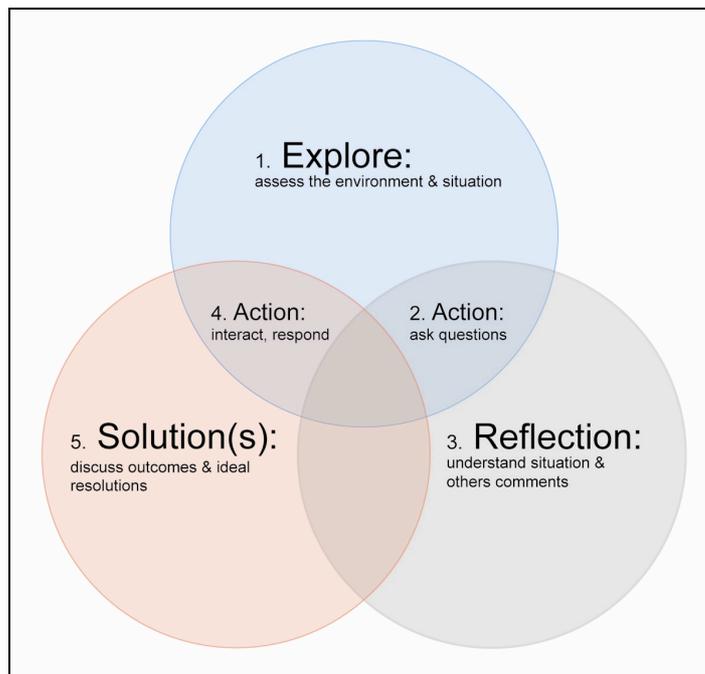
It was therefore decided that the design of scenarios should be graded in terms of the cognitive demands placed on students to allow them to adjust to increasing levels of self-efficacy. This has been achieved by commencing with a simple navigation and orientation exercise and building up to more complex situations containing problems that require critical evaluation and reflection from multi-perspective viewpoints through the adoption of different identities and role play. Rather than throwing students in at the deep end, this is intended to allow them to build confidence in mastering the technical demands of the learning experience through simpler cognitive tasks before moving on to greater complexity with scope for exploration and creative learning.

## Scenario design

The pedagogy underpinning scenario design is based on a five-stage virtual world model of learning (see Figure 1):

- Exploration: Second Life features; media, movement, visual elements
- Action: asynchronous chat, discussions
- Reflection: character profile within the environment
- Action: presentations, questionnaires, chat bots
- Solutions: outcomes and conclusions

The model draws upon Kolb's (1984) experiential learning cycle whereby learning comes from a process in which initial experience, aided by observation and reflection, is conceptualised and then guides the learner towards new experiences. The first stage of learning for students in the Second Life environment is exploration where they assess the context and become familiar with it and others in it. The second stage, action, involves dealing with questions and the adoption of roles through which they interact with other users. Reflection is then the stage where students will analyse and try to comprehend the situation, and it is at this stage that students should begin to conceptualise their experiences, which inform the actions that follow. Finally, students apply their knowledge and evaluate the results.



**Figure 1: Five stage virtual world model of learning**

Two scenarios are described briefly to demonstrate the layering of complexity and the move from fairly prescribed to relative freedom of activity. The first scenario sets out what a typical student would find, and the tasks assigned to him or her, on entering the virtual community at the beginning of the module. Stimuli to encourage students to move around and explore, but in a structured way, take the form of a treasure hunt in which clues are posted at strategic points in the landscape following a pre-defined route. The second scenario described here is indicative of what students would experience much later in the module and assumes that they have become relatively efficient at moving around the environment.

### Scenario 1

William opens his email and clicks on the SLurl to launch Second Life. After entering his unique avatar name (first name and surname) and password, Second Life starts and he is prompted to be teleported to the SLurl address once he has pressed the teleport button. When William arrives at the Second Life neighbourhood, Grahamsville (a name chosen by students as a tongue-in-cheek reference to the tutor!), and begins to move around, he discovers:

- A derelict area
- A typical deprived area
- A wealthy suburban area.

Whilst waiting for the other group members to arrive he starts to explore the wealthy suburban area and interact with the welcome board and information points, receiving information about the Spatial Analysis Scenario (SAS) through the interactive presentation board. William decides to chat to another group member who is also waiting for his group members to arrive. By pressing the Enter key on his keyboard the local chat icon window appears, William explains to his other colleague, Adam, that if he clicks on the information sign he will receive guidance (loaded into the SL web browser) and the objectives for being in Second Life. Adam replies that he has already received the information from the introductory taught session last week.

Williams' fellow group members, George, Finlay and Kathy, arrive and start by sending him instant messages through the group contacts list about the first task, referring to the aims of the scenario from the information sign, at the same time picking up the first clue as to where to go next. They learn that the aim of the session is to negotiate each area reflecting on what they feel about the nature of the environments and what community safety means in each context. All members assume the 'role' of the characters they are to act chosen from the previous week, which are:

- William: Brian Edwards, male aged 73  
Elderly widower, suffers from asthma and lives alone
- George: Vikki Poole, female aged 17  
Left school with no qualifications - has an Anti-social Behaviour Order (ASBO)
- Finlay: Jim Evans, male aged 26  
Qualified Mechanic, married with one child - banned from keeping pets for two years
- Kathy: Ashok Singh, male aged 37  
Medical doctor, married with three sons - suffered recent racial attack.

As the characters start to walk towards the street, they begin to take in the visual scene around them: police on duty, the placement of public seating, litter bins and street lighting and the layout of buildings overlooking public walkways. William and Kathy follow the route suggested by the first clue through the wealthy suburb and explore the streets and a shopping area looking for the next clue. William interacts with the 'further reading' notice boards; when he clicks on it he is prompted to open an internet web page of further reading by the Home Office: 'Protecting the public, securing our future'. The notice board also contains the second clue that directs them towards the deprived area.

As they follow the route they discuss the scene before them so that when they reach the discussion board they are able to post reflections on how they feel about the environment and the police presence from the viewpoint of their character. These reflections will provide useful feedback in the workshop discussion next week. William then discovers the interactive television that is next to the discussion board. This has preloaded *YouTube* videos on community safety partnerships and he can control them with the built-in Second Life media interface.

Moving on, William, Kathy and Finlay all interact with the 'further reading' notice boards and, after consulting the Home Office website on community safety, discuss the meaning of community safety and its impact from the viewpoint of their own character. They then walk down a small, dimly-lit side street into what they come to realise is the deprived area. Together they reflect on the contrast of the previous street scene with what is now before them: broken light fittings, graffiti, litter; basic signs of social deprivation. Prompted by the notices William sits down on a bench and watches past examples of students' assignments, patchwork text analyses, on a screen, which help him to understand what a patchwork text is all about.

Walking through the small dark alley William notices a sign prompting him to download all the scenario course notes, URLs and further reading, which he does and saves it all to his computer. Following this, William moves on to answer questions in the 'Question Analysis System' (a Second Life questionnaire) such as:

- What do we mean by a community safety team?
- What is the legislative framework in which you will operate?
- Explain how the various pieces of legislation will empower you to tackle the issues and problems identified?
- Explain what obligations, duties and responsibilities the legislation also places on you?
- What are the main elements for a safe community?
- How do you feel about your Second Life experience so far?

He answers these questions and is then prompted to speak with a Second Life chat bot. William tells Kathy on the instant message chat to ask the chat bot a question. Kathy asks, 'What is it like to live here?' Other questions relate to crime, the social environment, quality of life, policing, law and order and so on. Kathy is able to keep a log of questions and answers in Second Life and use them for the group evaluation. The chat bot explains that there are high rates of burglary in the deprived area and invites the characters to explore the issues surrounding this situation for discussion in the following workshop.

## Scenario 2

The scenario takes place in the second half of the module around a theme of regeneration. Kathy and her group have been assigned the roles of architect, police architectural liaison officer, local housing officer and chair of the local resident action group. Their brief is to explore from their own characters' points of view the issues around demolishing a group of houses in the deprived area to make way for re-development. These areas have been prone to burglary and vandalism exacerbated by poor security. Through a design process called a 'charette' involving representatives of various agencies and local residents coming together as the design team, the students critically analyse the impact of regeneration.

Then they have to search for, access and interrogate information from various sources in the virtual environment, for example, the town hall, the police station and the library, relating to some key approaches to designing out crime. Each offers information from different perspectives that the students need to evaluate to allow them to draw together and negotiate a plan for the re-development. The scheme is then presented in the following workshop for wider discussion and critique before implementing the changes in the virtual environment for further analysis.

## Conclusion

Web 2.0 technologies are changing the ways in which people interact and educators see this as an important direction for teaching and learning. Pedagogical tools that appeal to and capture the interests of learners are at the very least likely to offer sound recruitment benefits to higher education institutions. However, as Childs and Espinoza-Ramos (2008) point out, students tend to favour the use of communication technologies where that use is initiated by themselves and not the institution. With this in mind, the development of a Second Life virtual community described in this paper is intended to supplement rather than replace other methods of delivering teaching and learning in the module. Furthermore, the use of Second Life in this instance is attached directly to a specific set of learning objectives, and so its use will be fairly structured arguably not taking full account of the platform's opportunities for students to create their own infrastructure. However, it is important to note that the project is still under development and will require ongoing evaluation, but the flexibility of Second Life should ably allow adjustments to take account of the future developing needs and expectations of students.

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**Author:** Dr Graham Steventon, Senior Lecturer in Criminology, Faculty of Health and Life Sciences, Coventry University, Priory Street, Coventry, CV1 5FB, United Kingdom. Email [g.steventon@coventry.ac.uk](mailto:g.steventon@coventry.ac.uk)

Paul Grove, Learning Technologist, E-Learning Unit, Coventry University, Priory Street, Coventry' CV1 5FB, United Kingdom. Email [aa0197@coventry.ac.uk](mailto:aa0197@coventry.ac.uk)

Mark Childs, Teaching Development Fellow, The Centre for the Study of Higher Education, Coventry University, Priory Street Coventry, CV1 5FB, United Kingdom. Email [aa5575@coventry.ac.uk](mailto:aa5575@coventry.ac.uk)

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