

# Experiences of operating and studying in Second Life: conclusions for training design

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**ABSTRACT.** The Educational Association Citizens' Forum SKAFry is an educational institution for non-formal education. The Citizens' Forum has been an active Second Life participant since 2007, researching its potential and challenges in educational use and non-governmental organisation activities. The first training sessions were organised in 2008 on a block of land rented from EduFinland island. Later, ownership was acquired of the Suomi ry (Finland ry) island, which was customised to serve Finnish organisations and non-governmental organisations (further NGO). The Citizens' Forum's training courses have covered training in Second Life and the organisation of cooperative meetings and various other events in Second Life. The overall length of training sessions has been one month.

Each course has consisted of 3-5. 1.5 hour meetings in Second Life and interim tasks completed either individually or in small groups. In addition to Second Life, Moodle, an online learning environment, has been employed in which tasks, experiences and feedback have been gathered and which has also contained written summaries of what was learned during the Second Life meetings. The Second Life environment has also been regularly utilised in Citizens' Forum staff and various other work group work related meetings. Funding and ventures 2008: Ministry of Education special funding, Initiation of Second Life courses and construction of environment 2009-2010: ESF programme Open Learning Environments-AVO venture, development and implementation of Second Life educational programmes.

This article is based on practical experiences gained from:

- suitability of cooperative educational processes for Second Life
- constructing a Second Life environment for educational use
- suitability of Second Life technology and tools for education and team work
- practical methods related to educational situations.

**KEYWORDS:** Open Learning Environments-AVO, Second Life-SL, SKAF ry, Virtual world

## **Second Life environment and cooperative learning processes**

The strengths of Second Life are people present as avatar figures and the opportunity for collective and concurrent group activity. Because everyone participates in Second Life as their own walking, speaking and listening figure, an illusion of being physically together is created for participants. Second Life provides an excellent tool for cooperative learning processes, learning and doing together. This should be taken into consideration when designing educational contexts. "The possibilities afforded by the Second Life environment are wasted if it is only used as a place for sharing and reading knowledge content" (Päivi Svärd, 2010). For this reason the Citizens' Forum has integrated the Second Life environment into the Moodle online learning environment, through which teaching material is delivered and written tasks completed.

### ***Cooperative learning is a key mode of learning in non-governmental organisations***

Non-governmental organisations are central players in the learning and educational activities of the Citizens' Forum. The work of NGOs is voluntary and originates in the members' areas of interest. Therefore, it is important for courses, in both the real world and in Second Life, to be designed so that people feel they can achieve their goals together with other players. Cooperative methods, in which collaboration is well planned and staged, support production of collective knowledge, and endeavours to reach a common objective. At its best, this type of work method forms a common learning process for group members, in which there is purposeful and phased progress towards a common decision, members engage in reciprocal learning, and insights into new types of solutions are brainstormed collectively.

### ***Education is based on the learners' plans***

Cooperation is an operational method in all Citizens' Forum training courses. A cooperative organisation of meetings in Second Life, Second Life trainers' training and Second Life events training are based on an operational model in which learners' plans form an activity's starting point. Learning of content and initiation of collective work begins by mastering the basic technology of Second Life.

This is followed by an orientation to the educational theme. On the basis of this, learners in small groups draw up implementation plans. Instructors use these plans to determine Second Life work and teaching tool selections, to which the learners as a group are introduced and which each learner then has at her/his disposal. Each educational theme requires its own Second Life tools. Work and teaching tools that support small group work, production of collective knowledge and its documentation in Second Life are, however, common to all courses. In the final Second Life meeting in each course, each learner group presents a demonstration based on their own plan for the other participants. This provides learners with an understanding of how training or hosting a situation feels in Second Life.

#### ***Second Life environment supports interaction and collective activity***

Experiences of learners and instructors have been surveyed orally and in writing after various educational programmes. These experiences were described in Päivi Svärd's (2010) report. Acclimatisation to basic activities such as moving and communication was considered easy. The use of various Second Life work and education tools and adoption of methods, however, required more practice.

Basic cooperative methods were considered viable in the Second Life environment. Group dynamic phenomena were also seen to be realised in Second Life. Participants felt they were spending time together socially, as it was possible to talk and function with others the same way as in the real world. It was felt that cooperation suffered somewhat from the amount of energy allocated to learning the technology and other issues. On the other hand, learning situation distractions and concentration difficulties were avoided with cooperative methods, which did not leave space for extraneous activities. Small group work is central in the use of cooperative methods. Second Life provides excellent opportunities for this. The student group in its entirety needs to be sufficiently small; preferably less than 15 avatars and even further divided into smaller groups. A connection with other group members can be established through a virtual figure, an avatar, so that learners feel they really belong to a group and meet other people. Visually Second Life is enhanced by the fact that events in the environment can be seen and followed, and the presence of other learners felt.

Multiple senses are employed simultaneously. If the virtual group work space is decorated so that avatars can, for example, recline on cushions, it makes for a more relaxed meeting place. If an avatar comfortably reclines in Second Life, the space is conveyed more realistically to the real world as relaxing.

The Citizens' Forum has invested in creating a Second Life environment with sound-proofed group and common work spaces between which avatars can easily and quickly move with the help of teleporting. This facilitates flexible work processes for individual, group and collective work. Furthermore, various tools for group activity and for learners' core collective knowledge production are available in Second Life.

Note taking and documentation of knowledge has been eased by the internet, Shared Media, accessible within Second Life, through which text documents can be worked on in real-time and internet sites browsed. A plethora of tools to facilitate collaboration can be found in Second Life, which can be used to time group work, conduct feedback and opinion surveys, vote, and give PowerPoint presentations and so on. The same technical tools that can be used in any classroom can be transported to Second Life.

### *Second Life as a common operational environment for employees*

The Citizens' Forum began to utilise the Second Life environment in staff work meetings at the same time that it was experimented with in 2007. The Citizens' Forum has seven offices around Finland and an education designer works at each office. The offices took turns to plan an excursion to the various Second Life environments and these collectively undertaken excursions were linked to work meetings. This provided a collective understanding of the opportunities offered by the virtual world. Initiating work meetings in Second Life significantly improved and increased interaction among colleagues geographically remote from each other. Meetings in Second Life have regularly been organised 2-4 times a month, as opposed to earlier meetings of the entire staff 2-3 times annually. In addition to Second Life, other online environments have later been added as collective meeting places. Second Life was not only used for collective staff meetings, but other smaller work groups brainstorming and preparing ideas began to use Second Life on their own initiative.

Second Life enables quick meetings and handling of issues. Speech contact is an essential requisite for successful meetings. The environment has been especially appropriate for educational courses and collective brainstorming and working on other events, collective work on action plans, and the handling of topical issues. Second Life tools have been easily accessible. Shared Media, through which collectively produced knowledge has been documented as text by utilising for example Google documents, has particularly been used in brainstorming and planning activity.

## **Conclusions for training design**

### *Constructing a Second Life environment for educational use calculated construction*

The renting and designing of the Citizens' Forum's first Second Life area was preceded by almost a year long stage of examining environments constructed by others. We were also able to borrow these for our own in-house training sessions and meetings. Our staff accrued experience of various environments in a learner's role also, such as the Language lab language school and the consultants' Etrainer training.

When EduFinland, the first collective island for Finnish educational institutions, was opened in the spring of 2008, the Citizen's Forum was among the first groups to rent land on the island. The lengthy research and observation stage had equipped us well to plan our over 4000 square metre block in Second Life. This approach can be recommended to everyone planning to enter Second Life.

If the starting point is to first build up or contract someone to build the area and then begin planning the activity to be implemented in Second Life, there is a very strong likelihood of encountering difficulties that could easily have been avoided.

When the acquisition of our own island became timely in autumn 2009, we had already held a number of several-month long courses on our block on EduFinland Island and found that we had made viable solutions. Having an entire island for our own use brought new operational possibilities.

### *Elements of a viable learning environment*

According to our experience, a viable learning environment in Second Life fulfils the following criteria:

- The environment downloads quickly
- It is easy to move around the environment and use a camera
- The environment does not have many “fixed” structures and walls
- The environment also has free empty space
- The environment has peaceful areas dedicated to small group work and for modifying the avatar’s appearance
- The general appearance of the environment is harmonious and an underpinning theme has been followed in its construction

If the environment fails to fulfil these central criteria (especially the first two) the use of Second Life in teaching may hinder rather than promote learning.

Many factors, some of which can be influenced by environment design and some which are independent of the area’s structures, affect downloading of the environment. If the area is full of structures, various textures and moving and flashing objects, downloading it to be visible to users is slow.

Also, downloading is slow when many avatars gather in one area. Downloading is further hampered if the avatars present are wearing waving and glittering costumes. Each user’s internet connection speed, equipment capacity and the individual settings of each user interface also affect downloading speed.

Because it is unrealistic to assume when constructing a learning environment that everyone operating there has access to computers meeting the high technological requirements demanded by Second Life, it is more profitable to design an environment in which it is possible to satisfactorily operate with lower capacity equipment. It is necessary, therefore, to consider the relationship between the area’s visual appearance and usability. In our experience it is more profitable to sacrifice visual appearance for the sake of potentially fast downloading. In the final analysis, Second Life is, however, only a vehicle for learning the substance at hand; the environment should not dominate as the main role in learning contexts.

Numerous buildings and other “fixed” structures are visible in

Second Life. This is surprising, as in Second Life walls are not sound-proof and do not prevent seeing into or access to inside spaces, and roofs are not needed for protection against inclement weather. A house in Second Life does not provide privacy or shelter in the same way as in the real world. Rather, buildings with their walls, doors, and stairs are more of an obstacle to movement and seeing in Second Life.

In addition to moving avatars in Second Life users can inspect the environment through a camera function, which allows a thorough inspection of the environment without moving the avatar. Multiple fixed structures and walls make zooming the camera to various distances more difficult.

There are situations in which the use of buildings in learning environments is justified, for example, when replicating a real-world environment in Second Life promotes learning. Even in these situations premises should be spacious and as clear as possible. Plant choices for the area should favour objects through which avatars can walk or fly.

Uncluttered space or areas which can easily be cleared of unnecessary objects temporarily should be designed into the area for practice-based teaching sessions. This is important for example when constructing collaboratively with learners. If the Second Life area available is small, it is easy to realise this type of spacious operational area in the sky above the virtual ground.

In addition to loftiness, this “sky class” also provides a peaceful environment for lectures and small group work. If the area available is sufficiently large, it is possible to construct special small group spaces that can be sound-proofed. Movement between spaces reserved for collaborative work and spaces reserved for small groups should be planned to be as easy as possible.

### ***Applicability of Second Life technology and tools to education and team work***

Second Life offers multiple alternatives to organising educational situations from traditional lecture style teaching to collaborative work processes and simulation of different situations. It is easiest to begin with tools and operational methods familiar from the real world. Various auditoriums and presentation boards familiar from the real world are in fact found in almost all areas constructed for educational use. There is nothing wrong with this; it can be

comforting if something familiar to learners and instructors is found in strange environments.

However, it is necessary to move beyond the familiar model supplied by the real world. Otherwise the opportunities provided by Second Life are wasted and teaching would probably be more meaningfully delivered through some other form of online service.

### *Mastering the basics of construction*

Each user of Second Life has the opportunity to create virtual objects, that is, construct objects. Teachers endeavouring to fully utilise the education tools and environments offered by Second Life should become familiar with the basics of construction in Second Life. This opens up the entire operational logic of the environment and equips instructors with an ability to use constructed objects and adapt them. Additionally, instructors are then able to build simple tools to use in teaching situations. Individual instructors should leave more complex construction projects for experts. Utilising a professional Second Life builder saves valuable time for instructors to invest in more core issues, and work completed by professionals is usually of significantly higher quality than that undertaken by instructors.

Second Life construction can also be used for teaching purposes. Marketing and communications students can, for example, plan and implement a trade fair stall in Second Life. This opportunity for easy and cheap virtual construction and modelling provides incredible possibilities for, for example, teaching courses on architecture, urban planning, and also the arts. An entire educational institution's location can be undertaken as student work.

### *Tools from flying carpets to treasure hunts*

Instructors have access to a large arsenal of ready-to-use educational tools, some free and some that need to be purchased, in Second Life. There are tools for group situations and independent self-study. Teaching situations can be built around for example a board game or crossword or learners can be given a task to complete as a treasure hunt in which tools are acquired by clicking a text and/or visual clue and having given the correct answer, they proceed to the next step in the task.

Tools such as raffles, elections and competitions can also be found to bring teaching to life. Moving in a group is surprisingly difficult in

Second Life, so a tool that is guided by one avatar with the others on-board could be reserved for moving around as a group. Tool selection should emphasise user-friendliness. If the user manual for a piece of equipment is very long and its use so complicated that it requires extensive orientation on the part of the instructor and thorough guidance for learners, its use needs to be considered twice. Here again, it is good to remember that Second Life and the tools it offers are in fact only tools to learning the actual substance. It is not meaningful for the large proportion of the lesson to be taken up with teaching how to use the tool.

#### ***Shared media: a viable internet within Second Life***

In spring 2010 the Second Life user interface's appearance and functionality changed considerably. For instructors the single most significant reform was the inclusion of a viable internet within Second Life.

A viable internet within Second Life enables browsing the internet and watching, for example, YouTube videos with learners, and most importantly Second Life now includes a simple and viable tool for collaborative text editing through, for example, the use of Google documents.

Previously, presentation slides had to be loaded as images in Second Life and this involved a slight cost. This is no longer necessary, as slides can be loaded into an internet social bookmarking service completely free of charge and used as Shared Media in teaching situations.

#### ***Practical methods for educational contexts***

Teaching situations in Second Life differ in many ways from normal classroom contexts and they can easily become chaotic. Technical problems and learners' inadequate ability to work in the Second Life environment cause interruptions and take time away from handling substance. Typical examples include the voice of all learners cannot be heard for the entire teaching situation, or learners are separated from others when moving from place to another. Instructors may also experience technical problems during the lesson, typical examples relating to audio volume.

### *Careful preparation and shared responsibility*

The keys to successful implementation of education courses in Second Life are meticulous preparation, being prepared for problems, and shared responsibility for education sessions with another individual. It is in fact very difficult - almost impossible - for an instructor to carry out a successful course on her/his own. Seamless guidance of a group of ten learners requires the participation of at least two instructors. This means that when technical problems arise, one instructor can concentrate on the problems while the other continues teaching content. One instructor can also take charge if the other experiences a technical failure. Having several instructors on a course also allows the learner group to be divided into smaller groups for activities.

Education courses are best initiated with an orientation to the basic functions of Second Life or alternatively by offering learners an opportunity to become familiar with Second Life before the actual course commences. This method ensures that as little time as possible is dedicated to guidance in Second Life functions on the course. The reality is that an instructor must always be prepared to advise learners in the use of the user interface to a certain degree and the time needed for this must be taken into consideration in lesson planning.

Lessons in Second Life should be carefully planned beforehand and all tools to be employed during the lesson carefully tested, preferably with another individual. A schedule should be drawn up for the lesson, with time allocated for possible technical problems. Another text-based tool, such as Moodle or wiki, should be linked to teaching in Second Life. These tools can be employed for sharing and organising educational material, and responding to questions learners have and discussion between Second Life meetings. If the course is delivered entirely as distance education, it is of primary importance to test that equipment learners have access to meet the system requirements of Second Life before the course commences. Before the first Second Life session it is good to ensure that all learners have access to a functioning headphone set and that audio controls and Shared Media work on their machines. If this is not done, the first teaching session will mainly consist of audio testing and adjusting user interface settings.

### *Slowly but surely: a key to successful lessons*

Prudent instructors advance slowly during lessons and ensure that all learners are keeping pace. Lessons are best planned with lecture type sessions alternating with activities type sessions. Learners should be exposed to tasks and activities that sustain their concentration and prevent their minds from wandering to inessential issues. Long lecture type periods are best avoided. At its best, a Second Life lesson is so active and intensive that participants are one hundred percent immersed in it.

This intensity may be draining and we have observed that an appropriate length for a lesson requiring much activity is approximately 1.5 hours.

More patience and control than normal is required of learners in Second Life. Employing audio means that often different individuals all talk at the same time. Because gestures and expressions are not conveyed in Second Life, it is difficult for instructors and learners to anticipate when another individual will speak. Employing text-based chats alongside voice is often a viable solution. Learners can also ask questions in a chat column and the instructor is able to return to questions later if necessary by examining the recorded chat history. It would be ideal if in all teaching situations everyone could use the audio function of Second Life and have the microphone turned on continuously. This would allow learners' immediate reactions to be conveyed to the instructor in the form of short comments, utterances and bursts of laughter, in place of gestures and expressions. Unfortunately this is not always possible due to the noise and audio interference caused by multiple turned on microphones. Often the only available solution is for the learner who is speaking to have their microphone on. Others are turned off. Independent tasks between Second Life sessions are best completed with a partner. Roaming around Second Life on one's own can often create a feeling of isolation. It is more fun to move around with a partner and also easier to solve potential questions related to Second Life with someone else.

## Conclusion

Second Life is in many ways a challenging teaching and operational environment. It sets large demands on equipment capacity and acclimatisation to its activities requires time from both instructors and learners. Instructors or educational institutions who plan operations in Second Life possibly need to invest in equipment and reserve time for implementing the environment. As an online operational environment, Second Life does, however, afford multiple undeniable advantages, among which are a powerful sense of presence, immersion, simulation possibilities, and an effortless networking of practitioners.

Those considering a professional employment of Second Life are required to examine the relationship between investment and gained advantages particularly carefully. Our experience is that the advantages gained clearly surpass both time and financial investments. Second Life has provided an experiential work and educational environment, the community and cooperation features of which leaves other online environments in the dust.

## References

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## Sintesi

*L'associazione di cittadini finlandese Forum SKAFry, dedita all'informal learning, a partire dal 2007 ha avviato la sperimentazione di Second Life come ambiente virtuale in cui realizzare due diverse tipologie di attività precedentemente svolte in presenza: in primo luogo le attività didattiche con gruppi di studenti e, in secondo luogo, le riunioni periodiche del personale dell'associazione, dislocato in sette diverse città della Finlandia. In entrambi i casi la sperimentazione ha portato esiti*

molto positivi, che sono stati formalizzati, per quanto riguarda i corsi, in un report pubblicato dall'ente nel 2010.

In un primo momento, le attività didattiche sono state realizzate condividendo con altre associazioni lo spazio EduFinland, la prima isola virtuale per le istituzioni educative finlandesi. Dopo una fase preparatoria durata all'incirca un anno, il Forum ha acquistato, progettato e fatto realizzare un nuovo spazio in Second Life, costruito ad hoc per le attività dell'associazione in base ai requisiti che si erano andati delineando nel corso della sperimentazione in EduFinland.

L'ottica che muove l'associazione e che ne indirizza le scelte in campo tecnologico è di tipo schiettamente contenutistico e sostanzialistico: il core della loro attività è, infatti, il contenuto formativo da veicolare, per cui lo strumento tecnologico è sentito come un mezzo che deve permettere e facilitare - e mai intralciare - la comunicazione. In linea con tale orientamento, sono stati identificati alcuni criteri chiave per la realizzazione di uno spazio in Second Life adatto a svolgere corsi e per l'organizzazione di attività di gruppo: 1) il download veloce dell'ambiente, 2) la possibilità di muoversi con facilità all'interno dell'ambiente stesso e di usare una videocamera per ispezionare l'area, 3) l'assenza di eccessive strutture fisse che rendono il download lento e lo spostamento all'interno dell'area difficoltoso per gli avatar, ostacolando anche la visuale di eventuali videocamere, 3) la presenza di uno spazio vuoto e "rilassante", protetto da eccessivi rumori e distrazioni, che sia adibito al lavoro di gruppo.

I criteri generali che stanno alla base di queste indicazioni sono funzionalità e usabilità, da privilegiare rispetto all'applicazione di tecnologie complesse che richiedano molto tempo e impegno da parte dei docenti per aiutare gli studenti a familiarizzare con gli strumenti tecnologici. Il valore aggiunto di Second Life, che va identificato nella possibilità di collaborare a distanza garantendo il senso di immersione e di presenza, fondamentali per favorire la partecipazione e stimolare l'interesse degli studenti, deve essere messo al servizio della formazione, per cui è importante che le risorse intellettuali siano ottimizzate e orientate all'efficacia educativa. Per questo, i docenti dovranno acquistare delle competenze di base nella costruzione di oggetti virtuali e nell'uso dei tool educativi più semplici, ma il loro lavoro dovrà poi essere affiancato, soprattutto nella fase del design dell'ambiente, a quello di esperti tecnologici che possano realizzare le strutture necessarie, permettendo ai docenti di dedicarsi alle attività per le quali sono più altamente qualificati: la formazione e la programmazione. Infatti, insieme alla definizione del design tecnologico, è fondamentale, ai fini della corretta gestione dei corsi, dedicare un lavoro meticoloso alla pianificazione delle lezioni ed alla verifica preliminare delle condizioni di base per svolgere le lezioni (testare i tool che saranno usati, verificare che i pc e gli strumenti per la comunicazione audio e video in dotazione degli studenti siano adeguati e ben settati) per evitare che inconvenienti tecnici e spiegazioni preliminari occupino tempi

*eccessivi all'interno delle lezioni.*

*Funzionalità, ottimizzazione delle risorse, pianificazione preventiva e orientamento al contenuto sono quindi i caratteri specifici dell'esperienza del Forum SKAFry in Second Life, che si è inoltre ampliata grazie alla gestione delle riunioni periodiche del personale in Second Life. In questo caso, l'associazione ha potuto far incontrare i propri dipendenti a cadenze ravvicinate (dalle due alle quattro volte al mese, invece dei due incontri annuali in presenza) rendendo la collaborazione più fluida e conveniente tanto dal punto di vista economico che da quello strettamente professionale.*