Lessons learned from the birth and evolution of the EduFinland virtual community for educators

Kim Holmberg*

Department of Information Studies
Åbo Akademi University, Finland
E-mail: kim.holmberg@abo.fi

*Corresponding author

Abstract: Educators around the world are experimenting with the possibilities virtual three dimensional worlds have for education and learning how to use these new environments efficiently. Virtual worlds have the potential to bring some new added value to education and educators can use them to create something that is not possible to do or show in traditional classrooms. Although a lot have been learned about virtual worlds and their potential, a lot more has to be learned before virtual worlds can become an integrated part of education on various levels. The article looks back at the birth and growth of the EduFinland community in the virtual world of Second Life and discusses lessons learned so far during the years of its existence.

Keywords: Education; Virtual worlds; Learning; EduFinland

Biographical notes: Kim Holmberg, PhD, from the Department of Information Studies at Åbo Akademi University is an expert in social media, webometrics, Web 2.0 and Library 2.0 and he was the first university teacher to use the virtual world Second Life in education in Finland. He has held several talks and presentations and organized courses and workshops about these themes for libraries, universities and other organizations.

1. Introduction

The interest towards educational use of virtual worlds and virtual realities is not a new thing (Psotka, 1995; Ota, Loftin, Saito, Lea, & Keller, 1995; Helsel, 1992), but it has only been since the middle of the last decade that the educational possibilities of virtual worlds and virtual realities have been available to all educators. This was the time when the virtual world of Second Life (www.secondlife.com) and other similar virtual worlds opened. These new three dimensional worlds could be accessed from personal computers and anyone with a bit of practice could build virtual objects and modify the space for their purposes. Soon educators around the world realized the potential these environments could have in education and started experimenting with the possibilities virtual worlds had to offer. To spread information and knowledge and to meet others interested in virtual worlds, communities of educators were born.

EduFinland is a virtual community mainly for Finnish educators, a collaborative network, and a collection of islands in the virtual world of Second Life. EduFinland opened its first island in spring 2008 and today, about four years later, the archipelago has grown into a lively community consisting of 25 islands and it is the virtual home of

more than 50 schools, universities and other non-profit organizations from Finland. EduFinland has been an interesting place to observe how educators and organizations take their first steps in a virtual world and how they learn how to use them for educational purposes.

Many of the steps taken by schools, universities and other organizations entering a virtual world have been repeated over and over again by newcomers. Some of these steps may be seen as a need to understand the virtual environment and oneself, represented by an avatar in this new virtual environment. All the steps indicate how everybody is trying to understand the possibilities and the potential these new three dimensional environments may have in education. Some of the things happening in virtual worlds today remind of the early days of the web, which makes it possible to try to make some predictions of the future of virtual worlds and about how they could be used in the future. While other steps and observations have raised some concerns for the future of educational use of virtual worlds and indicated some challenges that have to be overcome before virtual worlds can be fully used in education.

This paper will discuss some of these observations and their implications for the future development and evolution of virtual worlds in education and educational communities in them. The paper will present some examples but also discuss some of the concerns that current developments in virtual worlds have raised. However, the main goal of this paper is to share the knowledge created and the experiences learned in the EduFinland community of educators.

2. Virtual education

People use virtual worlds for a multitude of different reasons. Among the most important reasons are self-therapy (i.e. to increase self-esteem), as a source for instant pleasures, to escape social norms, for self expression and for exploration (Partala, 2011). Interest towards educational use of virtual worlds have grown significantly around the world in the last few years and several scientific articles report on successful experiments and positive attitudes among students and teachers towards using virtual worlds in education (e.g. Jones, Morales, & Knezek, 2005; De Lucia, Francese, Passero, & Tortora, 2009; Johnson, Vorderstrasse, & Shaw, 2009; Esteves, Fonseca, Morgado, & Martins, 2011). In learning foreign languages virtual worlds have been found to improve motivation (Wehner, Gump, & Downey, 2011), while in health care education virtual worlds are perhaps best used in simulations where students can and are allowed to make mistakes in a risk-free environment (e.g. Yellowlees & Cook, 2006; Danforth, Procter, Heller, Chen, & Johnson, 2009; Rogers, 2011). This is supported by some earlier research that has shown that virtual worlds can be very efficient as experiential learning environments where students can learn through experience and by doing (Jarmon, Traphagan, Mayrath, & Trivedi, 2009). Virtual worlds offer different possibilities for different disciplines and different teachers. Some may use virtual worlds for simulations or to demonstrate something very abstract that would be difficult or even impossible to demonstrate in a traditional classroom while others can benefit from the tools for three dimensional building, but probably all can use virtual worlds to deliver lectures and to organize group discussions. This is also what most teachers seem to start their journey into virtual education with.

De Lucia et al. (2009) wrote that ”learning is strongly related to the user perception of belonging to a learning community, as well as to the perception of awareness, presence and communication”. In virtual worlds students feel the presence of

other students represented by avatars (Johnson, Vorderstrasse, & Shaw, 2009) and they experience a sense of community which in best cases reflects in students teaching and guiding each other (Calongne, 2008). The experienced sense of presence and community in virtual worlds are perhaps the greatest benefits virtual worlds have to offer education. Especially in distance education it is very important that the students feel that they are not alone on the course and that they can meet other students. Otherwise the risk for the students to drop out increases significantly. Another benefit that virtual worlds bring to distance education is that meetings and lectures in virtual worlds can substitute at least some of the face-to-face meetings that would often require that the students travel long distances. This is a benefit that many students have stated as a very positive thing about education in virtual worlds (Holmberg & Huvila, 2008; Ritzema & Harris, 2008).

Although several articles report on the possibilities of the virtual worlds there are only few reporting on dangers and challenges with virtual worlds. Boulos, Hetherington, and Wheeler (2007) state that many of the same dangers and challenges that exist in the conventional web exist in virtual worlds as well, e.g. gambling, addiction, vandalism, identity and privacy issues, pornography, and questions about the quality of information. Virtual worlds bring with them some new challenges as well. Hardware requirements and bandwidth issues are real concerns for the development of educational use of virtual worlds (Boulos, Hetherington, & Wheeler, 2007; Warburton, 2009). Warburton (2009) identified eight barriers in the use of Second Life and state that each of the barriers represents "a challenge that requires the careful consideration of a number of design possibilities". These barriers include technical and economical issues, but also barriers related to the culture of virtual worlds and identity issues in them. Warburton (2009) means that virtual communities can be difficult to find and that it may be challenging to learn the norms and the etiquette of virtual worlds. Educators (and students) are facing several challenges that they have to overcome before virtual worlds can become part of everyday education.

3. Building of EduFinland community

Activity on EduFinland archipelago has grown rapidly after the first island was opened in spring 2008. New islands have been added and currently the EduFinland archipelago consists of 25 virtual islands and the EduFinland group in Second Life has over 400 members, all interested in the educational possibilities of virtual worlds. EduFinland offers educators a low-barrier entry to virtual worlds and a place to start investigating the educational possibilities of virtual worlds. For this purpose EduFinland rents virtual land for educators, provides support and organizes meetings and seminars of different types. Ever since the beginning the goal and purpose of EduFinland has been to gather people interested in the educational and learning possibilities of virtual worlds together and to promote interaction between people and avatars that are interested in similar things. By gathering people to the same area we can better learn from each other's mistakes and successes so that everyone do not have to repeat the same mistakes over and over again. EduFinland has also supported and guided teachers, and avatars, taking their first virtual steps in Second Life. The administrators of EduFinland have organized lectures, workshops, courses and networking meetings to meet these goals. Organizing such events is one of the keys in creating an active community and sense of community in a virtual world.

Many of the educators entering Second Life for the first time have heard about Second Life at a conference or a workshop somewhere or read an article about it and they have become curious about this new world. When they login to Second Life for the first

time they are facing the same problem as everyone else: how to find something of interest in this vast virtual world and how to find other people. It can be very frustrating for newcomers to enter an empty virtual world and not immediately find anything of interest. This is where EduFinland comes in. EduFinland aims to be the starting point for people interested in education in virtual worlds and a place to find others interested in similar things. This first contact with a virtual world may be crucial for the person's future use of it. If the first visit gives a negative impression the person will probably never log in again. This is what EduFinland tries to prevent by creating a positive experience for those visiting Second Life for the first time. One way to succeed with that goal is to create different networking events where people can meet and find others interested in similar things.

Many educators worldwide are experimenting with the possibilities Second Life has to offer. This makes it a great place to meet others and to network. Through these meetings collaboration and perhaps even joint courses can be born. The networking opportunities are not restricted to the teachers alone; students can meet other students too. A student from a university in Finland is probably not likely to meet students from another university from Brazil or New Zealand, but when our virtual spaces are close to each other in Second Life it is even likely that they will meet. Currently the networking opportunities are perhaps the most important reason for educators to enter the virtual world. To promote networking the administrators of EduFinland have organized various networking events, such as Christmas and summer parties, but also seminars with a particular topic. The goal with organizing topical seminars and discussions (e.g. foreign languages, health care, archaeology, etc) is that people interested in that particular topic can enter Second Life and meet others interested in similar things and they can get advice on how to use Second Life in their own courses. The years of development of the EduFinland archipelago have taught that creating networking opportunities and providing guidance and support for newcomers are key factors when building up a vibrant community of educators in a virtual world.

4. Lessons learned

EduFinland has been a place where one have been able to watch closely how Finnish schools, universities and other non-profit organizations have started to use this virtual three-dimensional environment. It has been very interesting to notice that some of the steps and patterns have been repeated over and over again by newcomers. Some of these steps can be seen as attempts to understand this new virtual environment through creation of something familiar and something that can be understood with the knowledge and experience we have. Organizations are trying to bring sense in to an unfamiliar environment and controlling it by building familiar objects. Many organizations start by building a virtual house to protect the avatars from weather and from the view of other avatars. Weather does not change in Second Life and even if it did avatars or the persons behind the avatars would not get cold even if the climate on a certain island was programmed to be rainy and windy. Although there is an urban legend or a virtual legend about an event where the organizers had underestimated the number of attendees and hence they had not reserved enough chairs for all the participating avatars. This meant that some of the avatars had to stand through the whole event. According to the story, some of the people whose avatars had to stand talked with the organizers after the event and told them that they were physically tired because their avatars had to stand for a long time. The connection between the avatars and people behind them is strong and the experiences of the avatars can evidently be transferred to the persons behind the avatars.

To create a house as protection from other avatars' views may indicate that the builder of the house is not very familiar with Second Life, as experienced users of Second Life can easily see through walls and around corners, but building a house may also indicate something else than inexperience. Perhaps we are building houses because they are familiar to us. When we see a house, a chair or a coffee cup in Second Life we know what we can or are supposed to do with it, we understand what the object is and how it works. After all, these objects are familiar to us from the world outside Second Life. We know how to use familiar objects and we do not have to use a lot of time and energy to figure out what we are supposed to do with a certain object. Because of this it is logical and even necessary that we bring familiar objects and things to virtual worlds.

Understanding and controlling the environment should not take a lot of time and energy. We have to keep in mind that the virtual worlds that we use in education are tools just like Adobe ConnectPro or Moodle are and it should not take excessive amounts of time and effort to learn how to understand and use them. The virtual classrooms and other educational areas that we build should not be too complicated or futuristic because the students would have hard time understanding how to use them and how to be in them. However, the classrooms should not be plain gray boxes either. In an ongoing research we have studied what kind of impact different virtual environments have on learning. Preliminary results indicate that students both liked more and learned better in an esthetically pleasing virtual environment than in a plain gray room without any stimulating objects. While we are trying to understand and learn more about the use and possibilities of virtual environments, we should build familiar and user-friendly spaces with familiar objects to help us understand and control these new environments better. On EduFinland the environment has been created to resemble summer time in Finland, which has been thought to be esthetically pleasing for most users. The administrators have built shared spaces such as lecture halls and discussion circles that anyone can use. These spaces have been built with accessibility and ease of use in mind. Offering shared spaces also means that the educators do not necessarily have to build their own classrooms because they can use one of the already existing spaces. This has been another key factor when helping educators use virtual worlds.

Another very typical phenomenon that can be seen all over Second Life is that in the beginning everyone tries to build their own spaces. Some complete their building projects with amazing innovations while others soon realize that it may be better that they focus on functions and content instead and leave the building work to experts. Similar development could be seen in the early days of the web. At the end of the last millennium when the web was young everybody tried to code their own websites, with various successes. Today only few persons can actually code their own websites and it has become usual to hire a professional web designer for the job. A similar development can be seen in virtual worlds today. It is becoming more and more usual that organizations hire a professional builder that is an expert in designing and building three dimensional environments. Building in a virtual world is very different from coding web pages because the designer has a three dimensional space to work with. Building in Second Life requires besides mastering of different tools and software also some architectural knowledge. The builder has to have an eye for interior design and exterior design. It is not enough to know how to build an authentic and esthetically pleasing tree, the designer also has to know where to place it so that the tree looks good and possibly helps people use the space. Already today we need people with these skills and in the future the demand will be even greater. As far as we know, currently there are no schools giving education in these combined skills, but the situation will hopefully change in the near future.

Some teachers have created so called "dummy-avatars" for their students to use during lectures. The benefit of using ready avatars is that the students do not have to create their own avatars, which saves some time. However, based on the experience from organizing numerous workshops and lectures about virtual worlds we have witnessed that it is through creating their own avatars and by modifying the avatars' look that students create some kind of an emotional bond with their avatar. This bond between the avatar and the user is important for the sense of presence of others and to fully experience the immersive virtual world. This bond is something that cannot be achieved when using someone else's avatar. Teachers should reserve enough time for the students to create and modify their own avatars and to slowly take their first virtual steps. On EduFinland we have noticed how newcomers first refer to their avatars as "that avatar" or simply "that", but after a while this change and they refer to their avatars as "I" or "me". Anyone that enters a virtual world for the first time needs some time to explore the environment and to get familiar with their avatar. Only after that one is ready to take part of lectures or group discussions. Using "dummy-avatars" may be a good option if the students are only attending a single lecture in a virtual world, but it is probably not the best way to use virtual worlds when the environment is used for a single lecture or for just a couple of lectures. It is not justified to use a tool to deliver lectures that takes longer time to learn how to use than the lecture takes. There are other tools and methods that can be used to deliver single lectures and that are easier to use. Also the key benefits of virtual worlds are lost if the environment is accessed with someone else's avatar and just for a single lecture. When virtual worlds are used in education they should be planned into the course schedule so that the key benefits of sense of presence and sense of community can be fully utilized.

Even though virtual environments successfully support synchronous communication and social interaction and create a sense of community (De Lucia et al., 2009), using virtual worlds such as Second Life in education clearly divides the students' opinions (e.g. Holmberg & Huvila, 2008; Alrayes & Sutcliffe, 2011). Some of the students see new learning environments as a positive thing and they see the benefits of virtual worlds especially in distance education while other students are afraid that using virtual worlds may lead to decreased classroom education and less face-to-face meetings (Holmberg & Huvila, 2008). There may also be other reasons for the students to even refuse to use virtual worlds (e.g. lack of necessary computer skills, danger of addiction). This is something that every teacher has to be aware of when planning to use a virtual world in education. Should there be other possible ways of attending the lectures or can attendance in virtual worlds be required of every student? Virtual worlds have become such a huge part of so many people's lives (both professionally and for entertainment) that it is important to at least know something about them. Even though some students and teachers would refuse to use virtual worlds themselves, it is important that they are aware of these environments because chances are that someone close to them is already spending time in a virtual world.

5. Challenges to overcome

Another set of familiar things that we currently bring to the education in virtual worlds are the teaching methods we have found useful in traditional classrooms outside Second Life. We know that PowerPoint presentations can support lectures and deliver information in traditional classrooms and hence we bring them to Second Life. We know that different group discussions and various participatory teaching methods work outside Second Life and hence we have brought them to Second Life and we have noticed that

they work in Second Life as well. For a long time already educators have been delivering lectures and organizing group discussions in Second Life and these have been working well. Lectures and group discussions are easy to set up and they do not require a lot of work or knowledge about the environment from the teacher or the student. Virtual classrooms are in fact not that different from traditional classrooms if they are used for synchronous meetings (Calongne, 2008). The only obvious difference is that everybody attending are represented by avatars. Traditional methods used in virtual worlds may bring some added value, or as Jones, Morales, and Knezek (2005) wrote: "If 3-dimensional online learning environments can approach face-to-face classroom interaction and learning over low bandwidth Internet connections, then this approach merits serious consideration as a method to support interactive online classrooms and course delivery". However, the three dimensional and freely modifiable spaces offer possibilities to do so much more. So far we have not seen many great examples where the teaching methods used would have been especially designed for a three dimensional virtual environment. We have mostly seen familiar and traditional methods that have been adapted to virtual worlds. There are only few examples where the three dimensionality of space and sound have been fully used to enhance the learning experience. One of the best examples is the already couple of years old Virtual Hallucinations (Yellowlees & Cook, 2006). Virtual Hallucinations is a space where two researchers have created a reality as two patients with schizophrenia have explained that they experience reality. By entering the space people can through their avatars experience the hallucinations that the two patients experience every day. A visit to this immersive space is definitely more educative than reading an article about the hallucinations experienced by the patients. We need more examples of that kind.

Perhaps it is still too early for us to really understand and be able to imagine all the possibilities virtual worlds have to offer education. Perhaps we are unable to think outside the famous box and create new innovative and participatory teaching methods that would benefit from the full potential of virtual worlds. For virtual worlds to become part of everyday education the next step we take must be to come up with ways to fully utilize the potential of these environments and to come up with innovations that support learning and teaching in virtual worlds. Some educators are becoming frustrated with the lack of development and unless we soon see significant development in that area educators will begin to leave virtual worlds.

Technical problems can also create frustration. Moving around in Second Life is not intuitive for most of the users (Calongne, 2008) and the user interface of Second Life does not fit into the philosophy of a user-friendly environment very well as it does require some training to master. This problem will hopefully be solved when Second Life can be accessed with a web browser. This will be a much anticipated step of development that educators have been waiting for and it will lower the barrier to try the virtual world of Second Life in education and it will make educational use of it significantly easier. It will also lower the current equipment requirements that are huge obstacles in many classrooms around the world. Computer classrooms rarely have the latest graphic cards and quite often the computers are not able to draw the graphics that Second Life requires. In many schools the computer support may be unwilling to install the software for one reason or the other. The policy of the school may prohibit the installation or the hardware requirements of Second Life are not met. Many educators on EduFinland have run into these kinds of problems in their organizations. Bandwidth is a real concern in many countries where the Internet penetration is still low. There are many obstacles in the way of virtual worlds to become an integrated part of education but many educators around the world are working to find solutions for these obstacles.

There are plenty of papers describing educational solutions and possibilities with virtual worlds, but not many questioning the hype and the actual situation. Second Life may not be the best possible tool for lectures and other teaching activities. According to Gilman, Tashner, Bronack, Riedl, and Cheney (2007) we experience the presence of others in a virtual world through the avatars, perhaps even in a deeper and closer way than when using e.g. video conference tools or telepresence rooms. We are immersed in the environment and we actually feel the presence of others in the same virtual place and this is something that is difficult to achieve with other learning environments. But is this reason enough to use Second life in education? Are the benefits greater than the efforts required to learn how to use the avatar and the environment to even find the way to the virtual classroom? Does the virtual environment bring some added value to the lectures? In some situations a traditional classroom or other teaching methods may be better (Delwiche, 2006), so why should we use virtual worlds? What kind of additional benefits do they bring? Is learning more efficient in a virtual world? Every educator should ask themselves these questions before organizing a class in a virtual world. It is important to carefully consider how a virtual world should be used in education and what added value using it may bring to the course at hand (Herold, 2009). If the virtual world does not bring any added value to the course, then perhaps virtual worlds should not be used for that particular course. After all, the content of the course is the most important thing, not the tool that we are using to deliver the course.

6. Hope for the future

Every educator in Second Life and in other virtual worlds are experimenting with the environment and learning how to use it. We are taking the first steps towards a truly virtual education. We have not yet seen how virtual worlds can be used to their full potential, but we are on our way. We have seen some good examples of how virtual worlds can in some cases bring added value to education, but there is still a lot to be learned. Despite the hype and educational potential of virtual worlds it may take a long time before education will become truly virtual, but every experiment and even the mistakes that we make during our journey take us in the right direction; towards an efficient and innovative use of virtual worlds in education. Everything that we have done in virtual worlds has taught us something and prepared us to face the future. Everything that we have done has taken us closer to the real innovations and new teaching methods that will integrate completely with virtual worlds utilizing their full potential. Tomorrow will be very interesting.

References

Alrayes, A., & Sutcliffe, A. (2011). Student's attitudes in a virtual environment (Second Life). *Journal of Virtual Worlds Research, 4*(1).

Boulos, M. N. K., Hetherington, L., & Wheeler, S. (2007). Second Life: An overview of the potential of 3-D virtual worlds in medical and health education. *Health Information and Libraries Journal, 24*, 233–245.

Calongne, C. M. (2008). Educational frontiers: Learning in a virtual world. Educause, 43(5). Retrieved from http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume43/EducationalFrontiersLearningin/163163 on August 18, 2011.

Danforth, D., Procter, M., Heller, R., Chen, R., & Johnson, M. (2009). Development of virtual patient simulations for medical education. *Journal of Virtual Worlds Research,*

2(2).
De Lucia, A., Francese, R., Passero, I., & Tortora, G. (2009). Development and evaluation of a virtual campus on Second Life: The case of Second DMI. *Computers & Education, 52*(1), 220–233.
Delwiche, A. (2006). Massively multiplayer online games (MMOs) in the new media classroom. *Educational Technology & Society, 9*(3), 160–172.
Esteves, M., Fonseca, B., Morgado, L., & Martins, P. (2011). Improving teaching and learning of computer programming through the use of the Second Life virtual world. *British Journal of Educational technology, 42*(4), 624–637.
Gilman, R., Tashner, J., Bronack, S., Riedl, R., & Cheney, A. (2007). A 3-dimensional world builds community across countries and continents. *TechLearning*, April 1, 2007. Retrieved from http://www.techlearning.com/showArticle.php?articleID=196604336 on July 23, 2011.
Helsel, S. (1992). Virtual reality and education. *Educational Technology, 32*(5), 38–42.
Herold, D. K. (2009). Virtual education: Teaching media studies in Second Life. *Journal of Virtual Worlds Research, 2*(1).
Holmberg, K., & Huvila, I. (2008). Learning together apart: Distance education in a virtual world. *First Monday, 13*(10).
Jarmon, L., Traphagan, T., Mayrath, M., & Trivedi, A. (2009). Virtual world teaching, experiental learning, and assessment: An interdisciplinary communication course in Second Life. *Computers & Education, 53*(1), 169–182.
Johnson, C. M., Vorderstrasse, A., & Shaw, R. (2009). Virtual worlds in health case higher education. *Journal of Virtual Worlds Research, 2*(2).
Jones, J. G., Morales, C., & Knezek, G. A. (2005). 3-Dimensional online learning environments: Examining attitudes toward information technology between students in Internet-based 3-dimensional and face-to-face classroom interaction. *Educational Media International, 42*(3), 219–236.
Ota, D., Loftin, B., Saito, T., Lea, R., & Keller, J. (1995). Virtual reality in surgical education. *Computers in Biology and Medicine, 25*(2), 127–137.
Partala, T. (2011). Psychological needs and virtual worlds: Case Second Life. *International Journal of Human-Computer Studies, 69*, 787–800.
Psotka, J. (1995). Immersive training systems: Virtual reality and education and training. *Instructional Science, 23*, 405–431.
Ritzema, T., & Harris, B. (2008). The use of Second Life for distance education. Journal of Computing Sciences in Colleges, 23(6), 110–116.
Rogers, L. (2011). Developing simulations in multi-user virtual environments to enhance healthcare education. *British Journal of Educational Technology, 42*(4), 608–615.
Warburton, S. (2009). Second Life in higher education: Assessing the potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Technology, 40*(3), 414–426.
Wehner, A. K., Gump, A. W., & Downey, S. (2011). The effects of Second Life on the motivation of undergraduate students learning a foreign language. *Computer Assisted Language Learning, 24*(3), 277–289.
Yellowlees, P. M., & Cook, J. N. (2006). Education about hallucinations using and internet virtual reality system: A qualitative survey. *Academic Psychiatry, 30*(6), 534–539.