

## **EXPANDING YOUR LEARNING ENVIRONMENTS: New possibilities of Virtual reality and Virtual learning environments**

**Petri LOUNASKORPI**  
Didactec Ltd, FINLAND

### **INTRODUCTION**

Virtual training has been tradition in many areas. Airplane pilot have been trained in simulations for decades and the virtual learning environments for example police, military and security have been used to make the trainings safe. Today the technology has developed so that all these possibilities are available for all learners. Many training providers have created multiple learning environments, which use Virtual Reality (VR), 3D simulations and Augmented Reality (AR) as Open Educational Resources (OER). These new possibility's are not well known and the usage is low. There are couple reasons for the slow diffusion of the new learning possibilities. Firstly the implementations of these new learning environments need new skills, attitude and courage. Secondly the traditional fact those teachers teach like they have learned. So the usages of these new possibilities challenge both teachers and learners to learn new skills, competences and open their mind for learning by doing.

### **THE NEW ENVIRONMENTS**

In this article I shall discuss about some of the new learning possibilities. Serious games and simulations have the longest history. Virtual learning environments, virtual worlds like Second Life have the most number of learning possibilities and learning objects. The Newcomers: Virtual Reality, 3D videos/environments and Augmented Reality expand the learning possibilities of the mobile users.



But the challenge is the new learning skills development. Who will teach the learner the new skills to use the today's learning materials? Will the new excellent content and learning possibilities be only for edutainment without the new attitude?

### SECOND LIFE THE WORLD LARGEST VIRTUAL OER RESOURCE?

Now 12 years old Second Life has been creation platform of learning objects, simulations and free courses for long. In this more than 44 milj. (<https://danielvoyager.wordpress.com/sl-metrics>) users virtual world almost all self-respecting research institutes, universities, museums, cities, companies etc. have created content, simulations and free courses in the environment. These content is very under used. The most used content in the Second Life are the language courses like in the Virtlantis island (<http://virtlantis.com>), where one can learn multiple languages for free.



The huge amount of educational resources can be found at [http://wiki.secondlife.com/wiki/Second\\_Life\\_Education/Resources](http://wiki.secondlife.com/wiki/Second_Life_Education/Resources)

The students challenge is to learn the new skills of virtual environment and virtual learning. Firstly the student has to create an Avatar, learn to move, act and communicate with it. The participation of training might also be a challenge for the Internet connection and equipment.

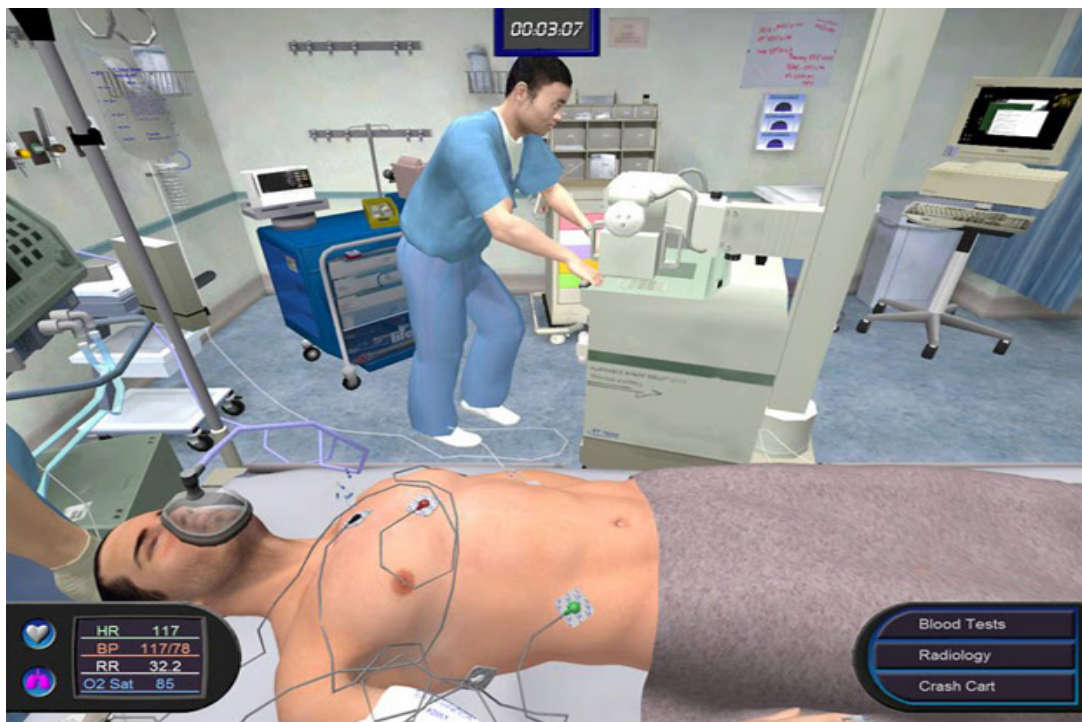
Secondly from teachers' point of view the teacher has to first find out the quality of the course content, and of course, learn the new skills of the virtual learning environment. This is the traditional way. In the today's, student centred learning culture; teacher's job is to guide the student to the new learning recourses. And after the learning process evaluate the student's skills and competences.

So with activating the student in the learning process the teacher can accredit also courses done in the virtual world.

### **SERIOUS GAMES AND SIMULATION IN LEARNING**

The electronically games are taught to be entertainment of the youth. But the The ESA's report 2015 reflects that sentiment throughout. The average age of someone who plays games is 31 years old. In fact, more gamers are over the age of 36 than between the ages of 18 to 35 or under the age of 18.

This means that the students have quite high skills to adapt the serious games and simulations in their learning processes. And the industry has answered this demand in their internal in-house trainings. More and more companies are building their competence building on gamification and simulations.



This is a challenge to academic training. When the tertiary training (teachers, educators) start to develop the students (future workers) skills in edu-gaming, learning with the games? In my opinion the challenge is the teacher training. Because teachers teach like they have learned, the teacher training ought to give experience of these new ways of learning.

The gaming is mostly problem-solving learning which is one the most effective way to learn. This has been proven in much professional training like airplane pilots. And it's very cost effective compared to the real learning situations. With the student's existing skills the usage of games, simulations and gamification has a bright future in all educational worlds.

## THE NEW MOBILE WINDS OF EDUCATION

The technology and software development and the new economy of Internet have opened the next level of virtual learning. The 3D environments, Virtual Reality and Augmented Reality solutions used by mobile devices are changing the world of simulation and learning experiences. New innovations of the usage of these methods are bringing the learning experiences very near the learner, practically in the learners' pocket.

Think about a jet engine in the classroom. It's an interesting technical machine, but one can't start it inside. But with the Augmented Reality solution student's mobile device (tablet/mobile phone) can show the real action of the engine by animations. All the settings can be simulated and the real picture and understanding of the working principles of the engine can be tested.

On the other hand Virtual Reality can be demonstrated with Google glasses or real 3D environment created with computers. Using a harbour crane inside a 3D virtual picture or acting in a emergency room handling different injures are nice examples of these environments used in professional training. The next step is to create ones' own 3D environment for Personal Learning. The 3D can be created with different free applications like Google Street view. Also one can create 3D videos with the latest equipment. These materials can be shared via platforms like Youtube or even Facebook. This opens wide new vision of the content creation and creation of learning objects and online courses.



## THE CHALLENGE

“Teachers are teaching like they have learned”. We are training the 21<sup>st</sup> century citizen with 20<sup>th</sup> century teachers training and competences in 19<sup>th</sup> century learning environments. The world outside the educational institutes has changed rapidly but the methods inside the institutes are coping the traditional and secure methods of the trainers. The challenge is rapidly start using the new possibilities and methods in teachers’ in-house training and give them practical experience of the today’s methods, possibilities and pedagogies.

Because the teachers are teaching like they have learned.

## BIO DATA and CONTACT ADDRESS of the AUTHOR



Mr. Lounaskorpi (born 1958) has excellent vision of implementation of ICT in education. His social skills and competences are excellent. He has been responsible in orchestrating, innovating, designing and implementing web-based learning. As trained M.Ed and Ph.D. student, Mr Lounaskorpi has worked a number of years in different distance education projects in different capacities. He has been designing distance education systems at different universities and companies (in Finland, the Netherlands, England, Portugal and Hungary) as well as training international organizations (UNESCO) and also writing tutoring and student support guides. Mr Lounaskorpi has been consulting a wide number of Finnish and international companies and organizations in the design of their learning, information and performance systems. He has worked in this sector, among others, for projects at Central Finland’s educational system high schools and Vocational institutes, secondary level.

His research is focusing on the implementation processes of ICT in education and the new pedagogical methods. *Planning and orchestrating distance education systems and their business*. Mr Lounaskorpi has worked a number of years in different distance education projects in different capacities. He has been designing distance education systems for various environments, writing distance education materials, training distance educators at different universities and companies (in Finland, the Netherlands, England, Portugal and Hungary) as well as training international organizations and also writing tutoring and student support guides.

Mr Lounaskorpi has been consulting a wide number of Finnish and international companies and organizations in the design of their learning, information and performance systems. He has worked in this sector, among others, for projects at Central Finland’s educational system (secondary level) and the Finnish Tax Administration and Finnish Customs. Mr Lounaskorpi has more than 10 years experience in project managing. He has completed more than 20 projects and has had several workers in these projects.

**Main parts of these projects have been connected with e-learning, blended learning or web based learning. Mr Lounaskorpi worked as main trainer and implementer in projects, which have implemented e-learning, -training and b-learning systems to National Customs Agency of Romania, Academy of the ministry of Justice of Croatia, Academy of the ministry of Finance of Georgia. In these projects the peer production method was used and after the piloting phase, more than 80% online students had started their on-line studies. Mr Lounaskorpi is the founder and CEO of the DidacTec Ltd.**

**Petri LOUNASKORPI**  
**Didactec ltd, FINLAND**  
**Email: [petri.lounaskorpi@gmail.com](mailto:petri.lounaskorpi@gmail.com)**