

Games for field testing

IO6: Games for field testing



Disclaimer

This project has been funded with support from the European Commission (Project number: 2017-1-UK01-KA201-036783). The information on this website reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

EU FUNDED GUINEVERE PROJECT (2017-2019)

IO Number: 6

IO Name: Games for field testing

Description:

These games built in this IO aim to connect different virtual worlds and let the pupils or students telecollaborate with each other through, for example, using a shared scoreboard, shared communication and other means we will explore during the project. The GUINEVERE Virtual World, built in OpenSimulator, will be the main area for developing the games. During and after the development time, this virtual world will be connected to other existing projects (so called grids) in Europe which also run the OpenSimulator software, in order to easily exchange information and accept virtual visitors from the other 'grids'. This connection to other grids can be opened and closed whenever needed. To ensure the virtual world will be a safe place for younger pupils to work on, the accounts of the GUINEVERE Virtual World all have to be approved by the project manager who is in charge of the account creation and approval. No unapproved visitors will be allowed to enter. On the GUINEVERE Virtual World there an island will act as the front door to the virtual world and all users will enter here. Moreover, a separate orientation island will be built there for the teachers and pupils in order to learn the basic steps of working in a virtual world. Every island will be gamified with objects (small serious games) that challenge the users to learn the content in a playful, collaborative manner. Several gamification elements will be used to enhance the virtual environment utilising points, badges, leaderboards, rewards, teamwork, social graph, badges, virtual goods, roleplaying, etc. All results (data) will be stored in a database on the server and can be used for later analysis in order to understand learner engagement. In-world content can be customized by teachers to adapt to the learning/teaching needs and requirements. A separate video channel on Youtube will be used to hold all instructional videos for teachers and recorded sessions (set to private) of pupils. All created games can be transferred to other grids by packing them in OAR or IAR files. These are zipped files that hold all content and scripting of a complete island (OAR) or inventory (IAR), ready to be used in future educational projects.

Dissemination Level: Public

Signed off by: Project Coordinator

Date Signed off: 14 August 2019

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List of Abbreviations

BYOD Bring your own device

CALL	Computer-assisted language learning
CLIL	Content and Language Integrated Learning
CMC	Computer-mediated communication
DS	Digital Schools
EFL	English as a foreign language
ESL	English as a second language
EU	European Union
FL	Foreign language
GUINEVERE	Games Used IN Engaging Virtual Environments for Real-time language Education
ICALL	Intelligent computer-assisted language learning
ICT	Information and communication technologies
L1	First language
L2	Second language
MALL	Mobile-assisted Language Learning
MC	Minecraft
MMOG	Massively multiplayer online games
MOOC	Massive Open Online Courses
MOODLE	Modular object-oriented dynamic learning environment
OECD	Organization for Economic Co-Operation and Development
OFSTED	Office for standards in education, children's services and skills
OS	OpenSimulator
PC	Personal computer
PISA	Programme for International Students Assessment
SL	Second Life
SLA	Second language acquisition
TELL	Technology-enhanced Language Learning
TL	Target language
VLE	Virtual learning environment
WELL	Web-enhanced language learning

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1. Introduction

This document aims to report on environments and games created in three different virtual worlds namely OpenSimulator (OS), Second Life (SL) and Minecraft (MC) for the GUINEVERE project. The first section of this report will offer a brief outline of each virtual environment and its relationship with the educational field in terms of impact and potential. The following sections will look at the development of specific areas where gamified objects (small serious games) and instructional tasks have been

created within each platform. Examples of in-world content suggested and customized by participating teachers to adapt to the learning/teaching needs and requirements will be provided. The sections dedicated to each platform will present also a Youtube video channel where instructional videos have been created and uploaded for teachers and users in general. Finally, the last section will look at comparing and contrasting the three virtual worlds by discussing the opportunities and possible limitations that each GUINEVERE environment has to offer.

2. OpenSimulator, Second Life and Minecraft in Education

The advent of immersive virtual reality technology can be traced back to the 1960s when *Sensorama*, a single user console designed for the entertainment industry, was created with the aim to captivate audience attention (Heiling, 1962). Later, in the 1980s, virtual reality technologies were used for simulations during flight trainings and exercises (Hawkins, 1995) but it took years for these technologies to be formally presented to the education system due mostly to financial constraints. As a matter of fact, the cost and maintenance of sophisticated devices to create immersive environments were prohibitive for the majority of people. In addition, the use of these devices was physically challenging in terms of posture demands, headset weights, simulator sickness etc... Over the years, the availability of high speed Internet connection, the rapid advancements in technology together with the drastic reduction of its costs allowed for the implementation of desktop-based virtual reality technology into education. In addition, with further developments of Web technologies, new possibilities emerged allowing more than one user to work collaboratively in a virtual environment (Chen & Teh, 2000; Kamel Boulos & Wheeler, 2007). Many educators have integrated a variety of desktop-based virtual reality technologies into their instruction exploring the potential of such environments. 3D virtual environments have been used to create, for example, replicas of real life places where users, digitally represented as avatars, can move and engage in different activities while fostering learning. As indicated by Edirisingha Nie, Pluciennik and Young (2009), OS, SL and MC, among other platforms, allow to “generate a sense of presence among peer learners via their avatars in a 3-D environment through real-time interactions that may facilitate relationship-building, learners’ engagement and motivation” (p.459). Virtual worlds have been also extensively used by educators to build 3D objects and digital

games in order to explain complex and otherwise abstract concepts (Merchant et al., 2012). Warburton and Perez-Garcia (2009) explain that when it comes to learning, 3D virtual environments enable their users to experience:

1) *Extended or rich interactions*: opportunities for social interactions between individuals or communities; 2) *Visualization and contextualization*: the production of content that may be inaccessible due to historical (too distant in the past), futuristic (too distant in the future) or cost related constraints; 3) *Exposure to authentic culture and content*; 4) *Immersion* in a 3D reality where there is an augmented sense of presence that can affect motivational and emphatic aspects of the experience; 5) *Simulation*: reproduction of contexts and experiences otherwise too costly and with possible physical constraints when proposed in real life settings; 6) *Community presence*: promoting a sense of belonging and collaboration within and among groups of people; 7) *Content production*: opportunities for creation of the learning environments as well as of the objects therein.

Second Life, OpenSimulator and Minecraft are the three platforms used in the GUINEVERE project and before going into further details, it is important to give a brief outline of each platform and its relation with the education sphere.

Second Life

Second Life is an Internet-supported virtual world created in 2003 by Philip Rosedale and his team at the Californian company Linden Lab. SL is characterized by visual contiguity having one world shared by millions of users in a single landscape and a complex system of permissions where content can be shared and sold (which led to a rich economy of digital content sales) (Rimaszewski et al., 2007). The content generated by users within this virtual platform is stored at the Linden's Lab servers. Second Life has been extensively adopted for academic, social and business purposes. In particular, many educational institutions begun to explore SL as a platform that would support education and facilitate distance learning. Various researches (Warburton, 2009; Baker, Wents & Woods, 2009; Andreas et al., 2010) suggest that Second Life may be an ideal place for project-base and experiential learning offering the opportunity to foster real life application of the theories and strategies proposed by the different curricula. In addition, the opportunity to create relatively simple as well as complex environments and objects, the richness of its immersive experience and the invaluable opportunity to create game-like activities

have enticed both educators and students. Having said that, it is important to remember that although signing up and interacting with the SL environment is free, the administration of a private 3D space, the uploading of images and the creation of permanent objects and groups are not free of charge.

OpenSimulator

OpenSimulator is the open-source counterpart of Second Life, looking and working almost the same. However, OpenSim does not aim to become a clone of the Second Life server platform. Rather, the platform aims to enable innovative feature development for virtual environments. The OS based grids are managed by independent commercial operators, individual or campus networks and they are not connected with the SL grid. OS uses the same protocol as SL and this means that it is compatible with any SL viewer/client including the SL viewer itself. The compatibility feature of OS resulted in a “de facto standard for Virtual Worlds and has meant that OpenSim offers a natural progression from Second Life for educationalists” (Allison et al., 2012, p. 2). OS is being extensively used by big companies such as IBM and Microsoft as well as by second and third level institutions. The fact that OS is an open source application allows designers the freedom of creating a multitude of environments, simulations and interfaces. In addition, it can be particularly suitable for research purposes because by setting up a private server, it is possible to enjoy the experience without unnecessary and unwanted influences prompt by others. In OS there are no restrictions in terms of objects and the size of scripts depending on the size of the land owned as for SL. OpenSim is getting more stable over time but it is still a highly complex software system that can suffer various bugs and quirks.

Minecraft

In 2009, Zachary Barth, an independent developer, created *Infiniminer*, a game where a new way of representing the game world was proposed. This game was in fact characterized by simple independent, block- shaped entities and users who entered the game had the chance to place blocks, recreating anything that can be constructed within this block-based structure. Inspired by this, Markus “Notch” Persson created his own Java-based version that eventually became Minecraft. Minecraft is a multiplayer sandbox building game (Ekaputra, Lim, & Eng, 2013) that allows players to explore

virtual worlds and use blocks to build amazing environments from the simplest to the grandest construction (Duncan, 2011). From an educational perspective, the use of Minecraft supports planning, collaboration, creativity as well as self-regulation skills. The ability to build and re-create virtual worlds also lends Minecraft to a wide range of applications, including the accurate reproduction of existing environments and re-imagination of past and future spaces facilitating the integration of the game within the curriculum for authentic and meaningful learning experiences. In this respect, Minecraft has been used extensively for the spatial geometry subject during class level 5/6 (Förster, 2012), to teach about sustainable planning (West & Bleiberg, 2013), for language and literacy subjects (Bebbington, 2014; Garcia Martinez, 2014; Hanghøj, Hautopp, Jessen, & Denning, 2014), digital storytelling (Garcia Martinez, 2014), social skills (Petrov, 2014), informatics (Wagner, 2014), computer art application (Garcia Martinez, 2014), and chemistry (Hancl, 2013).

Games creation and the GUINEVERE project

The creation of games in virtual environments to foster learning in general and language learning in particular is at the very core of the GUINEVERE project. The meta-analysis and the systematic review of the literature conducted in the previous intellectual outputs have highlighted the crucial educational potential of digital games reiterating “the importance of questions that ask not if but how games can support learning” (Clark, Tanner-Smith & Killingsworth, 2014, p. 14). Furthermore, it has been highlighted how the importance of game-based classrooms is not only due to their fun element, but rather to how they allow social participation and students’ engagement with the curriculum (Hanghøj, Lieberoth, and Misfeldt, 2018). It is important to say that in order to facilitate learning, games need to provide players with a sense of autonomy, interactivity and identity (Gee, 2007). They need to be designed in such a way that allows players to plan their moves, test their hypotheses and solve potential problems while keeping their motivation high (Gee, 2007; Dondlinger, 2007; Ang & Krishna, 2008). These requirements are met when designers integrate elements into games such as goals, achievement levels, a reward system and engaging narrative plots embedded within the learning context of the game (Merchant, Goetz, Cifuentes et al., 2013). As outlined in the IO1 paper (“Theory of game design”), the flow theory

proposed by Csikszentmihalyi's (2000) is a framework for interpreting the effectiveness of games to engage players: when a game is very challenging, the player may experience frustration and if it is too simple, the player may easily lose interest. In both cases, the player is likely to become distracted and lose interest ending in quitting the game altogether.

The following sections will present the GUINEVERE environments created in OpenSimulator, Second Life and Minecraft. Together with descriptions of the different learning areas designed in-worlds, a range of games and tutorials will be proposed in order to facilitate educators to find ways of integrating such gameful experiences in meaningful learning activities.

3. GUINEVERE OpenSimulator development

3.1 Environment setup

OpenSimulator is open source software that enables the user to create a virtual world on a computer or a server. This software is in development and is still in 'alpha' state. The version used for the GUINEVERE project is version 0.9.

The GUINEVERE OpenSim environment is placed on a rented Ubuntu 16.04 server (Linux) situated in Roubaix (FR) at *SoYouStart*, a sub company of *OVH.com*. It has a Intel W3520 processor, 16GB memory and 4x2000 GB SATA drives. On this same server also the GUINEVERE Minecraft Java version is running (see chapter 5).

We use the standard account system of OpenSim to handle the accounts of the users, which only holds the name and encrypted password of the user. At the first login the user is asked to read the terms of service and 'opt in' or 'opt out' according to the European GDPR privacy regulation. If they opt in, more data will be stored in our database for research only.

Please, click [here](#) for further details on the service terms and conditions.

The virtual world needs to be accessed through the Internet using a virtual world viewer. We recommend the [Firestorm viewer](#), that needs to be set to the url of the virtual world as indicated [here](#).

The GUINEVERE team created four islands for this project, each of them with its own purpose.

All users will first arrive on the **GUINEVERE island**, where they will find some shops with extra clothing for their avatar and are guided to follow an orientation path showing them how to do all kinds of things in a virtual world (see point 3.2). In addition, an example of a quest is situated on this island.



Fig. 1 GUINEVERE island

The second island, **Aedificare**, is an island where users can find many examples of games that are available in OpenSim and there is space for the users to build and script objects themselves.

The third island, **Movie Studio**, is filled with scenery to do roleplay and video recording. This is divided into two levels, one at the ground level and one sky platform.

The fourth island, **Team Up**, is a game that needs to be played with four users. During development of this environment, it has been open to visitors from other virtual worlds. This is done by 'Hypergrid' which is an extension to OpenSim that allows you to link one OpenSim system (grid) to other OpenSim grids on the internet, this supports seamless avatar and object transfer among those Hypergrid enabled OpenSim grids.

During the field testing phase we disabled this Hypergrid connection to secure the area for young students (12+).

3.2 Developments of games

The **GUINEVERE island** is the default landing place where all new users will arrive. Here they have to 'opt in' or 'opt out' and read our terms of service, before they can proceed.

The user can select the language they prefer to work with on this island. This will be stored as personal data in the database, but only when the user has opted in.



Fig. 2 Exploria castle entrance

The first castle they enter called 'Exploria' is an 'Orientation castle' where all users can learn to work with the basic tools in this virtual world. They learn how to walk, fly, chat, click on things, sit, open gates, change view, etc. The orientation signs are instructions in the language that the user selected at the beginning.



Fig. 3 Exploria castle orientation hall

In this castle the user is also asked to do the 'Bartle test', this is a digital test based on 'Bartles taxonomy of player types' which is a classification of video game players based on a paper by Richard Bartle. Each player type (Socialiser, Explorer, Achiever and Destroyer) is defined by the gaming elements which they find most enjoyable.

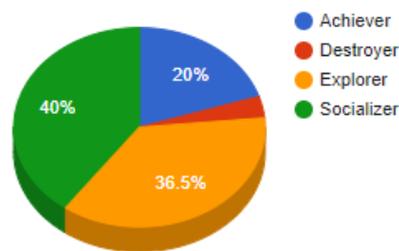


Table 1 Bartle test

In this castle there is also a game called 'Quiz Chair'. As soon as the user sits on this Quiz Chair, he or she will receive up to 10 multiple choice questions. Every right answer will raise the chair so when users play together on multiple chairs, they can see which one is doing better. At the end the result will be shown on the scoreboard. The questions can be adapted by teachers by changing the notecard in the chair.

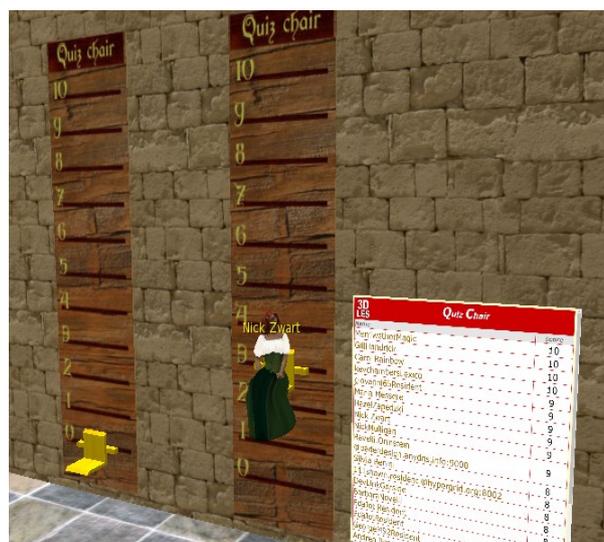


Fig.4 Quiz chair game

After the user(s) have done the orientation and the Bartle test, they are allowed to leave the castle at the back gate. There they will start with a small example of a quest in English. The instructions are placed on signs along the route and can be connected to web pages like a Google document or Google slide. So the teacher can make the instructions themselves.

During the quest the users have to find clues and riddles, give secret passwords to open gates or to be able to cross bridges. This game is an example of how a quest in a virtual world can be used for language education.



Fig. 5 GUINEVERE island quiz



Fig.6 Quest trail on the GUINEVERE island

The **Aedificare island** is an island where users can be taught to build and script games themselves and see some examples of games. The part where users can build offers many free textures to use during building.

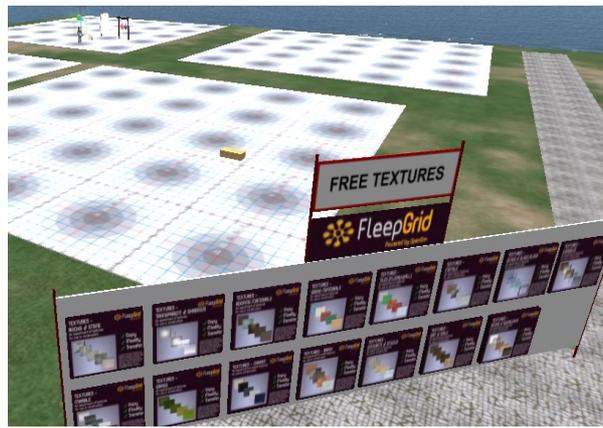


Fig. 7 Free textures, Aedificare island

Another part of the island is set up with examples of many types of games that are already created in OpenSim, like board games, quizzes and collaboration games.



Fig.8 Games sample

The **Movie Studio island** has many different sceneries that can be used for roleplay and filming (machinima).



Fig.9 The Movie Studio island

The island is split in two levels to have double the space for our scenes. The second level is a platform that floats at 1000 meters in the sky. The ground area offers several sceneries like country houses, a forest and parks, a treehouse and a lake.



The sky platform offers sceneries like: Fairground, Artroom, Sitting room, Airport Departure Lounge, Discoteque, Pool room, Pizza Parlour, Garage, Store, Arcade and Laundromat.

Fig.10 Airport Departure Lounge

The **Team Up island** is a communication game that needs to be played with four users. This game is not written for any particular language, it can be played in any language because it can be played just by communication, in text or voice chat, within the group of players. Thus it has no manual or any other explanation. This is done because the players have to find out what they have to do by themselves. If there are players from different countries they have to agree on a language and communicate to find out what they have to do.



Fig. 11 The team up island

Gates will open when all players stand on so called pressure plates, the plates will light up and send info to the gate. There are five different gates in this game and every gate has a slightly different way of working, which the users can easily figure out. There are also some traps and pitfalls to work around. When all four are on the other side, the game

is finished. This should all be done within 30-50 minutes.

All clicks, crossing thresholds, and the text chat communication are logged including the username and time and will be sent to the database.



Fig.12 The team up game, view from the other side of the gate

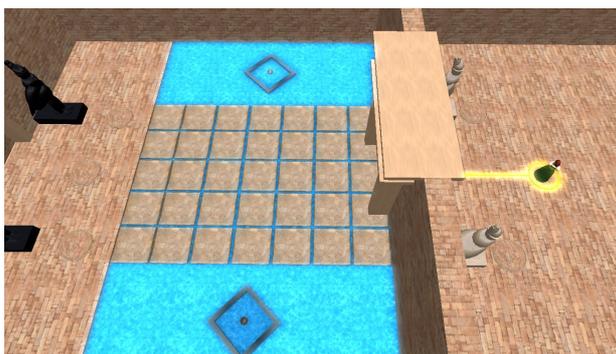


Fig.13 The team up game, pressure plates

3.3 Developments of tutorial

Project partners created instruction manuals and a [playlist of videos on Youtube](#) on how to set up an account, installing the Firestorm viewer and how to connect to the GUINEVERE Virtual World.

4. GUINEVERE Second Life development

4.1 Environment setup

The online virtual world Second Life is developed and owned by the San Francisco-based firm Linden Lab and launched in 2003. Second Life looks similar to massively multiplayer online role-playing games; but it is not a game. The virtual world can be accessed freely via Linden Lab's own client programs or via alternative third-party viewers like the [Firestorm viewer](#) we use in the GUINEVERE project.

Second Life users create virtual representations of themselves, called avatars, and are able to interact with places, objects and other avatars. They can explore the world (known as the grid), meet other residents, socialize, participate in both individual and group activities, build, create, shop, and trade virtual property and services with one another. Second Life is intended for people aged 16 and over.

The GUINEVERE project information and games can be found in a virtual building of the EduNation island, co-owned by one of the members of our GUINEVERE project team.



Fig.14 GUINEVERE building, EduNation

island

4.2 Developments of games

IUC has performed a teacher design team on 25th of October 2018, where 13 participants and 2 teacher trainers from the GUINEVERE Project attended. 4 English teachers, 7 Pre-service FLL teacher and 2 Computer Education and Instructional Technologies Pre-service teachers were present at the day of the meeting.



During the TDT, the participants were presented with the GUINEVERE Project ideas and development of the project and then they were put into 2 groups and were given time to generate their own ideas on what kind of games they could make use of in their classrooms with their students. They worked on ideas, design and language focus, thus came out with suggestions for GUINEVERE Games on Second Life. The suggestions included many aspects like interacting with environment in 3D VW, interacting with objects, solving riddles and puzzles as well as gamifying the content. Other aspects were creating leaderboards and teamwork to play.

In this respect, the Games for **GUINEVERE Project** on Second Life have been created by IUC. The Game that the IUC designed based on the suggestions was “*Mystery House*” game. In this game the players need to solve the riddles and find the name of

the hidden object to use it as a password to open the doors. Then after going into a room and solve the riddle there the players need to remember the passwords which in this case is “an object in the room”. Thus the players need to recycle vocabulary and use the words in order to enter and escape from the rooms. The language of the game can be changed from English into Turkish and the game can be played for recycling Turkish vocabulary.

In order to get started in Second Life, access environments and playing the different games, the user needs to:

1) Go to [Second Life](#) click on JOIN FREE.
Create an account and choose your avatar.

2) Download and install the viewer. There is a Second Life Viewer available for download however, we recommend a third party viewer, the [Firestorm viewer](#).

Here the user needs to put in his/her username and password.

It is important to specify that Firestorm allows the user to enter any OpenSim installation.

3) GUINEVERE games park is on [EduNation](#)

To enter the island, a whitelisting is necessary. Please communicate your SL username to the GUINEVERE project team members.

As mentioned in the paragraph 4.1, in Second Life there is an area designated for language education in virtual worlds, called EduNation. EduNation is a group of islands that hosts residents and a language school. On EduNation, an area has been set aside to display information on model games for field testing. Various games have been here created including board games, memory games, opinion games, idioms games as shown in the figures below.



Fig.15 Some sample board games including games pieces



Fig.16 Memory game



Fig.17 Opinions game



Fig.18 Idioms games

On EduNation there is also a sandbox area where users can practice their building skills. In the centre of the sandbox is a holodeck within which teachers and learners can find a number of various scenes for roleplay.

NOTE: Users have to check their access rights with the EduNation manager in order to be able to use these features.

Below there is a list of roleplay scenarios available in the holodeck that can be also useful for making **classroom Machinima**.

Simulations and Roleplays:

- 1- Seasonal:
- Snow globe
- Winter wonderland
- Graveyard (Halloween)
- Haunted House (Halloween)

2- Nature:

Mystic Forest
Old mill
Snow Cave
Barnyard
Forest Seating
Island Retreat
Aquarium
Aquarium Life

3- Education:

Marketplace
Movie Theatre
Oval Office
Garage
Hotel Lobby
Library
Airport
Bus station
Daras Diner

4- Just fun:

Island Retreat
Swimming Pool
Art Deco Lounge
Blue Cat Jass
Dining Room
Arcade Hall

5- SciFi/ Fantasy:

Galaxy Class
Moonbase
Borg Cube
Egyptian Tomb

4- Housing:

Library Room
Treehouse
Forest Seating
Hideaway
Hunters Retreat
CALICO Tower
Castle Renoir
Airport

5- Meeting Places:

Mega Temple
Forest Renoir
Lecture Room

Conference Room

6- Other:

Chitty Chitty Bang Oldtimer
Club Casablanca
Camping Trip
Boutique Renoir
A maze
Asylum
Pyramid
Bessie Roads Oldtimer
Living Room
Mad Scientist
Howl's Moving Castle
Jedi Council
Gilligan's Island
Green Screen
Skybuild
SkyTemple Seating
Space Station
Pantheon
Sample Room
Sealab
Mandragola Castle
Mega Temple
My living room
Workshop workstations

On the other side of the GUINEVERE games park is a holodeck belonging to one of the project partners which holds a mystery house and a mathematics game. The Mystery House game is a quest whereby the learners have to unlock doors using a password. The clues for the passwords are hidden in notecards and tips on where to find the notecard are provided by the NPC (non-playing characters) or 3D avatars placed in each room.

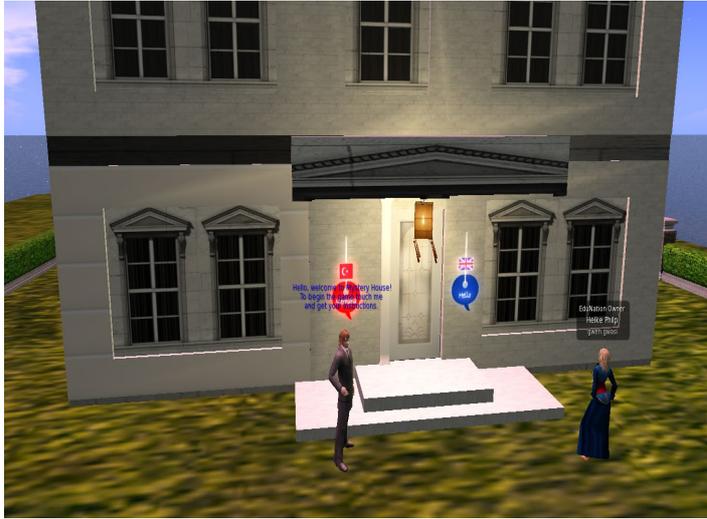


Fig. 19 Mystery house

4.3 Developments of tutorial

Instruction manuals have been created in the form of videos. Please see links below:

<https://www.youtube.com/watch?v=Fb3kvyFs2h8>,

<https://www.youtube.com/watch?v=ng0CEpM1ytg>

5. GUINEVERE Minecraft development

5.1 Environment setup

The GUINEVERE Minecraft (java edition) environment is placed on a rented Ubuntu 16.04 server (Linux) situated in Roubaix (FR) at *SoYouStart*, a sub company of *OVH.com*. It has a Intel W3520 processor, 16GB memory and 4x2000 GB SATA drives. On this same server we run the OpenSimulator virtual world (see paragraph 3).

At this moment we run a special version of Minecraft Java version called Spigot (version 1.12.2) because this version allows extra plugins to run in the environment. These plugins are very useful for our project. Some of the essential plugins we use are: Essentials, SetHome, Spawntp, HolographicDisplays, GroupManager, PermissionsEx, WorldEdit and WorldGuard.

In order to set up a working connection to the GUINEVERE Minecraft server, please follow these easy steps available [here](#).

5.2 Developments of games

In the GUINEVERE Minecraft server there are different areas (the spaceship area, the playground area, the Jungle Gym area, the railway area etc...) where many games have been designed for teachers and learners to use and integrate in the teaching and learning practice. They have been developed in accordance to the different language(s) proficiency levels, language skills and digital competences. They can all be easily adapted to meet specific time, collaboration and curricula needs.

There are several quests, scavengers and treasure hunts ready for teachers to try out in Minecraft and these are being developed regularly. Some examples of these games include but are not limited to: expedition quests, a spaceship that has crashed, exploring the local area, taming and riding horses, create a photo album.



Fig. 20 The MC ship on the GUINEVERE area

The Playground

In order to access the playground area (fig. 16), a teleport point can be found at the edge of the shelter area, the maze is there too. There is a stone circle and pyramid to explore as well as a huge stable and fields full of horses to ride. The area is very well developed and there is plenty to find nearby. Photographs can be taken in this area showing, for example, the orchestra, the stone circle and part of the railway system and all can be kept in a journal (using Google Slides or similar).



Fig. 21 The MC playground



Fig. 22 View of the GUINEVERE environment with the railway system

There are also several 3D mazes, Atlantis, the jungle gym and many of these environments are linked by a railway. Players can build a house, park, adventure item and complete building quests set by their teacher anywhere.

The Jungle Gym

The jungle gym is a very rich environment that consists of different parts including hidden caves, smugglers cave leading to boats waiting on the river etc... Prizes can be found in the different areas.



Fig.23 The Jungle gym

The jungle gym as well as the other environments are linked by a railway or the tube system.



Fig. 24 The railway

Activities for young or low-level learners

Various activities can be completed using the target language, these include:

- 1) The maze - practice directions giving. Children may work in pairs, one on top guiding the person inside the maze - giving directions.



Fig. 25 The maze

- 2) Build and label faces to represent family members
- 3) Go down the mine to practice the days of the week (careful, as there are zombies and spiders!). Players need to make sure they right click the button to collect a few of the torches before they get into the dark!
- 4) Practice the months of the year in a trench and right click the button for a secret gift
- 5) Labelling up the parts of the body.
- 6) Labelling up rooms and furniture in a house
- 7) Building a house
- 8) Labelling animals in a barn
- 9) Building a barn and finding the requested animals to add to the barn
- 10) A scavenger hunt where children are given a list of sentences in the target language to follow
- 11) A treasure hunt where they have to find the words to make sentences.

5.3 Developments of tutorial

Several tutorials have been developed by the GUINEVERE team to getting started in Minecraft, to making tools and survive the first night in survival mode and to build and

complete quests in creative and survival modes. In addition, there is an orientation place for teachers built in Minecraft. /warp navtrain1.



Fig. 26 Orientation area

In the following paragraphs there are a set of training tutorials in the form of videos and written guides (in English) divided in getting started, survival mode and creative and survival mode.

5.3.1 Getting Started

1. To set your sound, follow this [video tutorial](#) or this [Google Doc version](#)
2. To log in to the GUINEVERE server, follow this [video tutorial](#) or this [Google Doc version](#)
3. To move around in Minecraft, follow this [video tutorial](#) or this [Google Doc version](#)
4. To use your Inventory, follow this [video tutorial](#) or this [Google Doc version](#)

5.3.2 Survival Mode

1. Surviving the first night, follow this [video tutorial](#)
2. Making Wooden Tools, follow this [video tutorial](#) or this [Google Docs version](#)
3. Making Stone Tools, follow this [video tutorial](#) or this [Google Docs version](#)
4. Eating to restore health, follow this [video tutorial](#)

5. Making night pass quickly, follow this [video tutorial](#) or this [Google Docs version](#)
6. Growing food, follow this [video tutorial](#) or this [Google Docs version](#)
7. Making Light, follow this [video tutorial](#) or this [Google Docs version](#)
8. Fishing for food and extra resources (also experience points), follow [this video tutorial](#) or this [Google docs version](#)
9. Mining for Iron and Coal, follow this [video tutorial](#)
10. Using a furnace to make iron ingots, follow this [video tutorial](#)
11. Making tools and armour from iron, follow this [video tutorial](#)

5.3.3 Creative and Survival Modes

1. Building 1, follow this [video tutorial](#)
2. Building 2, follow this [video tutorial](#) or this [Google Docs version](#)
3. Learning to ride a horse, follow this [video tutorial](#) or this [Google Doc version](#)
4. Playing the Alien Spaceship Quest part 1, follow this [video tutorial](#)
5. Playing the Alien Spaceship Quest parts 2 & 3, follow this [video tutorial](#)
6. Cooking food, follow this [Google Docs version](#)

6. Conclusions

This report offers an outline of the virtual worlds chosen for the GUINEVERE project (OpenSimulator, Second Life and Minecraft), the GUINEVERE environments created within each virtual world as well as the various games designed for field testing. The document starts with a description of each virtual world, looking at their history and main features. It follows a section dedicated to OpenSimulator where detailed instructions on how to access the platform are provided together with a description of the different areas of the GUINEVERE OpenSimulator. In each area, different games have been designed and here explained in detail. The second section is dedicated to Second Life and the GUINEVERE environment set up on EduNation. Instructions on

how to download, access and use a free version of Second Life is provided and a list of the different games and role-plays available offered. The final section is dedicated to Minecraft. As for the other virtual worlds, instructions are provided on how to download and access the game. Various environments have been created in Minecraft (i.e. the Playground area, the Jungle gym, the ship etc...) and a selection of different games are available for playing.

It is important to highlight that each section of the report offers a list of material and tutorials that can be used to guide the player access and use of the different environments and activities within them.

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