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IO11: Field Test Events

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EU FUNDED GUINEVERE PROJECT (2017-2019)

IO Number: O11

IO Name: Field Test Events

Description:

- The report will document the logistics of each field test: date, time, number of students etc. These data will be correlated by the IO leader to produce an overall profile of the tests that have been carried out.
- As well as a questionnaire, or in some instances in place of a questionnaire, focus group discussions will be held as part of the field test event. The purpose of the discussions will be to gain a deeper insight into the response to the games in order to supplement the information gained through the questionnaires. These will be written up as summary reports.
- The output from this IO will be a series of games in different styles and formats. Before determining how these can be incorporated into a teacher training package, it is essential to find out which style and format of games suit different target populations of learners. O11 takes this output and test it in situ. The aim is to find out through surveys and focus group discussions how successful each type is. Success here is judged by the positive feedback on the style and content of each field tested product by the target groups. The games provided will be tested with learner groups from primary and secondary schools provided by the partners.
- The testing will also take place in groups of learners with special educational needs and language classes.
- Each partner involved in the field testing will choose a suitable group of 10 - 15 students for testing.
- Games can be used as a suitable part of a language course or they can constitute a whole course depending on the individual case in the testing partner organization.
- An assessment based on the criteria developed in IO 05 will focus on the following aspects:
 - - progress of language learners
 - - improved intercultural competence
 - - suitability for teaching
- Common criteria for assessments, both learning results and pedagogical aspects, will also be decided in IO 05 and 06. The assessment will consist of students' evaluation of learning by the means of games, teachers evaluation of students' progress and teachers' evaluation of the suitability of games for language teaching.
- The results of the above mentioned assessments will be collected by the partners into a common summary report and analysed. The results of field-testing will also be summarized in the teacher-training material.

Dissemination Level: Public

Signed off by:

Date Signed off:

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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	<u>G</u> ames <u>U</u> sed <u>I</u> n <u>E</u> ngaging <u>V</u> irtual <u>E</u> nvironments for <u>R</u> eal-time <u>l</u> anguage <u>E</u> ducation
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	Open Simulator
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

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1. Introduction

2. Ethical Consideration

Any research that involves human participants raises important and critical ethical considerations. Some of these considerations may appear as a matter of pure courtesy or common sense while others reveal quite complex scenarios. Firstly, it is important to specify what we mean by ethics. Ethics is a philosophical term derived from the Greek word *ethos* which means character or custom. As a consequence, research ethics refers to those moral principles that guide research projects (Economic and Social Research Council, 2004). Homan (1991:1) defines it as the ‘science of morality’ meaning that research has to be conducted in a responsible and morally defensible way. It has also been argued that, in a time of globalization, there is an urge for an adaptation of the existing

Western framework to diverse contexts, having very different ethical values (Ntseane, 2009) for those contexts.

There are three main objectives in research ethics. The first is the protection of human participants, avoiding any type of “harm” (from physical to mental and emotional harm). The second objective is to ensure that the research is conducted in a way that allows participants to have sufficient and accessible information about the project so they can make an informed decision on taking part or not. Finally, the third objective is respecting the privacy of participants and avoiding deception (Gregory 2003; Gray 2013). The following paragraphs will examine each of these concerns in relation to this study.

2.1 Protection of participants

Avoiding harm is the first principle that needs to be addressed when conducting research. Research can be considered harmful when it causes anxiety, stress, embarrassment or when it produces general negative emotional reactions (Gregory 2003; Gray 2013). Sudman (1998) states that avoiding harm could include simple acts such as scheduling interviews to avoid disruption to the participants. Therefore, ethically acceptable research should obey the principle of respect for persons. This means that a study has to be well designed and organized in order to achieve meaningful results in an appropriate way. It is important to highlight that even if a research project may not cause any injury, the fact that the results may be inadequate is nonetheless disrespectful. Similarly, a study’s research design should not represent a burden to any participant unless there are some compensating gains (Sales and Folkman 2000; Simons and Usher 2000). According to Gray (2013), researchers should go beyond avoiding harm to participants aiming instead for positive and meaningful benefits. Among the various potential benefits there is the vital element of adding valuable knowledge to the social and educational human class.

Participants in this study were always treated with respect and politeness. The project partners were constantly focused on ensuring that respondents were participating voluntarily with the choice to withdraw at any time. Collection, storage and possible publication of the data were explained in great depth ensuring anonymity in all the phases.

2.2 Informed consent

Informed consent is a principle through which respondents are provided with precise and clear information about the research project; this allows them to make an informed decision about participating or not in the study ([Oliver 2010](#); [Gray 2013](#)). As Sudman (1998) indicates, the amount of information given to participants should reflect the degree of risk involved in the study. Details that should be included in the informed consent are: the purpose of the study; how the study will be carried out; the expected duration; any specific risks or benefits; the type of information required by the researcher and finally, who will have access to the data gathered ([Ntseane 2009](#)). Informed consent is particularly important for groups that are considered “vulnerable” such as children, people with special educational needs, and refugees ([Gray 2013](#)). Having good and clear informed consent forces researchers to reflect on and clarify the purpose of their research. In addition, it helps research participants to have more confidence in the research and consequently be more open in their responses. Finally, having more confidence in the research generally results in higher participation rates.

It is essential that the information given to the participants is clear, simple and succinct so that they can be easily understood. Participants were provided with an official information sheet which outlined:

- The title and the purpose of the study
- A description of the research method and the role of the participants
- The type of information that will be collected and how confidentiality, anonymity and privacy will be maintained
- How the data will be securely stored and used after collection

Voluntary written informed consent was obtained from the participants offering a copy for them to keep. In the consent form participants confirmed to agree to the following:

- the nature of the study and their role as participants
- how the collected data will be used
- participation implies audio and video-recording
- the possibility to withdraw participation from the study at anytime

- participants are entitled to full confidentiality
- there is no obligation to participate in the study

It is important to specify that parents signed the allocated consent form for the students' participation. Participants in this study were not placed under any pressure or coercion to take part in the project. All respondents have been treated with respect and dignity.

2.3 Respect of privacy

The right to privacy is one of the basic principles of living in a democratic society. In a research study this means that participants can control the access a researcher has into their personal information. Furthermore, it means that respondents must give their informed consent in giving information before and during the data collection phase, keeping always in mind that their participation is absolutely voluntary (Sales and Folkman 2000; Gray 2013).

Issues of anonymity and confidentiality refer to the de-identification of participants so that their real names are not used. In this sense, it is essential that researchers obtain informed consent, remove identifiers, use codes and permanently delete data upon request. These principles are strongly linked to data collection and management. Specifically, they look at how the data are stored and what kind of controls are in place to prevent any external access (Ntseane 2009; Gray 2013). This research has outlined the respect for privacy and anonymity in the informed consent carrying these principles throughout the whole process and afterwards. Deception was always avoided, presenting the research for what it was in reality.

Both the elicited paper-based and digital data were securely stored locally in spaces specifically allocated by partners. Electronic files were password-protected and antivirus software installed on the computer to ensure information technology security. Back-ups of the data were performed on a regular basis.

3. GUINEVERE Minecraft Field Testing

The GUINEVERE Minecraft Field Testing was conducted in different schools located in the United Kingdom and Italy. The school participating in the UK field testing was the same primary school that took part in the pilot testing events (see IO7 report). The school organized a "French through Minecraft" club for children ranging from 3 to 6 and 7 to 11 years of age. The aim of the

club was to introduce specific topics each week and practice the target language while completing activities in Minecraft. The participants had 1 computer available each (11 Minecraft licenses were distributed at the beginning of the pilot testing). The lessons were recorded by the GUINEVERE team and stored in a password protected space. The students participating (10-15, the number varied within the sessions) were learning French language at beginner level (A1- A2 CEFR). The topics covered in the sessions included: learn key vocabulary for months of the years, days of the week and numbers; recognize a variety of French vocabulary in order to solve puzzles; write sentences to describe family members; use vocabulary relating to different jobs and professions; use knowledge of vocabulary to take part in a competition.

During the sessions, together with the participating children, there was one teacher/facilitator (computing manager) from the school working in the room with the children and 2-3 adults from the GUINEVERE team supporting in world. It is important to say that the teacher/facilitator guiding the students in the school was not a French teacher but together with all the adult participants was using the target language (at an elementary level) to teach and reinforce vocabulary related to the topics covered during the sessions. Each session was carefully organized and outlined in lesson plan documents (an example of the first 5 sessions can be viewed [here](#)) and participants were instructed by the teacher about the session aims before entering Minecraft. During the sessions, children availed of handouts related to the topic introduced and, at the end of each session, a booklet was created and shared by a GUINEVERE team member outlining what the children have achieved in each session. The GUINEVERE team also set Minecraft in creative mode in order to prevent the students from spawning (i.e. creating mobs) or destroying things.

The sessions started in January 2019 and finished in March 2019.

The Italian school that took part in the GUINEVERE Minecraft field testing was a primary school and, in this case, students were learning English. More details on this field testing will be given in the following paragraphs.

3.1 GUINEVERE UK Primary School: Timeline and Topics

Sessions	Topics

Day 1: 15/01/2019	Months, days and numbers: Key vocabulary for months of the year, days of the week and numbers
Day 2: 22/01/2019	Continuation of the previous session
Day 3: 28/01/2019	Vocabulary reinforcement: Recognize a variety of French vocabulary/sentences in order to do a treasure hunt
Day 4: 5/02/2019	Birthdays: Use vocabulary in relation to birthdays and family
Day 5: 12/02/2019	Jobs: Use vocabulary in relation to different jobs and professions
Day 6: 26/02/2019	Theme Park: working in groups creating and labelling buildings
Day 7: 05/03/2019	Theme Park: working in groups creating and labelling buildings
Day 8: 12/03/2019	Theme Park: working in groups creating and labelling buildings
Day 9: 19/03/2019	Theme Park: working in groups creating and labelling buildings
Day 10: 26/03/2019	Theme Park: working in groups creating and labelling buildings

Table 1: Sessions and Participants UK Primary School

3.2 GUINEVERE UK Primary School: Sessions

Day 1: 15/01/2019

During this first session, there were 8 children participating (divided into 3 groups) together with the teacher guiding them in classroom and 2 project members guiding and supporting them in world. The outline of the session was presented in the lesson plan document available [here](#). Participants successfully accessed the Minecraft Guinevere Server (set in creative mode) and

moved to the mazes area for the practical activities. Before the online session started, the teacher discussed expectations and access of Minecraft on the GUINEVERE server with the children. The topic and the activities to be conducted in world were also presented and misconceptions were clarified. The teacher explained that during this session, children had to navigate their way through the two mazes set out with signs posts in (fig.1). Each maze had a different theme (months of the year, days of the week and numbers). At each turn in the maze, the children were presented with options and had to choose the correct one in order to exit the maze successfully. It is important to specify that participants first worked on a maze with the months set in English before they moved to the one set up in French. An extension of this activity was suggested by the teacher and the GUINEVERE team that focused on allowing children to create their own mazes with different sequential themes (i.e. days of the week, numbers). In this way, participants could benefit from working together to label the maze in the correct order (having one child guiding outside and another one inside the maze). This activity strongly drew on collaboration and problem solving skills reinforcing French language.

They started working collaboratively approaching both the English and the French mazes. As the session proceeded, two groups of children successfully mapped out the mazes respectively with lights and blocks added over the mazes themselves. An excerpt of this activity can be viewed [here](#). The third group did not engage with this activity. The language used for the interaction was only English however, participants showed a high level of collaboration engaging with the proposed activity very proactively. The activity was not completed within this first session hence a continuation was proposed for the following week.

Day 2: 22/01/2019

During the second day of the field testing event, children, according to the lesson plan (see [here](#)), were supposed to be taking part in a treasure hunt however, as it will be outlined below, participants continued to work on their tasks in the mazes which was not finished yet. In this sessions there were 7 children participating (divided into 3 groups) as well as the teacher guiding them in the classroom and 3 GUINEVERE project members supporting them in world. Children accessed the Minecraft GUINEVERE server and were put by one of the project members in creative mode. Unfortunately, an issue arose for the first half of the session as Discord (the voice app used to communicate in Minecraft) was not working properly in the school so that it was not possible to

hear the children communicating. They continued their work in the mazes finishing to add limestone blocks and lights that would indicate the right pathway to exit the mazes (fig. 3 below).



Fig. 3 Maze mapped out with limestone blocks

While mapping out the mazes, children were adding signposts indicating the days of the week and numbers (fig. 4). Both the days and numbers, written in French and placed them in the correct order to allow a player to exit successfully from the maze. It is important to note that participants spent a lot of time with this task as they easily got distracted and sometimes preferred focusing on playing and building in and around the mazes (adding walls and doors to their entrance). This [excerpt](#) shows the signposts indicating the sequence of numbers placed successfully by a group of children. During the second part of the session, the audio was working, and it was possible to hear the children communicating however, the target language was not used in the spoken interaction throughout the session but only in its writing form through the signposts created.

As for the field testing, a GUINEVERE team member created a booklet with all the details of the session so that students could view it and share it. This is the making mazes [booklet](#).



Fig. 4 Sequence of days in the maze

Day 3: 28/01/2019

In this third session, together with the teacher available in the room, there were 2 GUINEVERE members supporting in world and 7 children participating. As for the previous sessions, participants were playing in creative mode. Before starting the Minecraft session, participants were briefed by the teacher about the aims and objectives of the session. The teacher distributed a handout with details related to the activity and a list of French words and short sentences to guide the children to the completion of the task (the handout can be viewed [here](#)). During this third session, students took part in a treasure hunt, where they had to follow clues to new locations leading to a treasure. The GUINEVERE team designed the treasure hunt creating chatbots (figures that will give instructions and clues in French once the players step onto a pressure plate next to them) and placing them in different key areas. Once the instructions given by the chatbots were followed and the clues solved, the player received the treasure. Students logged in without any problem and started immediately the treasure hunt. They followed individually the indications provided by the chatbots and found themselves in the different environments build in the GUINEVERE server. Firstly, they visited the farm where the treasure hunt started, then they all went to the main house

where a chatbot was placed to give further indications in French to move to the next environment (see fig. 5).



Fig. 5 Chatbot in the main house

As shown in fig. 6 below, the following environment reached by the participants was the ship. 2 participants arrived here very quickly engaging with the chatbot placed on the higher level of the ship.



Fig. 6 Chatbot on the ship giving instructions

Following the instructions given by the chatbot, children arrived at another environment, the crazy house. A chatbot was placed on the blue rooftop of the house. Once the clue was solved, participants were ready to go to a final location where they discovered the treasure and their prize: a treasure chest full of fireworks. This [excerpt](#) shows children playing with fireworks once the treasure hunt was successfully completed. At the end of the session, all children moved to the location where the treasure chests were placed, got their fireworks and played with them. The GUINEVERE team member set the time in Minecraft so that it was dark, and the fireworks could be seen very well, as shown in fig. 7.



Fig. 7 Participants playing with fireworks

Children were very delighted about the prizes received and spent several minutes playing all together with the fireworks. It is important to note that there was no oral interaction in the target language aside the greetings at the start and end of the session encouraged by the GUINEVERE team.

As for the pilot testing events, a GUINEVERE team member created a booklet with all the details and tasks completed during the session so that students could viewed it and share it with their family and friends. The treasure hunt booklet can be viewed [here](#).

During this fourth session students focused on creating birthday cakes labelling them with details about themselves and their family members. Participants had to build giant birthday cakes in the allocated spaces next to the family figures they had previously created during the pilot testing events. Once the cakes were built, students had to add to them words or short sentences to them indicating information such as:

- Participants' birthdays
- The number of brothers and sisters participants had
- The age of family members
- The jobs of their parents

A handout was circulated before the start of the session with vocabulary and short sentences related to the topic that participants could use as a reference. The document can be viewed [here](#).

Together with the teacher in classroom, there were 2 GUINEVERE members and 6 children. As for the other sessions, the game was set in creative mode.

Once the children logged in, they started immediately to build cakes working individually.

4 of the participants built cakes that resembled the Minecraft model cake enriching them with complex spaces and tools (such as beacons on top of the cake or developed houses inside the cake itself) as shown in figures 8 and 9.



Fig. 8 Cake with beacon



Fig. 9 A participant building a cake

Once the cakes were built, participants added labels where details of themselves and their family members were written in the target language.

It is important to note that some of the cakes were equipped with very few labels and that children were reminded several times to add signposts as part of their activity. Participants were very much focused on building rather than adding signposts. As a consequence it was decided that, during the following session, students should first start writing the signposts before continuing to build so that the target language could be practiced.

Day 5: 05/02/2019

During this fifth session, participants were guided to explore the topic area related to jobs and professions. Specifically, they had to reflect on what kind of job they may be interested to do in the future discussing it in class with the other students and teacher before the start of the Minecraft session. Once the topic was discussed, students would move onto the Minecraft server and create something (may that be figures representing specific professions and/or tools specific of a certain profession) that related to the job/profession they were interested in. Together with the teacher

available in the room, there were 2 GUINEVERE members supporting in world and 6 children. Participants were in creative mode.

Children logged in and slowly moved to the area that has been allocated for the completion of their task. Firstly, as suggested by the teacher and the GUINEVERE members, they wrote signpost in French indicating the jobs they would like to do when older. Students created signposts showing the following jobs: “youtuber”, “une astronaute” , “un mécanicien”, “un infirmier” together with the accompanying short sentence “Je veux être” signpost, as can be seen in fig. 8.



Fig. 10 Participant adding signposts and building

Once the signposts were placed, students started to build their figures equipped with the related professional tools. This [excerpt](#) shows the signposts successfully written and placed by one participant and the figure and tools (fig. 13) built for the Youtuber profession.



Fig. 11 Participant building a Youtuber figure

Another participant expressed the desire to become an astronaut and this [excerpt](#) shows the signposts and the figure created.



Fig. 12 Participant building an astronaut



Fig. 13 Participant adding signposts related to the mechanic profession



Fig. 14 Participant building a mechanic

During this session there was no oral interaction in the target language among participants however, as in the previous sessions, children successfully wrote the signposts in French using the handouts for reference. It is interesting to note that participants wrote on their signposts not only single words but full sentences referring to their dream-job. Children really enjoy building as shown throughout the pilot testing and this field testing and often it was found that the time dedicated to French language practice was very limited. For this reason, during this session students started with the signposts writing and then moved into building. As for the other sessions, a GUINEVERE team member created a booklet with all the details of the session and what had been created so that students could view it and share it with family and friends. The jobs and professions booklet can be viewed [here](#).

Day 6: 26/02/2019

Day 6 of the field testing was the start of a series of four sessions dedicated to building in a specific area called the Theme Park. As for the other sessions, students were briefed by the teacher that guided them in class on the aims of this session. During these sessions in the Theme Park, participants had the possibility to build working in small groups adding signposts to the elements created. Together with the teacher available in the room, there were 2 GUINEVERE members supporting in world and 6 children participating. Participants were put, as for the other sessions, in creative mode.

Children logged in and quickly moved to the Theme Park area where had been spaces allocated to them where they could build. Participants were divided into 2 groups and started building 1 structure representing a café respectively. In addition, 1 student worked by herself in another area building another café (the latter was moved by a GUINEVERE member closer to the other two cafes). One group designed a café linked to another building where different toilettes were placed (see fig. 15). This [excerpt](#) shows the participants working collaboratively on building café 1.



Fig. 15 Café 1 in the Theme Park

The second group built in another area a café, with a very different design compared to the first one (fig. 16). This [excerpt](#) presents an overview of the building as well as part of the building process.



Fig. 16 Café 2 in the Theme Park

During this first session in the Theme Park, the target language was only used towards the end of the session for greetings and small talk. English was used throughout the session both in speaking (via discord) and writing (via Minecraft chat). This session shows a high level of team work among

participants as they worked successfully, very naturally with no issues at all in designing and creating their builds. A GUINEVERE team member created a booklet with all the details of the sessions related to the Theme Park and what has been created in this area so that students can viewed it and share it with family and friends. The Theme Park booklet can be viewed [here](#).

Day 7: 05/03/2019

This is the second session dedicated to the activities in the Theme Park. Together with the teacher available in the room, there were 1 GUINEVERE member supporting in world and 6 children participating. Participants were put, as for the other sessions, in creative mode. Children, divided in three groups, continued to work on their café. This session focused entirely on building allowing the students to freely add and modify their constructions. Unfortunately, the recording of this session presented some issues with the video however, the audio was working properly. Aside from the figure below that shows the Theme Park and the different constructions built by the participants, no excerpts or other images are available to document this session.



Fig. 17 Buildings in the Theme Park

Students continued their work on their cat shape café (café 2), the big café equipped with toilets and a water slide (café 1) and a cake stand with seats and tables, building quite complex and creative

constructions. They showed a great deal of enthusiasm throughout the session collaborating and exchanging ideas among themselves on which tools/spaces to add and or modify. One of the participants said that he went online searching for specific commands to be used on Minecraft confirming that the activities carried out in the school sessions continued somehow outside the school time. The use of the target language was limited only to the greetings at the end of the session.

Day 8: 12/03/2019

This is the third session dedicated to the activities in the theme park.

Together with the teacher available in the room, there were 1 GUINEVERE member supporting in world and 5 children participating. Participants were put, as for the other sessions, in creative mode. Children, divided in three groups, continued to work on their buildings. This session, as for the previous one, focused entirely on building allowing the students to add and modify existing constructions.

The session started with the greetings in French typed in the chatbox by all the participants. Students quickly moved to their buildings continuing to add very creative and complex elements to the constructions: Café 1 was enriched with a water slide that run from the roof to the ground (fig. 18), Café 2 became a cat shape café (fig. 19) and The Cake Stand was equipped with a map showing the area and lots of goodies to eat (fig. 20).



Fig. 18 Water slide in Café 1



Fig. 19 Café 2 shaped like a cat



Fig. 20 Cake Stand

In Café 2, a GUINEVERE member had placed a precious stone that could be used for trade under the till. One of the children, guided by the GUINEVERE team member, discover the treasure and reacted very enthusiastically to it.

Labels in French were added by the students to indicate the different sections of the buildings, as shown in fig. 21.



Fig. 21 Cake stand labels

Other small buildings had been created by the students around the main buildings during this session including a cookies house, a fish pond and swings.

Day 9: 19/03/2019

This is the fourth and last session dedicated to the activities in the Theme Park. Together with the teacher available in the room, there were 1 GUINEVERE member supporting in world and 6 children participating. Participants were put, as for the other sessions, in creative mode. The GUINEVERE team member guided students into the exploration of other areas of the Theme Park such as the Bat Cave and the Railway area asking them to contribute to finishing the construction of such spaces. This [excerpt](#) shows one of the participants working on the rail that would link different buildings. As part of this session, students created some animals that would inhabit the jungle area. Among the animals created were parrots and tigers. During the session, additional structures that were linking the different areas were created by the students such as stairs in the jungle area and viewpoints. During the final minutes of the session, one of the students worked on the construction of a giant parrot that was placed in the sky above the jungle (fig. 22)



Fig. 22 Giant parrot

The target language was not used aside from the greeting parts at the end of the session.

3.3 GUINEVERE Italian Primary School: Timeline and Topics

Together with the UK primary school, Minecraft was used in two Italian primary schools as a platform to learn and practice English. The two schools have been named respectively School A and School B. The field testing events that took place in the two schools started in February 2019 and finished in April 2019 and each school allocated 40 minutes per group of students every week to the use and integration of Minecraft into the English course curriculum. The total number of participating students for each school was 20 and they were 8 years of age and had a pre A1 level of CEFR of English language. In both schools, during each session, two teachers were available in class to guide the students and 2-3 members of the GUINEVERE team were guiding them in world. Because the limited number of devices and in order to allow all the students to use Minecraft, the participants were divided into 2 groups: while one group was working on Minecraft, the other was observing the work of their peers in world on the interactive whiteboard commenting and interacting with the English teacher; once the second group accessed the platform, they continued the work of the first group. A total of 6 Minecraft licences were given to the schools and students were working in pairs availing of one computer per pair. In School A the sessions, outlined in advance in terms of topics to be covered and tasks to be completed, focused on learning colours,

prepositions, vocabulary related to the house and “Wh” questions (Where is it? What is it? What colour is it?). The aim of the Minecraft experience was to create a virtual museum on the different types of houses and buildings where students added labels indicating the different environments and elements. In School B the focus of the Minecraft experience was working on “Il progetto sulle emozioni”, “The feelings project” where students used the platform to approach and reflect upon different tales (such as “Hansel and Gretel”, “Three Little Pigs” and “Little Red Riding Hood”) building different environments related to the stories and describing them in the target language through the guidance and support of their teachers. A booklet with details of the sessions for both School A and School B has been created by a GUINEVERE member and can be seen [here](#). The table available in the paragraph below outlines the calendar and the topics covered in School A and School B sessions.

3.4 GUINEVERE Italian Primary School: Sessions

Sessions	Topics
Session 1 (School A): 12/02/2019	Vocabulary related to colours, “Wh” questions in relation to colours and specific answer “It is...”
Session 2 (School A): 19/02/2019	Participants introducing themselves in writing and speaking. Description of the different sections of the house.
Session 3 (School A): 12/03/2019	Participants introducing themselves in writing and speaking. Description of the different sections of the house.
Session 4 (School A): 19/03/2019	Participants introducing themselves in writing and speaking. Description of the different sections of the house.
Session 1 (School B): 18/02/2019	Participants introducing themselves in writing and speaking. Building the witch house from Hansel and Gretel: naming in the TL language the material used
Session 2 (School B): 21/02/2019	Participants build the house of the grandmother of Little Red Riding Hood
Session 3 (School B): 25/02/2019	Participants continue to build houses and to interact in the TL through greetings and answering/asking questions related to their activities

Session 4 (School B): 04/03/2019	Participant feed animals, continue to build houses and to interact in the TL through greetings and answering/asking questions related to their activities
Session 5 (School B): 11/03/2019	Participants add furniture and related labels to the houses built
Session 6 (School B): 13/03/2019	The animals: vocabulary related to animals and stables
Session 7 (School B): 14/03/2019	The house: vocabulary related to the hose and furniture
Session 8 (School B): 21/03/2019	The house: vocabulary related to the house and furniture
Session 9 (School B): 25/03/2019	The house: vocabulary related to the house and furniture

Table 2: Sessions and Topics of Italian Primary Schools (School A and School B)

Session 1 (School A): 12/02/2019

In the first session students worked in pairs using one computer per pair. The total number of students participating in this session was 14. Together with the students, there were 2 teachers available in the classroom and 2 GUINEVERE team members available in-world. The teachers were not English language teachers however, they had knowledge of the target language and they could guide the students in using it successfully. This session focused on learning and practicing the vocabulary related to colours and “Wh” questions specifically “What colour is this?” and the related answer “It is...” already introduced in class. This was done through the construction of flower beds together with benches and lights that students would describe to their teachers and the GUINEVERE members using the vocabulary and sentences learnt. In order to complete their building activities, participants had an allocated space called “Italia” (fig. 25). Once logged in, students were put in creative mode. All the instructions were given in Italian by the teachers.



Fig. 23 Space allocated for building

Once the participants accessed the platform, they used the English language both in the chat box and through Discord. Some of the students introduced themselves in English (both in writing, and speaking) and answered questions related to colours asked by their teachers in-world and by the GUINEVERE team in world. Participants, working in groups, started to build flower beds and a fishing pond.

In the first part of the session there were no major issues with Discord however, in the second part, more issues were experienced (in terms of audio and accessing the platform); the Internet connection was in fact disrupted.

Session 2 (School A): 19/02/2019

During the second session there were no issues with accessing Minecraft and Discord. The total number of students was 14. 2 teachers were available in the classroom and 2 GUINEVERE members were available in-world. The students logged in and teleported to the building area. They were in creative mode. Participants continued their work, focusing on building houses using blocks of wood, stones, ceramics and bricks that they would describe to their teachers and GUINEVERE members repeating the key words in English suggested by the teachers.

One of the GUINEVERE team members interacted with the students asking about their buildings and if they were enjoying the activities in Minecraft. The students answered mainly in Italian explaining what kind of materials they used to build their houses and what they had available in their inventory. They added that they were enjoying the Minecraft experience very much.

Throughout the session, students, guided by their teachers, introduced themselves in English using Discord (speaking) but also writing their name in the chat box. One of the teachers in class expressed that the project was of great interest for the school and many of the other teachers wanted to take part on a voluntary basis as they considered it to be extremely beneficial for the different subjects.

Session 3 (School A): 12/03/2019

In the third session there were 14 students taking part, 2 teachers available in class and 1 GUINEVERE team member in-world. Students were in creative mode. Once logged in, in pairs they continued to build the houses , adding walls. This [excerpt](#) shows students working on their houses and interacting in English with the GUINEVERE member and the teacher available in the classroom who guided the conversation asking questions in relation to the construction and blocks being used.



Fig. 24 Participants building a house



Fig. 25 Participant building colourful walls

Session 4 (School A): 19/03/2019

There were 14 students taking part in the last session together with 2 teachers in class and 1 GUINEVERE team member available in-world. Students were in creative mode. Students continued to build their houses working in pairs. The teachers stimulated and facilitated the interaction in the target language with the GUINEVERE member asking questions about the different sections of the house (kitchen, bathroom, living room, bathroom) and the related colours. Students used regularly English words and short sentences repeating in turn their names before answering specific questions.



Fig. 26 Doors and further walls added to a house

Session 1 (School B): 18/02/2019

This is the first session for School B students. During this session students focused on building the witch's house from the Hansel and Gretel tale. Students were working on a project that looked at emotions. This project was linked to other subjects such as Italian, Art and IT. The idea was to use Minecraft to build the different spaces related to popular tales (together with "Hansel and Gretel" teachers had selected "Little Red Riding Hood" and "Three Little Pigs") and learning key vocabulary and short sentences in relation to these constructions.

Students were divided into 3 groups, 1 with 2 children and the other 2 with 3. There were 2 GUINEVERE members supporting online and 2 teachers available in the classroom. The English language teacher was not available during this session however, the teachers knew some English. Students logged in and teleported to the allocated space where they could start to build. As for School A, Discord was used in the mobile form so that teachers asked in turn to the small groups of students to interact in the target language. During this first session, students focused on building (see fig. 27) and greetings and introducing themselves in English via discord and chat box. As for the other sessions, students were in creative mode.



Fig. 27 Participants building the Hansel and Gretel witch house

Session 2 (School B): 21/02/2019

During this second session, a total of 16 children were participating together 2 teachers available in the classroom (of whom 1 English teacher) and 2 GUINEVERE members supporting in world. They created the house of the grandmother of Little Red Riding Hood (“la nonna di Cappuccetto Rosso’). Students worked on building some of the floors (fig. 32) and interacted with one of the GUINEVERE members responding with “Yes” or “No” to questions asked in English in relation to their buildings and the material used. One group of participants stated that they were familiar with Minecraft as they were playing regularly at home.



Fig. 28 Participants building the house of the grandmother of little red riding hood

Session 3 (School B- Pascoli): 25/02/2019

During this third session there were 8 students participating, 2 teachers available in the classroom and 1 GUINEVERE member available online. Students were in creative mode. Students started the session interacting with the GUINEVERE member asking questions like “What is your name?”, “What is your favourite colour?”. This was done through the support and facilitation of the teacher. Same questions were asked back from the GUINEVERE member and the students replied both in speaking and in writing typing in the chat box. This [excerpt](#) is an example of such interaction. Afterwards, students continued to work on their buildings. Fig. 29 below shows an example of the interior of a house one of the participants was working on.



Fig. 29 One participant working on the interior of a house

The interaction in English between the students and the GUINEVERE member continued successfully as the latter asked questions related to the buildings they were working on (i.e.: “Are there any stairs?”, “Where is the floor?”). The students answered in English using “Yes” or “No” or pointing out or using single words used in the questions. This showed a good comprehension of the target language on the students part as well as a willingness to react using the target language.



Fig. 30 Participants working on the exterior of a house
Session 4 (School B- Pascoli):4/3/2019

In this session, there were 18 students participating, 2 teachers available in the classroom and 1 GUINEVERE member available online. Students were in creative mode. Students, divided in groups of three, were respectively building the roof of the witch house, building a fence, feeding animals and learning the Minecraft command to feed.

Keywords related to animal food, flower beds and houses were introduced to the children by the teachers and repeated by them. The English practice was focused on repeating words introduced by the teachers.

In this [excerpt](#) students interact with the GUINEVERE member asking her questions and describing what they are building. They repeated correctly what the teacher in room said.

During the session, a child (from Taiwan) who took part in the pilot testing joined the session. All the Italian children reacted with great enthusiasm to this and they asked the teacher where Taiwan was. The teacher show Taiwan on the map.

This is one of the sessions with a clear relationship of sound and visuals.



Fig. 31 Treasure room



Fig. 32 Participants filling the chests

Session 5 (School B-): 11/03/2019

In this session, there were 16 students participating, 2 teachers available in the classroom and 2 GUINEVERE member available online. Students were in creative mode.

Participants had finished building the Hansel and Gretel house and were put in chests. They filled the chests in the kitchen with food, the chests in the treasure room with gold and the chests in the room with the cage with redstone. The kitchen was equipped with a sink, an oven, some kitchen units at the top and cobwebs in the corner. Participants had been very creative in the design of the rooms. Labels written in English describing the different parts of the rooms were added (shelves, bookshelves, chest, furnace) by the participants.

Children interacted very successfully in the target language with the GUINEVERE members available online throughout the session.



Fig. 33 Treasure room

Session 6 (School B): 13/03/2019

In this session, there were 13 students participating, 2 teachers available in the classroom and 2 GUINEVERE members available online. Students were in creative mode.

Children built stables where different animals were to be placed. During this session they learned to feed animals. Outside each stable there were signs indicating the animals that would be placed inside (chickens, pigs, sheep, horses).

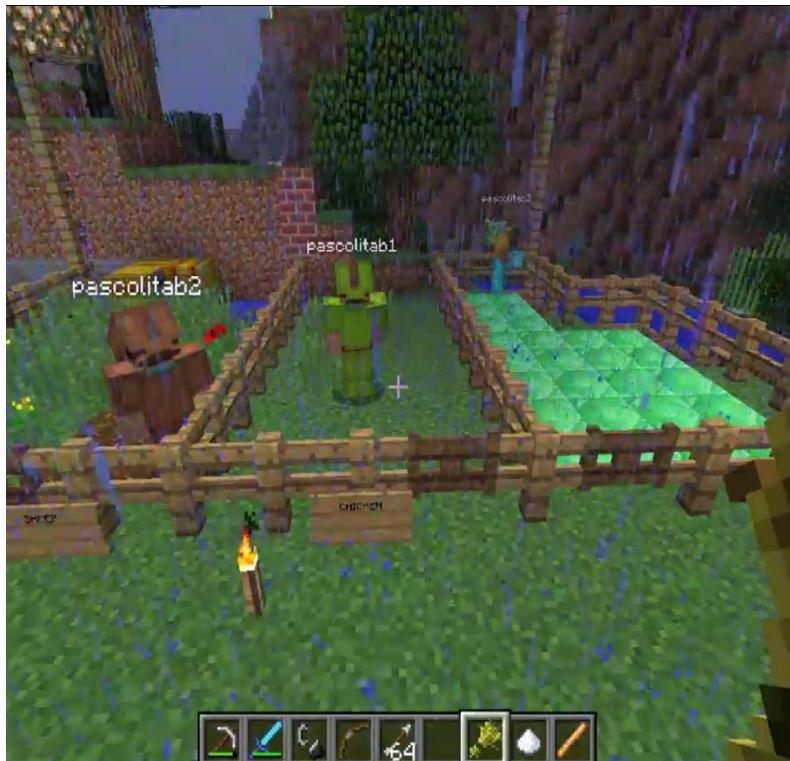


Fig. 34 Participants working on the stables

The children, guided by their teachers, interacted with the GUINEVERE members explaining them, after introducing themselves, which animals they were putting in each stable. This [excerpt](#) shows a student describing the stable he was working on and the horses he placed inside. All the other students did the same description referring to their own stables and animals. Figures 39 and 40 below show the stables created and the different animals added by the students.



Fig. 35 Participants building stables



Fig. 36 Participants adding animals to their stables

Session 7 (School B): 14/03/2019

In this session, there were 18 students participating, 2 teachers available in the classroom and 2 GUINEVERE member available online. Students were in creative mode. Students were working on the houses specifically on building la Casa Nonna, Little Red Riding Hood grandmother's house. They were placing also signs in English outside each room and adding furniture (shelves, beds, chest etc..). They were describing, guided by both online and in class teachers, what they were building referring to the different spaces/rooms of the house and the furniture added.



Fig. 37 Participants building a living room



Fig. 38 Participants adding labels in the living room



Fig. 39 Participants building a table, a chair and a laptop.

In this session, there were 13 students participating, 2 teachers available in the classroom and 2 GUINEVERE member available online. Students were in creative mode. During this session students placed some signs indicating a number of objects around the house (see figures 44 and 45 below). They described what theirs signs say (i.e “This sign reads sofa”). Some grammatical aspects were approached (i.e. possessive case) and discussed with the teachers.



Fig. 40 Signs placed in the kitchen

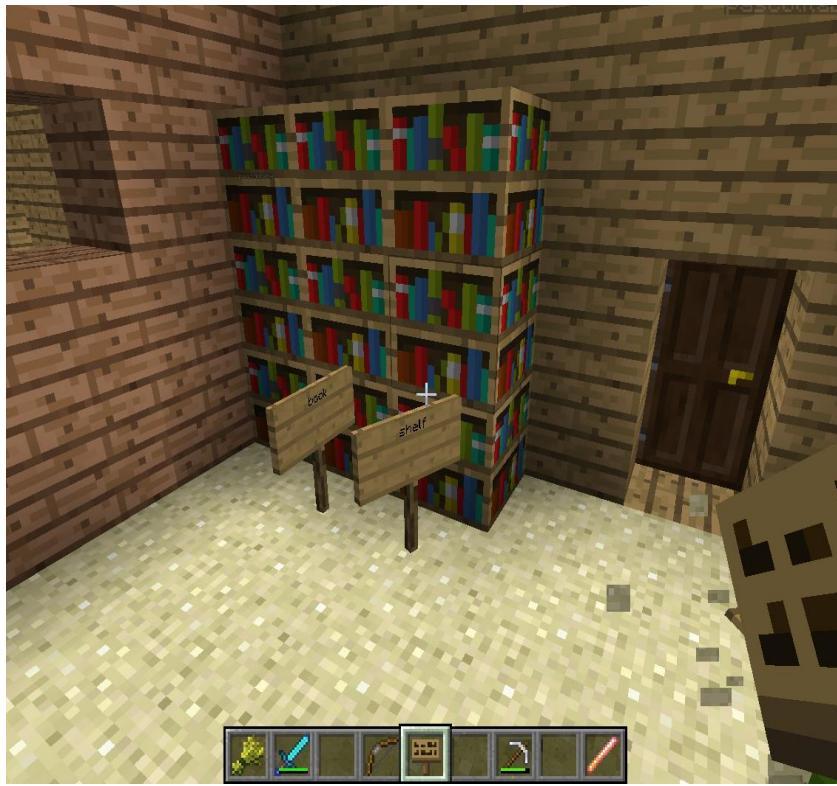


Fig. 41 Signs placed in the sitting room

Session 9 (School B): 25/03/2019

During this session, there were 13 students participating, 2 teachers available in the classroom and 2 GUINEVERE member available online. Students were in creative mode. Students continued to work on the Hansel and Gretel house where a punishment corner had been added. Facilitated by their teachers, they described what they were building in English (using, for example, vocabulary related to colours). The long rain that characterized this session created a teaching opportunity related to the weather (see fig. 46). Specific questions like: “Are your pants wet?”, “Are your boots wet?” were asked and students answered appropriately. The majority of students confirmed at the end of the session that they regularly played Minecraft at home.

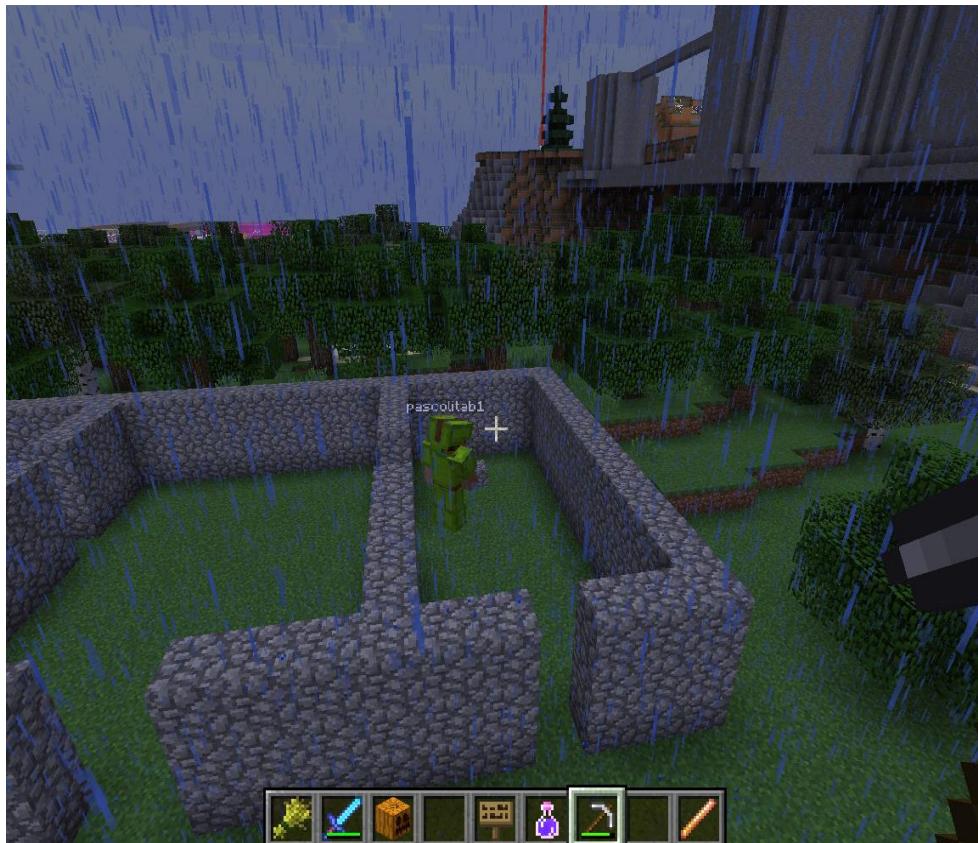


Fig. 42 Students building in the rain

4. GUINEVERE Open Simulator Field Testing

The GUINEVERE Open Simulator field testing run in an Italian secondary school. The participants were 7, 16-18 year old students. There was 1 English teacher available in the classroom and GUINEVERE members supporting in world. The platform was used to learn and practice the English language of whom the students level was B1 of the CEFR/QCER. 20 hours were allocated to the use and integration of Open Simulator into the English language curriculum. The sessions started in February 2019 and each session lasted 50 minutes. The students, as well as the teacher, had one computer each available and they were accessing Open Simulator respectively with one avatar. It is important to note that the application Telegram was used to communicate among participants and coordinate the sessions. The GUINEVERE Open Simulator environment, allowed the teacher to design tasks and related lesson plans around the theme of King Arthur and his Knights of the Round Table. Following the path in the Exploria Castle built in the GUINEVERE

environment, students had the possibilities to complete quizzes, quests, riddles and other games while learning and practicing the target language as well as history and art.

4.1 GUINEVERE Open-Simulator: Timeline and Topics

Sessions	Topics
Session 1: 14/02/2019	Web-Quest “KingArthur”: Reflect upon and recognize the main features of Medieval England; practice target language through riddles

Table 3: Sessions and Topics of the GUINEVERE Open-Simulator field events

4.2 Sessions

Session 1: 14/02/2019

This was the first session in the GUINEVERE Open Simulator environment. Before starting the session, students were introduced to the GUINEVERE project and all the organizational aspects completed (creation of a telegram group to share material and to communicate among participants; registration and first access to the Guinevere OS platform). This session focussed on the Web-Quest “King Arthur” activity (available in detail [here](#)): students were asked first to gather info on King Arthur and the Knights of the Round Table circle.

Subsequently, the next phase, that was going to happen in-world, was divided into two parts:

- 1) students were to follow the path available in the GUINEVERE castle interacting in English with the Chatbot, completing the Bartle test and the Quiz Chair activity.
- 2) Hints (translated into English) for a WebQuest were created by students and placed in the space available in the GUINEVERE Aedificeare SandBox (allocated testing area).

The final phase was dedicated to reflecting upon the activities in the Virtual world and the positives and possible difficulties experienced.

The objectives of this session were:

- Reflect upon and recognize the main features of Medieval England (from a historical, artistic and religious point of view) particularly, the times of King Arthur and the Knights of the Round Table
- Enhancement of the problem-solving skills
- Enhancement of communicative skills
- Enhancement of reading and interpretation skills through the messages presented and the context to whom they refer.

Two teachers were available in the classroom and 2 GUINEVERE members were available in-world. The students arrived successfully to the Exploria castle where they started their first activities and tests (see figure 47 and 48).

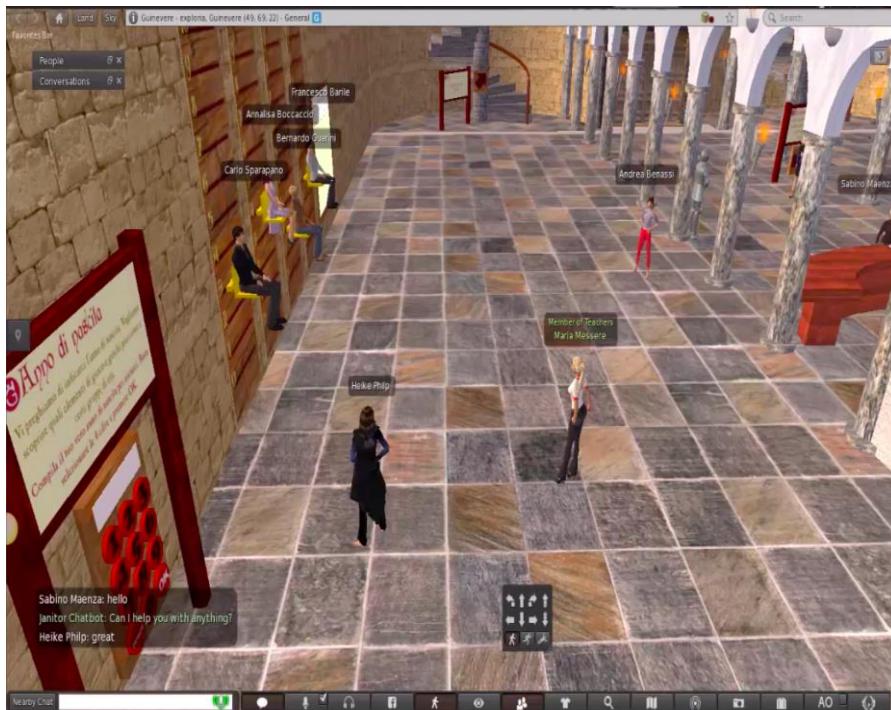


Fig. 43 Students in the Exploria castle



Fig. 44 Students completing the quiz chair test

The students followed the path in the castle guided by their teachers completing successfully all the riddles. This [excerpt](#) shows the students, guided solving collaboratively the riddle proposed. The instructions were given by the teachers in Italian and the students translated collaboratively the signs equipped with all the instructions. The participants completed successfully all the quests and tests available in the GUINEVERE castle area and are now ready to design their own quests and riddles to be completed by other students that will access the GUINEVERE Open Simulator environment.



Fig. 45 Students finishing the GUINEVERE quest.

During this first session, the target language was used for greetings, complete tests, interact with the chatbot and translate the signs available in the environment. Students worked together to complete the GUINEVERE test helping each other when necessary. They interacted successfully both in writing via the chat box and orally, through the microphone.

Session 2: 26/02/2019

Sessions	Topics
Session 2: 26/02/2019	Playing on Exploria Castle, field testing on OS
Florya College (10th Grade) Students Turkey	

İstanbul University - Cerrahpaşa invited 20 Turkish students from Florya College High School. They were 15/16 year olds with B1 English Level. The students were selected because they could communicate in English, thus circulate on our OS GUINEVERE Island. The students were previously introduced to the concept of GUINEVERE Project by their teachers and were granted access with usernames and passwords by the Project partners. Two weeks before the initial computer lab trial the teachers from Florya College (a private high school in Istanbul) were invited

for a meeting to Istanbul University - Cerrahpaşa Campus where they learned about the GUINEVERE Project. The teachers were interested in the idea of digital games and wanted to participate in the field testing with their students. Initially the English teacher and the Maths teacher wanted to participate and learn more about the digital games. They were informed about the field test and agreed to set up a date to bring in their students. An official invitation was sent to the school and the school also arranged a transport for their students.



Fig. 46 Florya College High School Students and Their Teachers.

20 Students from 10th Grade of Florya College in Istanbul participated the field testing in the IUC - Faculty of Education Computer Lab. They were welcomed by three colleagues of the GUINEVERE Project partners including lab technician was present to help with any inaccuracies and technical issues. The event started with a welcoming session and then an introduction to the GUINEVERE Island on Open Sim. Then the students were asked to do a couple of simple tasks like finding the entrance and solve the riddle of how to enter the Exploria Castle. After these collaborative question and answer type of tasks the students were asked to do the walk through in the first floor of the castle. Thus, the students were trained on how to use the castle and the controllers.



Fig. 47 Initial Training for Florya College Students.

After the initial training on Open Sim Exploria Castle the students were asked to explore the island on their computers. Students were eager and started competing in opening the gates and solving the riddles on the island. After some time though what the GUINEVERE project facilitators witnessed that when the students couldn't solve the riddles and started gathering in front of the gates for the next phases they started talking to each other and the ones who were sitting far from each other started writing on the chat channel to each other. Thus they could solve the riddles collaboratively developing an interactive and supportive attitude. After the students completed the tasks on Exploria Castle and surroundings they were introduced to the gaming section on the GUINEVERE Island. As the level of the students was B1 in English, some of them explored the games but as the games were way below their level they just went around the games and played on only some of them. The aim of the field test was only to experience the games and not to design their own games.

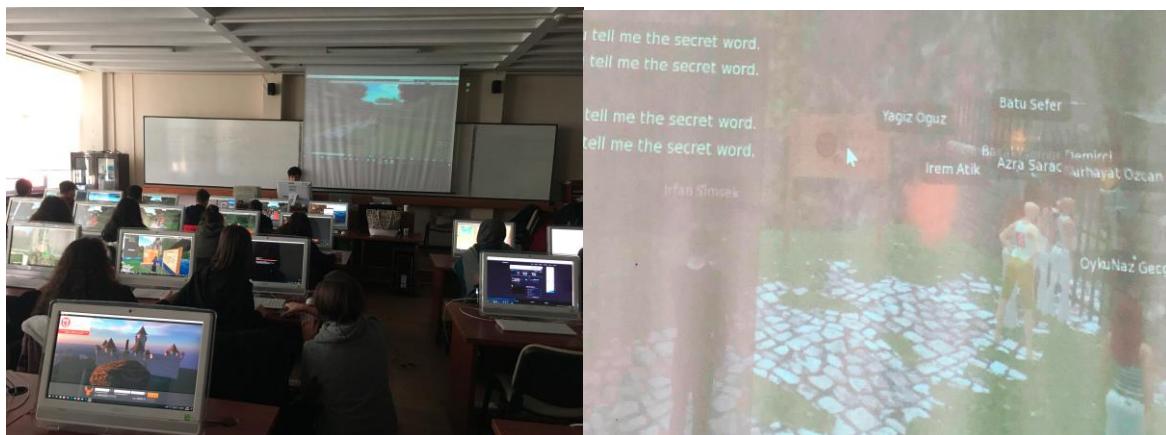


Fig. 48 Florya College Students Collaborating in 3D VWs and Real World.

The students spent almost 2 hours on the tasks and in the reflection phase in the end of the field testing they expressed interest and wanted to stay longer on their computers to play more. Some of the students wanted to participate in future trials and some expressed that they enjoyed themselves more than in the classroom. The teachers also expressed gratitude that them and their students were given this chance to participate in the field testing.

5 GUINEVERE Second Life Field Testing

5.1 GUINEVERE Second Life: Timeline and Topics

Sessions	Topics
Session 1: 26/02/2019 Florya College (10th Grade) Students	Field Test Second Life: Mystery House

5.2 Sessions

Three of the students who completed the tasks on the Open Sim earlier than the others were asked to explore the Second Life GUINEVERE Games. They played some of the games that were on the SL sim. The students were asked to play the game, “Mystery House” that Istanbul University - Cerrahpaşa created as a result of the focus group earlier on IO6. In this game the students had to escape from room to room by finding the secret word that was hidden throughout the rooms. Unfortunately due to time constraints and that the students had to return to school via their shuttle bus, more students couldn’t explore the GUINEVERE Games on SL. The three students expressed that they wanted to explore more.



Fig. 49 Florya College Students Exploring Second Life GUINEVERE Section.

6. Results and Evaluation

The sessions conducted highlighted various elements on the use of virtual platforms for language teaching and learning mainly in terms of linguistic output, participant engagement, behaviour and collaboration. The sessions that took place in Minecraft have shown a high level of collaboration among participants that engaged with the proposed activities regularly and very successfully. Students collaborated with great enthusiasm and exchanged ideas on how to design and build their structures, which tools/spaces to add and or modify. During one particular session, one of the participants said that he went online searching for specific commands to be used in Minecraft,

confirming that the activities carried out in the school sessions continued somehow outside school and that the interest towards the game was indeed very strong.

Throughout the sessions, participants demonstrated a strong interest for building creating very complex and inventive environments. Often they found themselves so immersed into building activities that it was a little bit challenging for the supporting team available in world and in class to bring them back to the completion of their tasks.

During the sessions, students used English, their first language, extensively however, they used regularly their target language for greetings (speaking skill, via Discord) and for the completion of the labelling activities (writing skills, via text chat). It is important to note that the use of the target language was regularly facilitated and encouraged by the supporting team allowing the students to respond and interact as much as possible. As mentioned above, students demonstrated a high interest towards Minecraft which was habitually played outside the classroom. The game allowed participants to foster their problem solving and digital skills as confirmed, for example, by commands and tools discovered by the students themselves when playing at home.

The Minecraft sessions and the GUINEVERE project as a whole proved to be very successful also from the teachers and educators perspectives. Many teachers requested to take part in the project on a voluntary basis as they considered it to be extremely beneficial for the different subjects.

The OpenSimulator session proved this be very stimulating for both students and teachers. During this session, participants used the target language for greetings, complete tests, interact to the chatbot and translate the signs available in the environment. Students worked together to complete the GUINEVERE test helping each other when necessary. They interacted successfully both in writing via the chat box and orally, through the microphone. Teachers facilitating in-world confirmed that the session had a positive impact on participants as allowed them to experience virtual physical contexts to generate and practice their target language.

The Second Life session proved to be very successful as the students welcomed the games and related tasks proposed. Unfortunately, there wasn't enough time to investigate the interaction between participants and the platform in detail however, students expressed regularly a desire to explore the GUINEVERE environment in Second Life further.

7. Conclusions

Through the field testing events outlined above, several final remarks can be addressed:

- Both teachers and students were very interested in the idea of digital games and were very keen on participating in the field testing events.
- Teachers of different subjects requested to take part to the GUINEVERE field testing on a voluntary basis. They considered the use of digital games extremely beneficial for pedagogical purposes and were interested in integrating digital games into their teaching practices.
- Participants worked collaboratively exchanging ideas on how to build structures, doing research on the best tools to use and completing the proposed tasks successfully. This facilitated the development of an interactive and supportive attitude to learning.
- The activities conducted on the different virtual platforms allowed participants to work on their collaborative and communicative skills as well as on their problem solving and digital skills while having the opportunity to express their creativity.
- The target languages were used both in the spoken and written format (respectively via Discord and text chat). However, a regular pedagogical and technical support was needed in order to facilitate the communication.

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