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WHAT WE HAVE LEARNED BY USING CULTURAL HERITAGE, TECHNOLOGY BASED, EDUCATIONAL ENVIRONMENT: SEE (SHRINE EDUCATIONAL EXPERIENCE)

Evelyne Gobbo, Paolo Paolini

Politecnico di Milano, Italy

http://www.seequmran.it

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Abstract

Can new technologies help didactic? Can education at school make use of games? Do educational games have to be cooperative or competitive? A possible answer is offered by SEE, *Shrine Educational Experience*: a joint project of Politecnico di Milano and the Israel Museum, Jerusalem; the aim is to provide an effective educational experience (about the Dead Sea Scrolls and the Qumran community) to junior and senior high school students worldwide. The experience is based upon a shared 3D world, accessible on the Web: eight pupils belonging to four different schools meet together, interact with 3D objects, and with the 3D environment; they acquire information, learn and play, under the surveillance of a museum guide. A competition (2 schools against the other 2) enhances the pupils' engagement, and drives them to study the material made available online. Within each team, cooperation is necessary in order to win: games are built in such a way that each player is required to cooperate with the other players in the team.

An extensive experimentation of SEE has allowed us to carry on an in-depth analysis concerning pedagogic-didactic aspects of the use of advanced technologies in schools. A specific focus was on understanding the role and the educational impact of cooperation, games and competition in a virtual environment for schools. The paper will present data from the actual usage of SEE and derive pedagogical lessons from there, as a possible core of guidelines for advanced technology-based activities in European schools.

Keywords: Edutainment, 3D world, Cooperative learning, Critical Thinking

Zusammenfassung (DE)

Können neue Technologien der Didaktik helfen? Können Schulen von Spielen Gebrauch machen? Müssen pädagogische Spiele kooperations- oder wettbewerbsorientiert sein? Eine mögliche Antwort auf diese Fragen bietet *Shrine Educational Experience* (SEE), ein gemeinsames Projekt des Politecnico di Milano und des Israel Museums, Jerusalem. Ziel ist es Schülern der Mittel- und Oberstufe eine effektive pädagogische Lernumgebung (über die Schriftrollen vom Toten Meer und die Qumran-Gemeinschaft) weltweit zur Verfügung zu stellen. Die Lernumgebung basiert auf einer 3D Welt, die Online zugänglich ist. Acht Schüler von vier verschiedenen Schulen treffen sich, interagieren mit 3D Objekten und mit dem 3D Umfeld. Unter der Aufsicht eines Museumsführers erhalten sie Informationen, lernen und spielen sie. Ein Wettbewerb, bei dem zwei Schulen gegen die anderen zwei antreten, steigert

das Engagement der Schüler und treibt sie an das Online zur Verfügung gestellte Material zu studieren. Um zu gewinnen ist die Zusammenarbeit im Team notwendig. Das heißt, die Spiele sind so aufgebaut, dass jeder Spieler mit dem anderen Spieler seines Teams zusammenarbeiten muss.
Umfangreiche Experimente mit SEE ließen es zu eine eingehende Analyse hinsichtlich der pädagogisch-didaktischen Aspekte eines Einsatzes von hoch entwickelten Technologien in Schulen durchzuführen. Dabei wurde ein Schwerpunkt auf das Verstehen der Rolle und der pädagogischen Bedeutung von Zusammenarbeit, Spielen und Wettkampf in einer virtuellen Umgebung für Schulen gesetzt. Es werden Daten von der gegenwärtigen Nutzung von SEE präsentiert. Von diesen Daten werden pädagogische Lektionen abgeleitet, die ein mögliches Herzstück von Richtlinien für hoch entwickelte Technologiebasierte Aktivitäten in europäischen Schulen bilden könnten.

Schlüsselwörter: Edutainment, 3D Welt, kooperatives Lernen, kritisches Denken.

Résumé (FR)

Les nouvelles technologies peuvent-elles soutenir la didactique ? L'éducation à l'école peut-elle se servir des jeux ? Les jeux éducatifs doivent-ils être coopératifs ou compétitifs ? Une réponse possible est offerte par SEE (*Shrine Educational Experience)* : un projet commun de l'Ecole polytechnique de Milan et du musée d'Israël (Jérusalem) ; le but est de fournir une expérience éducative effective — à propos des Manuscrits de la mer morte et de la communauté de Qumran — aux élèves de lycées dans le monde entier. L'expérience est basée sur un monde 3D partagé, accessible sur le Web : huit élèves appartenant à quatre écoles différentes se réunissent ensemble, interagissent avec les objets et l'environnement 3D ; ils acquièrent l'information, apprennent et jouent, sous la surveillance d'un guide de musée. Une compétition (2 écoles contre 2 autres) stimule l'engagement des élèves, et les incite à étudier la documentation accessible en ligne. Dans chaque équipe la coopération est nécessaire pour gagner : des jeux sont établis de telle manière que chaque joueur doive collaborer avec ses partenaires.

Une expérimentation étendue de SEE nous a permis de mener une analyse approfondie des aspects pédagogiques et didactiques de l'utilisation des technologies de pointe à l'école. Un point clé était de comprendre le rôle et l'impact éducatif de la coopération, des jeux et de la

compétition dans un environnement virtuel scolaire. Cette communication présente des données de l'utilisation réelle de SEE et en tire des leçons pédagogiques qui pourraient servir de base pour des directives sur les activités basées sur les technologies avançées dans les écoles européennes.

Mots-clés : *Edutainment*, Mondes 3D, Apprentissage coopératif, Pensée critique

I. SEE: The *Shrine Educational Experience*

SEE is an innovative educational project based on relevant cultural contents (the Dead Sea Scrolls and related issues) and an engaging technology-enhanced environment, offering an exciting multicultural experience. Students of different countries meet online to discuss a variety of subjects lying at the heart and at the foundation of their cultures, in an appealing and worldwide perspective.

The Dead Sea Scrolls are ancient manuscripts, about 2000 years old, which were found in 1947 in eleven caves near the Dead Sea (on the border between Israel and Jordania), not far from the archaeological site of Khirbet Qumran. They represent the earliest version of books of the Bible, and were probably written by a community of Essenes, a Jewish movement that left Jerusalem and retired to the desert. The community lived at Qumran approximately from 150 B.C. to 68 A.D., when a legion of the Roman army destroyed the settlement (Roitman, 1997). The contents of the Scrolls shed light on a period of history which saw the blending of the Hellenistic, Jewish and Roman cultures, the foundation of modern rabbinic Judaism and the origins of Christianity: they represent an invaluable source to understand the roots of Western civilization and an extraordinary point of departure to talk about culture in a broader sense.

The SEE project aims at offering students (from 12 to 19 years of age) a meaningful experience in a virtual setting, making them deal both with robust cultural content and advanced new technologies; meeting distantly located peers, discussing and playing with them provides exciting interaction and very interesting cross cultural exchanges.

SEE provides a 6-7 weeks long experience: pupils study advanced material (downloaded from a website), work at their assignments, discuss (via Internet) with experts and other students of different schools and countries. The focal points of a SEE experience are four cooperative sessions: students of four different schools meet together in a 3D virtual environment to learn, play and discuss. Each student (represented in the 3D world by an *avatar*, i.e. a graphical "puppet") can move around, interact with the world and with other students. A "guide" leads the group of students around, moderates discussions, organizes the activities and sustains the effectiveness of the learning process. A "cultural competition" among two teams (each consisting of 2 schools) makes the whole experience even more engaging and compelling: players have to collaborate with their remote team members to win against their opponents.

II. How the Experience Works

Four cooperative sessions compose a SEE experience; in each session, students, visualized through avatars, are welcomed by a guide and start their adventure in the SEE 3D world (Figs. 1-2), playing games, answering quizzes, experimenting the advanced features made available by new technologies (like flying, seeing through the other avatars' eyes, seeing from fixed cameras, etc.). They communicate mainly via chat.

Figure 1 - Avatars meet in the virtual 3D environment reproducing the Shrine of the Book buildings

Figure 2 - Students participate enthusiastically to a session

Cooperative sessions alternate with "traditional" offline activities: through a website (www.seequmran.it), students are given background material to study, whose basic core consists of interviews to leading experts about the Dead Sea Scrolls, Qumran and related issues: these show different perspectives and points of view on the same topic. They are integrated by a rich set of auxiliary material, enhancing students' comprehension: summaries, anthological excerpts of texts quoted in the interviews, insets on the relevant characters or events mentioned, maps, chronologies, etc.

When a class registers for a SEE experience, it is associated to 3 other classes of the same age group and kind of school, but different geographical areas. In each session, only two students per class are actually connected to the online environment, in order to have at most 9 avatars in the 3D world, including the guide. The other students of the class help the two "players" in several ways, suggesting the answers to cultural questions, pinpointing objects on the screen, reading loudly the conversation in the chat, and… cheering!

During S*ession 1* students get to know each other; they introduce their class, school and country in turn, with the help of boards: browser windows showing multimedia content (in this case, a class-picture and a brief self-presentation of the students) that can be activated from special hotspots in the 3D world. They are also briefly introduced to the cultural context.

Before the next meeting, students are asked to study a set of contents (interviews and cultural material), which will serve as the necessary cultural background for the next session. The 3D world is not suitable to deliver large amounts of content with an acceptable degree of detail: such goal is better achieved through "traditional" means, i.e. individual study on printed material and/or frontal lessons in the classroom. However, pupils are well aware that studying will give them far better chances of winning the games: competition here acts as a strong motivating factor.

Session 2 deals with the content of the Dead Sea Scrolls and the life of the community that used to live in Qumran. Students are led by the guide inside a corridor – a reproduction of the actual corridor in the museum – where some boards with images and texts offer insights about the topic dealt with.

Students are then teleported to one of the game spaces: a Labyrinth (Fig. 3), where they will have to find and identify four correct objects out of twenty, according to a clue that the guide gives them. All the objects of this Treasure Hunt are related to Qumran and the Scrolls, and each one of them is associated to a piece of sentence: if the team finds the four correct objects, it will reconstruct the full sentence – typically, a quotation from the Scrolls.

Session 3 tackles a specific aspect of the culture related to Qumran, chosen by the teachers of the 4 classes as a matter of particular interest to study in depth. Examples of available topics are: *Rituals in Qumran*, *Life in a community*, *the Holy Bible and the Canon,…* Again, discussions and games take place. The games of Session 3 are a Matching Pairs and a Quiz; in the Matching Pairs, students have to find significant associations between objects related to a specific topic; in the Quiz, one student per team performs in turn one of the 4 "ability" games present in the game space (Fig. 4). The winner gives to his/her team the right to answer the quiz question first, thus gaining more points if the answer is correct. Correct and wrong answers, revealed by the guide, offer the starting point for a cultural discussion about the most provoking aspects of the contents studied so far.

Before the last session, students are required to prepare a short essay, based on a theme assigned at the end of Session 2. Its goal is to make students reflect on the aspects of Qumran they have analyzed in depth, and to find analogous phenomena in their own local culture. For example, after learning about the feasts that were celebrated in Qumran, students are asked to describe the rituals and symbols accompanying a feast celebrated in their country, reflecting on its meaning and its origins. Thus, a 2000 years old culture becomes the occasion to reflect on aspects of our everyday life, which may have a long, fascinating history, although we tend to take them for granted.

During S*ession 4*, each class in turn presents its homework (Fig. 5) and the other students ask for details, disagree on certain issues, make remarks about others… comparison among cultures and discussion about the meaning of different traditions make this moment the most culturally intense of the whole experience. The quality of homework is evaluated and added to the total game scores: at the end, the guide announces the final results and proclaims the winner. Teams cheer or complain depending on the situation; however, they may have a chance of re-opening the competition by participating to another experience, focused on a different topic.

Figure 3 - The Labyrinth

Figure 4 - The Quiz game space

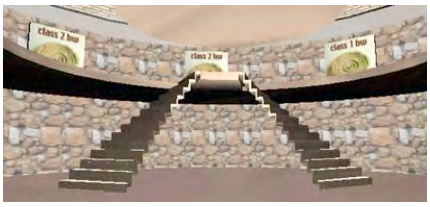

Figure 5 - The discussion space

III. The Experimental Phase

SEE has been tested by over 1400 high-school students in Europe and Israel, proving to be an extremely valuable learning experience.

- November/December 2002: first phase, involving 16 classes from 5 different cities. The goal was to test technical and organizational aspects.
- March/May 2003: second phase, involving 36 classes from Italy and Israel. The goal was to test the content, the learning process and the educational benefits.
- March/May 2004: third phase, involving 20 classes from Italy, Israel, Belgium and Germany. The goal was to consolidate the learning process, confirm the educational benefits and to test, on a larger basis, the multicultural aspects.

On the whole, the experimental phase has involved 30 Schools (7 junior High Schools; 23 senior High Schools, 9 of which confessional, and 14 with orientation upon humanities), 72

classes, approximately 80 teachers, and nearly 1.500 students; 72 cooperative sessions, each involving 4 classes, have been successfully completed. 52 of them were monitored by a person of the staff physically present in the school, who annotated problems, observations and general evaluations in a report.

A rich set of data has been collected through direct observation of cooperative sessions in schools, focus groups with teachers (before, during and after the experience), surveys to teachers and students, analysis of chat-flows and of the assignments produced by students.

Teachers have found SEE educationally effective, both in stimulating curiosity-driven research on controversial issues, and in motivating disaffected students; they appreciated the quality and depth of the contents, and the project's spur on students to responsibly organize group work. Students enjoyed the playful and competitive elements, developing strong team spirit with their remote partners; games were a powerful motivator to study, together with the most appreciated aspect of all: meeting peers of different countries, interacting and collaborating with them.

Overall the experimental use of SEE has proven that effective eLearning can be made real, that non standard content (like the Dead Sea Scrolls) can be brought to schools, that innovative educational paradigms can work, that advanced technology can be a success factor, that discussions among students from different cultures and nationalities (comparing one's beliefs and experience with different points of view) is tremendously enlightening and fascinating – especially when concepts are discussed, which lie at the very foundations of our cultures and lives.

SEE has shown that in-depth cooperation between an advanced Engineering School, Politecnico di Milano, and a prestigious cultural institution, the Israel Museum in Jerusalem (section Shrine of the Book), can provide innovative and effective educational solutions to a multi-cultural community. The Dead Sea Scrolls were chosen by the museum as the ideal subject of an educational 3D experience meant to address an international, potentially worldwide audience.

IV. Lessons Learned

The testing phases have allowed the development team to understand better pedagogic-didactic aspects, sharpening the different innovative solutions concerning games in education, cooperation in 3D virtual worlds, cultural competition, multicultural education and how all

these factors can be the key to a more effective development of new eLearning-related technologies.

The main lesson has been that cooperation and competition are not necessarily opposite concepts: both of them are important ingredients to make the proposed activities stimulating. Game also is not opposed to 'serious education'. The data collected have shown that online engagement was ensured by interaction, games and the real-time cooperation with remote students. Competition was at the same time an engagement factor and the motivation for in-depth study of the materials: students (and teachers above all) wanted to win. The role of teachers has been another crucial factor: they were strongly motivated (both for cultural interest and for the competition) and they passed along their motivation to their students. At the same time teachers were not fully in control of the situation: they did not know exactly what was going on, especially as far as technological issues were concerned. Therefore their students felt in the role of the 'champions' fighting for their teachers: they wanted to do well and to win, in order to satisfy their teacher's ambition.

In addition, SEE activities require different skills: traditional learning capability, reactivity (to answer quickly to quiz), interactive skills (to play in the 3D environments), interpersonal skills (to organize and do team work), etc. Students in each class spontaneously organized team work by assigning to each other different roles, in order to get the best possible results. This situation has created strong team spirit within each class, both among students and with the teacher. Team-ship has proven to be one of the most important factors in fostering educational achievements, not only concerning SEE, but also lasting beyond the experience (as reported by the teachers).

1. Technology

As far as technology is concerned, the starting point of the project were the lessons learned in a previous similar project ("Virtual Leonardo"), a 3D reconstruction of the Science and Technology Museum of Milan, in which visitors were allowed to meet in real time, and to virtually wander together in the museums' galleries. The early approach meant to provide shared virtual environments for cooperative visits to virtual museums: the application allowed exploring the museum, interacting with other visitors and with a person who played the role of Leonardo, guiding visitors through the virtual rooms. It was possible to click on objects to obtain information about the exhibition, showed in web pages of the museum's website.

One important highlight from the data collected in a six-months-long activity concerns collaboration: when there were no cooperative activities to be performed within the system

(no other users connected, or nobody playing Leonardo in the virtual environment), the connection time of the users was very low (typically below five minutes); on the contrary, when attractive forms of collaboration were available and an effective learning activity took place within the environment, users remained connected in average 53 minutes, getting engaged on a single topic. It is evident that collaboration is the key for the success or failure of such learning experiments: interaction and real-time cooperation have a clear, outstanding and unexploited potential for attracting attention and interest of a vast range of participants independently from their level, and for supporting their attention for a long time.

SEE develops the most valuable potential of 3D environments, which is cooperation, sharing of knowledge between peers, and multi-cultural interaction, in order to create a new methodology of learning. Technologies leverage collaboration between students working on the same eLearning modules in different places, thus creating blended, distributed eLearning activities, and extending the current concept of eLearning (today mainly perceived as "remote learning").

Enhancing teamwork and finding new ways to engage the attention of the students are two key factors to a more effective use of eLearning within selected ranges of audience. These two goals can be achieved by shifting the paradigm with which eLearning is currently being interpreted (i.e., specifically a means to study contents and perform comprehension tests from remote locations), and by rethinking its strategies in a wider context. Three-dimensional, virtual workspaces can be used not only to create an occasion of collaboration between remote peers, but also between students in the same classroom, blending the study of content in remote mode with the assistance of a teacher / tutor in the classroom.

Prior to using the 3D learning environment and meeting other classes in the virtual space, each class is required to study specific material or prepare assignments with the assistance of the teacher. Then, students connect to the system and start working with other classes in the computer laboratories of their schools, collaborating also with each other, "side by side". Such use of technology can both engage students and help schools to move toward eLearning without neglecting traditional didactics, which is nonetheless very important throughout the Shrine Educational Experience. Each cooperative session had been planned to last less than an hour, in order to avoid the risk of boring pupils and to leave them with expectations about the next session. All planned times resulted too short: students, far from getting bored, wanted to continue even after one hour and a half.

Nothing like comments of teachers who took part in a SEE experience did better confirm our work hypothesis: "I've always been very attracted by online collaborative work: I've always

thought it possesses a high educational value. I liked the idea of chatting with people of other schools and countries. SEE has introduced a wholly innovative teaching method". "The teaching and learning method works, it's engaging"; "I don't think the project will loose its effectiveness after the enthusiasm for its novelty will be over. I wouldn't be tired of repeating it even after four years".

2. Cooperation and Games

The whole experience proved to be extremely appealing: students showed great interest, followed the guide through the virtual world with curiosity and participated in the games with enthusiasm, finding the interactive and competitive aspects especially exciting. Many teachers remarked, that presenting the Dead Sea Scrolls entirely in normal frontal lessons would have been an arduous task, hardly leaving any trace in the memories of the students, whereas with SEE a teacher told us, "At the final exam, all kids wanted to talk about the Dead Sea Scrolls". Using technology, involving users from different schools, making them cooperate and compete, are the most important factors that make SEE an effective learning experience. Cooperation is enforced by chat and games.

Chatting allows dialogue: students can discuss, express their opinions and help each other; games emphasize these aspects, implying roles recognition, self-regulated organization, individual accountability, and reciprocal support. We noticed that games fostered student to study. What is most interesting, once kids had studied, they wanted to prove and show off their knowledge: they complained because the quiz questions were too easy for them, and asked for more complex tasks. This important added value of SEE games overcomes a common prejudice: there is a strong difference between videogames and multi-user educational playful experiences (where users interact and cooperate with each other); games are not necessarily in opposition to the accomplishment of serious tasks.

Analyzing the three games played during every experience (Treasure Hunt, Matching Pairs and Quiz) in the light of the experimentation results, we tried to enforce their positive features and to minimize weaknesses. Each game requires pupils to study some background material in order to answer cultural puzzles, and every action is important for the final score. Thanks to the experimental phases, we could improve cooperation and interaction between peers: games have been designed in such a way to entail the contribution of the whole team.

Concerning the *Treasure Hunt*, the game scene is a labyrinth: searching objects in the labyrinth is engaging, finding them is exciting. Competition with the other team (e.g. knowing

that the opponents have found no objects yet) is also stimulating. Each object chosen by an avatar must be "confirmed" by a team member, who can look at it (using the "watch from another avatar's eyes" view mode): players must discuss about the objects found, and when they agree upon one, both of them must select the chosen object.

Concerning the *Matching Pairs*, players have to find correct pairs among a set of objects; although this is not overly difficult, it is interesting: each avatar finds himself in front of two objects, and must describe them to the team; all players share their information items and find significant associations between objects by discussing with their team members. Then, they have to take their objects and fly up together to place them in the appropriate pair-holder, which can only be reached by flight: a good degree of flying ability is required.

Concerning the *Quiz*, action in the 3D world is distinct from the cultural part: students appreciate this "separation of concerns". There are four ability games, each one associated to a quiz multiple-choice question. One avatar per team performs one of the games in turn, while the others reflect on the answer to the quiz. The ability games are exciting, also for those who watch. The player who first completes the ability game can answer first: his teammates suggest the answer. Then the other player can answer. Of the three possible answers, one is correct, one is partially correct and one is wrong: thus the player who lost the ability game can still earn some points.

Games increase team spirit building and cooperation among students, who use their different skills to achieve a common goal: one player's ability is appreciable only if combined with other players' knowledge (Gardner, 1983). Students have the opportunity to learn from and with each other, accepting different behaviors and aptitudes, learning how to make the most of every skill and how to gain from it (Johnson & Johnson, 1989).

Teachers commented: "The Experience has awakened team spirit in my students. They knew that each one's skills were resources for the class. They understood that, by playing their role well, the whole team would benefit"; "I chose among my students the ones with less motivation to study, and my colleague chose as well the most problematic of her pupils. We thought that, if something could "rescue" them, it was a project like this. And we were right"; "I could bring out students with scarce motivation".

Competition engages and motivates in-depth study of the materials, as both students and teachers want to win!

3. A New Role for Students, Teachers and Schools

The special format of SEE offers a new learning setting, shifting the roles of students and teachers. Students are given high responsibility: in many situations they actively take part in the decision-making process, choosing how to organize themselves (e.g. deciding who is going to play the games, answering the questions, working on the assignments, etc.); in the fourth cooperative session, they actually take the lead: the whole session is devoted to them and to their work; they present the results of their own research, explain them, discuss and criticize the others' works; the guide is nothing but a moderator, and the teacher becomes a – nonetheless essential - facilitator. *They* discuss, play and chat during online cooperative sessions; *they* are responsible for studying and preparing assignments during the project's offline activities. Concerning this, a teacher declared: "Students worked a lot by themselves. They really had the idea that this was *their* project". Students also perceive that their teachers want them to do well and win, and are strongly motivated by that.

Teachers in fact play a crucial role: once they are persuaded about the value of the project, they transfer their motivation and enthusiasm to their students, setting off different emotional dynamics that bring kids to apply themselves hard, with rewarding effects. The teachers' role changes: they are not information-givers any more - sometimes they don't even know more than their pupils about the project. Rather, they have to provide motivation, supervision, and support about contents, learning skills, and organization of activities, sharing authority in a very peculiar way: they are not as usual the sole responsible for setting goals, planning learning tasks, and evaluating what is learned. They become mediators (Roblyer, Edwards, & Havriluk, 1997), encouraging students to be protagonist of their learning process, to use their own knowledge and their favorite learning strategies, to think about causes, implications, solutions in a multifaceted setting, to treat their peers politely.

SEE pioneer learning environment actually helps students to express their ideas, listen to different opinions, enforce their critical thinking *(*Totten, Sills, Digby, & Russ, 1991), engage in open and significant discussions: each student's standpoint, culture, background, finds an opportunity to emerge, enriching the educational value of everyone's shared experience.

A significant example is the final assignment, which consists in producing a research about one of the themes studied, comparing it with analogous issues in the students' local culture and environment. This "Homework", presented by pupils during the fourth session, especially promotes comparison of multiple perspectives, and aims at high standards of performance from all students; it encourages students to connect what they studied to their reality, to real-world objects, events, and situations, attesting diverse perspectives and experiences. For this

reason, the fourth session is tremendously challenging and exciting: pupils are enthusiastic to communicate their thoughts and they do not seem afraid of discussing serious problems.
The following excerpt is a small part of homework produced by a class participating to SEE. It highlights the educational value both of the experience and of this particular task: a comparison across times and cultures; students had to think about life in Qumran – particularly the community's choice to separate from the world and live a hard life in the desert, pursuing their ideals - and compare it to their own life style. They wrote:

> *It is not easy to find anything similar in our life as students, since the choice of isolation in Qumran does not meet our requirements or purposes. We are committed to realized ideals of peace and respect in the world. To pursue these ends we are willing to adopt not easy options; we have chosen a demanding school to have opportunities of unbiased education; to learn foreign languages in order to make friends with people of different cultures from distant countries; to acquire the skill of listening to everyone, even to those who are less appreciated by the prevailing mentality. Yet, our intention is to be engaged in this world we want to improve. We do not agree with the separation between "good and pure" on the one side and "bad and evil" on the other either. The world needs more respect and mutual sympathy, and we should see what we have in common. Like people in Qumran, we are interested in following a great ideal: to build a pacific life together with the peoples of the world. To follow this we make difficult choices, sometimes not immediately satisfying, sometimes against the mainstream. But we love to make these choices together and in that world that we want to improve, aware that no pure people opposing to impure people exist.*

This homework gave students a chance to express their judgement on what they had studied, and to speak about concepts like peace, war, fanatics, unaccepted people; Israeli students, in particular, helped Italian students to better understand the feeling of being in war, the situation in Jerusalem, while Italian students had the occasion to support their peers, who have to face a different everyday reality. SEE allows schools to open to world's problems and situations, promoting a valuable exchange and reflection, in an unusual and deep way, giving students critical tools that serve not just to the game's purposes (in order to acquire higher scores), but in everyday life as well.

V. Conclusion

Many pedagogic aspects emerged in the previous pages have been verified and analyzed thanks to the experimentation of SEE - Shrine Educational Experience. Feedback from teachers, students, and observers, survey results, focus groups, observations, and remarks from participants, allowed to identify and deepen the most didactically relevant aspects, guiding the refinement of the educational plot and the enforcement of the learning activities.

SEE opens a fascinating dialogue space, where opinions and different points of view can be expressed and shared in a pacific and acceptable way by all participants. The online cooperative environment assures the centrality of students: they become protagonists in their learning processes using their own skills, knowledge, and resourcefulness.

Learning becomes constructive: students have to discover concepts, events, relations between objects, and need to understand them, analyze their peculiarities, compare them to their previous experience, set them into new contexts. They are encouraged to express their thoughts, make them clear to the people they are talking to, bear critics, and be able to argue consequently. The feeling of *being here and now, together*, allows students to communicate their spontaneous ideas, sometimes ingenuous, sometimes incomplete, whose growth is often due the others' precious contribution and to the gradual growth of their critical skills.

The study material provided by SEE, i.e. interviews showing different – sometimes conflicting - contributions upon the same issues, is thought-provoking by itself, wakening curiosity and stimulating a further analysis of the different hypothesis. The educational games promote a study activity that is motivated by practical use: students have to make use of the knowledge deriving from interviews and auxiliary materials, and are encouraged to transfer it, thanks to comparisons and logical associations, into new contexts and situations. The various learning activities of SEE appeal to many different learning styles, allowing pupils to contribute with what they can do best and to develop new skills, enriching any student, even the smartest ones.

Teachers are essential for supervising and motivating students, providing support, and managing the sessions; the "guide" in the shared environment guarantees the educational value of the cooperative experiences, leading and moderating the online discussions (often quite lively), ensuring that they are understandable to everyone, helping students to express their personal opinions, to find out motivations, to investigate upon their views and relate them to different ones.

SEE shared cooperative environment provides additional values: comparison, discussion, shared learning, collaboration and playful competition foster some basic educational values, such as following rules, respecting others, understanding the value of living together and the ability of deciding together. Mistakes or incorrect behaviors are immediately corrected by the guide and remarked by students, who ask for a more serious performance, leading to a reflection on each one's opinion and attitude. Moreover, SEE encourages students to be more responsible, as they feel the active protagonists of a unique event. Interacting with net-mates increases motivation, curiosity and interest, emphasizing the valuable role of emotions, amusement, and surprise in learning and education.

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