

## INCLUSION OF THE MINECRAFT DIGITAL GAME IN THE THEATRE EDUCATION COURSE: THEORETICAL APPROACHES AND AN INTERACTIVE EXPERIMENT

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### ABSTRACT:

Due to technological advancements, all areas of daily life undergo changes including the methods of the educational process. The traditional model of education, with the teacher as the transmitter and the student as the receiver, has been modified as the facts in today's era are completely different from what they were in the past. Especially now the use of ChatGPT has proven that education should be oriented towards methods that promote students' critical thinking and enhance interaction, communication, and creativity.

The new generations of learners not only demand but also are entitled to new educational methods, which reflect the evolution of technology and respond to contemporary needs. The educational system should meet these requirements and shape new practices that will motivate the students, so that the learning result will be substantial and clear.

This paper focuses on the use of the videogame "Minecraft" in the subject of Theatrical Education, which is included in its educational program of primary education, and more specifically in the third and fourth grade (3rd - 4th) during the 2021-2022 school year in three elementary schools in a total of 223 students. Through this academic project has been proved that there is a bidirectional connection between these digital tools and the education of art and cultural heritage. This interactive experiment was completed using survey questionnaires so as to understand and define the value of the use of digital tools during the learning procedure.

### 1. INTRODUCTION

The spread of Information and Communication Technologies (ICT) has contributed to the development of new educational methods, offering additional possibilities in the teaching process. Digital games, which are the most widespread means of entertainment for young people can enrich the educational process by providing positive outcomes for students (Shaffer et al, 2005). It is a goal, in the educational field, to achieve the combination between electronic games and education for the acquisition of knowledge through a unique experience (Ciavarrò, 2006). In addition, they motivate students in a more constructive way than the traditional educational method and this element of motivation, the inner desire of the individual, is a key factor for the student to show interest in learning and to maintain for a long time (Tyrovolas et al, 2022). The student gains control, undertakes to solve any problems that arise, develops his creativity and all these elements enhance his/her cognitive development (Bruner, 1972). The teachers, for their part, distribute roles to the participants for proper cooperation between them (Srijbos & Martens, 2001) or define the work of each student and also the time in which the project should be carried out (Owen, 2000). Through this procedure, Students acquire an active role and their motivation to learn is strengthened (Junco, 2014).

While in several countries the integration of digital games in the educational system is developing at a rapid pace (Caponetto et al, 2013), in Greece this phenomenon is not strongly present and old practices are maintained with perceptions that are a brake on this integration.

The achievable purpose of the educational community nowadays is not the fundamental reform of education but the

different approach in order to improve the already existing structure and to enrich it so that it is more flexible (Christakis, 2018). This will be possible through the cooperation of theory and practice, the mutual service of the "new" and the "old", the inclusion of all the necessary tools that will further raise the value of education and make it worthy of contemporary requirements. The immediate goal, therefore, is the development of a new learning environment that will prevent sterile knowledge and memorization and will deepen experiential knowledge by acquiring skills that can be cultivated from the use of new technologies.

According to the conditions up to now, for the most part, the semantic receptive method (Ausubel, 1963). is used for teaching within the school environment, where the learners take the knowledge as it is imparted to them (Retalis et al., 2005). In this paper, we attempt to combine this type with semantic discovery (Ausubel, 1963), as the students will not be simple listeners to the teacher, but by adopting the theoretical bases that will be provided to them, they will have the ability to observe and relate the received information to the personal experiences resulting from their perceptual ability. Teachers must change their teaching methods and adopt "strategies and techniques that are more communicative, i.e., interactive" (Androulakis, 1999). Traditional learning is replaced by substantive learning, where the students combine the knowledge, they already possess in order to acquire new ones (Ausubel, 2012).

The purpose of this research work is to evaluate the inclusion of the Minecraft digital game in the Theatre Education course in primary education, and more specifically in the third and fourth grade during the 2021-2022 school year. The research took place in three elementary schools in a total of 223 students.

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Through the theoretical approaches of the elements of digital games and the courses of Theatre Education, the research is completed with an innovative educational experiment where students are asked to build from scratch, with the knowledge they received during the courses, spaces of ancient and modern theatres in the virtual Minecraft world. This project was implemented under the framework of the MSc of Digital Culture, of the Department of Informatics in the University of Piraeus, Greece.

The structure of the article is organized as follows: Firstly, Section 2 explains the state of the art, Section 3 describes the methodology of the research work, the questionnaires, the theoretical approach and the practical part of the Course. Then, Section 4 discusses the results of this research, and finally, the last section summarizes the conclusions of our work.

## 2. STATE OF THE ART

While students largely use digital technology in their daily lives, in Greece they do not enjoy its benefits in education, nor do they participate in technology-related activities at school. Prensky (2003) points out that the digital game must become a basic part of the educational process and that it is a basic educational tool that will be used especially in the future to a much greater extent. The educational use of Minecraft began just a few years after the first appearance of the game and proved to be an excellent learning tool for both academic and social knowledge. Through its 3D environment that looks like Lego, the users can build and interact in a virtual world (Bos et al., 2014) that helps them acquire experiences and develop critical skills, which are implemented with methods that respond to today's challenges.

According to a study by Ciampa (2013) there are six important factors of effective learning systems, challenge, control, curiosity, recognition, collaboration, and competition. All these factors are key characteristics of the Minecraft game, placing it in the first place of preferences for its use as an educational tool and can be analysed as follows:

1. **Challenge:** It helps players and especially young students to be able to decode messages and process data and information they receive in different ways. For example, in the context of the game there are no texts and words but images that convey separate meanings (Dourish, 2001; Streeck et al., 2011) that guide the students to play (Kress & van Leeuwen, 2001). Children gain the ability to create imaginary or real structures by stimulating their imagination and creativity.
2. **Control:** Due to the ease of handling of the game by young children, it is possible to include it as an educational practice from the first grades of elementary school (Brand & Kinash, 2013), as it provides a large number of ready-made lessons either with specific content or targeting concepts.
3. **Curiosity:** Students can experiment as much as they wish without the constraints of the real world (Gee, 2007).
4. **Recognition:** It places the student as the protagonist in a free, open world and through its playful graphics and provides the ability for the participant to interact with the building blocks, either by removing them, altering them or constructing them anew. Students' performance improves as through playful learning activities they can face and solve problems (Bottino et al., 2007).

5. **Collaboration:** Through security login codes, up to 40 students can connect and create, build, and solve potential problems. It helps young people to express and control their emotions by building strong social bonds, enhancing creativity and teamwork.
6. **Competition:** Students realize that it is not an ordinary game for them as it has no winners or losers and there are no levels to reach or overcome. As a result, during the game the students are calm and content with their activities, without stress, and they can more easily receive information and knowledge without effort. However, the more creative the students are the more satisfied are by the outcome of their effort, leading them to compete with their "best self".

There are programs such as the Immersive Reader which makes it easier for students to read and even translate text within the virtual world of the game e.g. by the Chemistry Resource Pack the children are given the opportunity to construct a periodic table. Also, over 300 worlds are available to learn about history, space exploration and marine biology, art, climate sustainability etc. (Short, 2012). Through the game the students can develop spatial skills (Garskof, 2014) and reconstruct ancient cultures, sites and buildings or learn chemistry by creating structures of atoms. It is also used in science lessons to raise the mind thinking of the youth (Kenkel, 2015, Risberg, 2015). For example, in mathematics, Minecraft can help students to "explore concepts such as algebraic patterns, measurement, perimeter, area, and volume" (Bos et al., 2014). In the biology course, it is possible to construct animal and plant cells, where students can describe the shape and structures of each part of the cell and explore its role.

Moreover, Minecraft Education Edition turned the game into an educational tool that can be easily integrated into the educational process and understood by teachers (Heintz & Law, 2018). With the use of digital games, there is the possibility of implementing in the classroom activities that would not be possible to carry out otherwise, such as for example the construction of theatre buildings which is the subject of this research work. As mentioned by Karsenti, Bugmann and Gros (2017), Minecraft is a separate tool that teachers can use to facilitate their work, especially when trying to include and empower disadvantaged students in the classroom (Elliott, 2014).

Lings Primary School in Northampton combines the academic curriculum with the Minecraft EDU digital world to teach children about Shakespeare's plays such as A Midsummer Night's Dream by creating an in-game performance of the play<sup>1</sup>. Regardless of the age of the children, they are invited individually or in groups to create both the spatial and technical parts of the project in order to complete the performance in the world of Minecraft.

Another example of the use of Minecraft in the educational process is the case of a teacher from the Western USA. who used the game to teach his students math, science and computing. This teacher designed his lessons based on student evaluations and reports. After this study, he created a curriculum that he called Mathcraft and which, within one academic year, helped students improve their scores from 18% to 84%<sup>2</sup>

Saez-Lopez, Miller, Vázquez-Cano, and Domínguez-Garrido (2015) tested Minecraft Edu in history and architecture classes with school students from the United States and Spain. While

<sup>1</sup> <https://www.pauldredge.co.uk/deploying-minecraft-education-edition-at-lings-primary-school-northampton/>

<sup>2</sup> <https://www.classcraft.com/blog/mathcraft-jim-pike/>

parents were hesitant and perhaps even negative about the usefulness of play and its inclusion in lessons, the researchers found that students valued that playing, creating and learning had a positive sign in these classes.

In the Midwest of the United States, a social studies teacher applied the use of Minecraft so as to motivate his students to write a constitution and create governmental and economic policies for the early colonies. Students used Minecraft to create a 2D map with key buildings such as churches and town halls and connect virtual colonies together (Colias, 2015).

Short (2012) describes how Minecraft was greatly leveraged through the use of 3D imagery in its virtual world. Thus, the students with this technique were able to learn biology through the creation of 3D maps of the human body and ecology through the construction of maps that list temperatures, altitudes on earth and climate simulation using various experiential and climatic conditions. The students built structures in the virtual world of Minecraft and made exclusive use of resources from the earth. As a result, they realized their value and the need to protect them, as for example the destruction of forests due to their excessive exploitation (Scarlett, 2005). They also learned physics using Minecraft blocks by working with gravity, explored natural phenomena such as the evaporation of water, and learned chemistry by drawing a 3D periodic table to render 3D images of mathematical functions and chemical reactions through a mod called MineChem.

There are also several programs with construction competitions in Minecraft that concern the engagement of young people with the game as well as online communities of players and designers such as the Builders Club in Minecraft. With the guidance of a qualified advisor, members of these communities can collaborate and create structures. Participants have the opportunity to play with other students who love the game and make new friends. For any help and advice or push there is a counselor for guidance. It is a supportive community in a constructive environment where children connect and learn the benefits of group exercises as they strengthen their social-emotional and conflict resolution skills. Ideas can be shared to strengthen group cohesion and the child sets and meets goals by developing self-confidence through group feedback while enjoying a game they love<sup>3</sup>

### 3. METHODOLOGY

It is increasingly accepted that new forms of experiential didactic learning, where teaching focuses on the two-way relationship of learning - entertainment can present concepts in a clearer and more comprehensive way, to make them clearer, while ensuring a high level of knowledge. Digital environments offer different educational opportunities, some with cognitive and emotional purposes, others with historical conformity and scientific rigor, and still others through the realization of expressive-creative experiences with high quotients of imagination.

Using Minecraft in Theatre Education, we aim to inspire children on cultural heritage. Also, due to the pandemic COVID - 19, children have not participated in cultural events over the last years. Through the Theatre Education class in primary schools and the game that most of them already know and love, we tried to help them to gain knowledge about their history and architecture. Moreover, according to research by the Hellenic Ministry of Culture, in the last decade there has been a steep drop in the percentage of children visiting theatre performances,

which makes it even more necessary to utilize new technologies in our lessons to attract their interest on this cultural field.

In this research, a series of theoretical lessons were implemented for children aged 9 and 10 years, which along the way led to the practical training of the participants by creating digital theater spaces in the world of Minecraft (the latest version of Minecraft Education Edition was used) and the creation of a digital repository, which they themselves chose through the course.

Several students were already players of the game while there were many who were subsequently made on the occasion of our lesson. Minecraft does not require special digital skills and therefore students who were not familiar with it had no difficulty at all joining the group.

By using questionnaires, we received answers from the students both before and after the implementation of the teaching. Therefore, conclusions were drawn in relation to the integration of new technologies in the Greek school, but also the methods of improving the educational practice from the side of the recipients, gaining feedback regarding their requirements and needs.

For the practical part of the courses due to deficiencies in the logistical infrastructure of the schools, and as the last version of Minecraft Education Edition used requires for its execution the existence of the latest operating system of Microsoft (Windows 10) as well as the subscription to Office 365, with sincere interest, the students, after the consent of their parents, were willing to practice the theory in their personal space, using their computer. Thanks to the online functionality of Minecraft, they were allowed to collaborate in the construction of famous theaters from all over the world and experience this creative activity together.

More specifically, the research was divided into five parts (Figure 1):

1. First Questionnaire to obtain initial, basic information for the correct conduct of research and the comparison of results.
2. Theoretical Approach and learning of the architectural function and evolution of theaters.
3. Learning the Minecraft Digital Game in the classroom
4. Practical Part of the Course with the construction of theaters in the digital world of Minecraft by the students.
5. Second Questionnaire for drawing conclusions from the children themselves.

The research that took place was experimental and was carried out during the school year 2021-2022 in three elementary schools for 223 students, of which 104 were in 3rd grade and 119 in 4th grade.

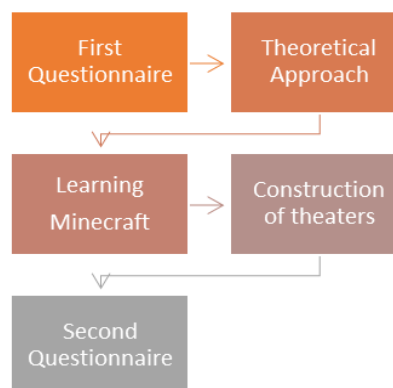


Figure 1. Methodology of the research work.

<sup>3</sup> <https://connectedcamps.com/builders-club-in-minecraft>

### 3.1 First Questionnaire

The first questionnaire was given to the students so as to retrieve information before integrating the Minecraft game into the lesson, regarding their knowledge and involvement with computers and digital games, but also express their opinion on educational issues. The 14 questions are the following:

**Question 1-2:** Are you a boy or a girl? Do you have a computer in your personal space?

The largest percentage, although by a small margin, is that of girls, who were 123 against 100 boys. A key question to start researching a digital gaming issue is computer ownership. According to the answers, there is no student who does not have a computer at home. This is due to the fact that during the pandemic several families were led to purchase technical means so that distance learning and teleworking from home is possible.

**Question 3:** How well do you know how to use a computer?

The question aims to identify how many of the students are computer literate in order to understand if it will be feasible in this group of children to carry out the research as it is a key skill to study Minecraft in Theater Education. Of the respondents, 138 answered "very well", 22 "fairly" and 11 "a little". It is worth noting that no student chose the answer "not at all".

**Question 4:** Do you play electronic games in your free time?

The purpose of the question is to examine the number of children who devote their free time to the entertainment provided by electronic games. At a rate of 77% (172 positive answers) children prefer digital games as they provide fast images, changes of scenery and many possibilities for action.

**Question 5:** What kind of digital games do you prefer to play?

This question is very important as it highlights the children's preferences, and we will be able to understand whether they will show interest in the new educational process. Regarding the types of digital games that children prefer to play (Table 1), we see that most of them are action and strategy. The specific answers were given by 98% of the boys with the remaining 2% preferring sports games. For girls, the responses were split between simulation, role playing, logic, fun and quiz games with the most votes going to fun games. We notice that the girls avoided strategy and action games.

Action	60
Quiz	17
Entertainment	40
Strategy	32
Simulation	21
Role Playing	28
Logic	17
Sports	8
<b>Total</b>	<b>223</b>

**Table 1.** The answers of the 223 students on which type of digital games they prefer.

**Question 6:** Do you prefer group or individual video games?

In order to examine children's preferences, this question serves to know in advance their moods for group or individual video games, as they will be asked to cooperate with their classmates. We notice that most of the students (200 out of 223), play individual games.

**Question 7:** Do you like to play team games at school?

In contrast to the previous answer, it is clear that children show a great interest in group games at school, with 181 positive responses and 42 negative ones.

**Question 8 and 9:** Do you play digital games every day? "If you play digital games every day, how much time do you spend daily?"

The questions concern the contact that students have with digital games and the frequency of use is a key piece of information. In this particular survey, we see that 144 of the 223 children have daily contact with videogames, that is, about 65% of the children. Of the 144 children who responded positively to the question of whether they play video games every day, half play for a maximum of 1 hour. The children who answered that they play for more than 2 hours are the children who have older siblings and spend time together in this activity, mainly in online games.

**Question 10:** Do you think that digital games can be included in education?

Most of the students (182 out of 223) consider that digital games can be included in education and showed incredible enthusiasm just hearing the idea, making their own suggestions. It should be pointed out that when answering this questionnaire, the children did not know about the inclusion of Minecraft in the lesson.

**Question 11 and 12:** Would learning be more engaging using computer games? Do you think learning would be more effective if digital games were used?

The answer to the questions was 100% positive as we must not forget that for children play is the most important factor in their lives. They are more likely to resist anything but the game.

**Question 13:** Do you know the game Minecraft?

When asked if they know the Minecraft game, only three (3) children answered that they don't, although they soon became knowledgeable through the Theater Education course. The percentage of children who have played Minecraft at least once is again large, giving an even clearer picture of the ease of its inclusion in the educational process.

**Question 14:** How well can you respond to his platform?

In order to be able to determine and prepare for the lessons, an important factor is the children's abilities in the specific game (Table 2).

Not At All	84
Little	18
Enough	38
Very Well	59
Excellent	24
<b>Total</b>	<b>223</b>

**Table 2.** The answers of the 223 students on how familiar they are with the game.

Of the 139 students who have been in contact with the environment of Minecraft at least once, only 18 can respond to a small degree to the platform, and this is because they have not played enough times to become familiar with the way the game works. On the contrary, the students who have excellent knowledge of the game are 24, while those who know how to play quite (enough) and very well are 97.

From the 14 questions that were asked, it can be extracted that a direct consequence of the pandemic and the extensive use of

computers is the very good knowledge of their handling by children in a wide age range. Now, having the technological means at their disposal, children get used to obtaining information on various topics through search engines, to communicate with others and to play games.

Also, in most group digital games users are required to use the internet. At the specific ages targeted by the questionnaire, parents often do not allow it to be used to protect children from the dangers of the internet. After discussion in the classrooms, it became known that children who have older siblings are the ones who have access to online games and spend time for their shared fun in online, group games.

Nowadays children are increasingly finding ways to entertain themselves in electronic media as the traditional play in neighborhoods and squares has disappeared. However, the preference for group games within our school environment reinforces the view that we owe it to children to promote cooperative education through digital games. Students will be able to play their favorite games through the computer, together with their classmates, collaborate and finally gain access to knowledge in this special and innovative way.

The children responded positively with over-enthusiasm. The wide appeal of the creativity and ease of this particular game across the range of age groups has made it known even to children who are not players of this particular game. The Microsoft game has surpassed the number of 100 million active players and is constantly growing, making it one of the best-selling games in history. From earlier research, according to Zedda-Sampson (2013), about 40% of 8 to 10 year-olds were already learning Minecraft, which was a large number considering that only about 14-17% of them used popular sites like Facebook and only 8-16% play online.

It is one of those games that, since you don't need to be in daily contact, it is easy for children to create their own world, to have complete independence in their movements and in the course of the game with very few and simple rules. They have full control over the space they create and at any time they can pause their game or even end what they have created by deleting it.

Given the above, it is not surprising that when hearing the educational use of such a well-known game in the school environment, the surprise and the children's anticipation was enormous.

### 3.2 Theoretical Approach and Practical Part of the Course

After the theoretical approach about the history and the architecture of the theater, the students obtained a good knowledge of its evolution, from its first organized form built in the ancient Greek area to the most modern buildings around the world. The participants were invited to construct in the virtual environment of Minecraft theatrical spaces that would meet all the required specifications of a real theater e.g., arrangement of the stage and the spectators, etc., according to what was analyzed in class.

Due to the fact that many students were familiar with the game but there were also some who had not come into contact with it again, several hours were spent describing the game, its environment, requirements and capabilities. For this reason, as a first contact, the children were engaged with the Lego toys in the classroom, getting into the process of creating some models with colorful plastic cubes. Sufficient time was spent playing Lego so that the children could enter into the process of thinking and designing together, collaboratively, what they want to build, to unleash their imagination and to "build" together something of their own that will be a product of individual and collective effort.

Then, it was explained how the game with Lego bricks can be transferred digitally, in a 3D virtual environment that provides unlimited freedom of movement. Players when starting a new "world" must choose one of four difficulty levels, ranging from easy to hard. In our lesson we chose the lowest degree of difficulty.

Each classroom was one group, as the children decided not to divide into subgroups but to create theatres together based on their knowledge and imagination. Before they started the constructions, they discussed in the school area how each one individually imagines the building, a fact that brought them close and they exchanged opinions getting to know each other better.

Of particular interest was the search by some students for information from other teachers, as the little "architects" were asking for information on mathematical matters for the successful and balanced construction of the theater spaces, visual elements that could be useful to them but also historical pieces that would direct them more correctly to their ideas. Trying to achieve the most realistic results, they calculated the area, the height of the walls, the size of the stage and after covering the functional parts, they decided the details for the aesthetic issues such as the colors they would use etc. At the same time, the parents expressed their excitement as children also engaged with cultural issues at home, transferred their knowledge and presented their ideas in order to receive credit.

They then arranged meetings through the platform to begin construction. Teachers should, within reason, always leave the students a little free and there should not be constant guidance, otherwise they will be burdened and will not have the sense of creation (Hamalainen, 2008). The key factor that will contribute decisively to the efficient use of digital games in education is the game itself and the possibilities it provides to the players (Blumberg & Sokol, 2004).

Also, the children who knew the game accepted the others and tried to pass on their knowledge to them patiently so that everyone could participate. In several cases, they scrapped what they had made and started over again just to get everyone to agree with each other.

Each week during our lessons, there was an update on the progress of their projects, under the guidance of the teacher, either in the classroom or through the game platform. Their constructions included both open (Figure 2) and closed theaters with special details that make them stand out.



**Figure 2.** Approach to the Herodian Conservatory of Atticus, Athens Greece.

The theatres that the students decided to design were the Herodian Conservatory of Atticus, the theatre of Epidaurus, the La Scala theatre in Milan, the Shakespeare's Globe in London, the Carnegie Hall in New York, the National Noh Theatre in Japan (Figure 3) and the Roman Conservatory of Nikopolis in Epirus.



Figure 3. Approach to the National Noh Theatre, Tokyo, Japan

The students experimented with the perspective and the shape of the constructions, and they managed to deliver what they had imagined. They presented solutions that went beyond the main architecture, e.g., they covered the interior with paintings (Figure 4), they made lighting from torches (Figure 5), they placed curtains on the stage of the indoor theater and built a waiting area for the spectators. They also dealt with the creation of the theater's exterior space by designing access corridors for the spectators.

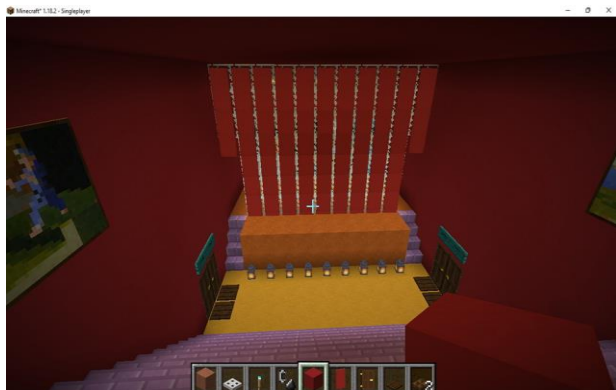


Figure 4. Approach to La Scala theatre, in Milan, Italy



Figure 5. Approach to National Noh Theatre, Tokyo, Japan.

### 3.3 Second Questionnaire

After the completion of the experimental educational process, the children were asked to answer a second questionnaire. The goal of that stage was to examine the results and draw conclusions about the students' experience on the inclusion of the Minecraft game in the Theatre Education course. The questions concerned the practical part of the course such as the contact with the game but also an assessment of the new teaching method. The questionnaire was created in the simplest form as the purpose is not to make the students resentful but

with pleasure to give honestly as much information as possible. The 8 questions are the following:

**Question 1:** Was it difficult to move around in the environment of Minecraft?

None of the children who participated in the educational use of Minecraft had difficulty understanding and applying the gameplay. Children today are quite familiar with technology and moreover the most basic element that characterizes them is that they have the ability to absorb knowledge very quickly and easily use it in practice.

**Question 2:** Do you think it helped you in theatrical education class?

All the children agreed that through the game they were able to obtain many more facts about culture, the history of theaters, the types of scenes as through their own creations they gained experience and developed design skills based on theoretical knowledge.

**Question 3:** Could Minecraft be used in other lessons?

And to this question there is a positive unanimity in the answer.

**Question 4:** If your answer is yes, in which courses would you like it to be used?

Most children struggle quite a bit in math class and would like to incorporate play into their teaching if possible. Also, the language, English and visual arts lessons are areas where play can be included and have benefits in understanding, learning and creation.

Math courses	145
Literature courses	24
Foreign Language (English) courses	32
Art courses	22
<b>Total</b>	<b>223</b>

Table 3. The answers of the 223 students on which courses they would like Minecraft to be used.

**Question 5:** Do you think Minecraft has helped you collaborate with your classmates in the virtual world?

All the children agreed that they cooperated with their classmates to help each other, to exchange views and bring the common desired result to fruition.

**Question 6:** Do you think you developed closer relationships with your classmates after getting to know each other through the game?

The answer was 100% positive. The communication of the children led them to collective activity, as the common goal that does not include victory or defeat, encouraged the contacts between them and they functioned as a team.

**Question 7:** Does it serve you to create constructions like theaters individually or cooperatively?

All the children chose to work together to build the theaters despite the possibility of a single player game, i.e., an individual game. Interaction with classmates who are part of the everyday safe environment - beyond the family - provides children with greater self-confidence. Contact with familiar people to whom they can turn for help but also for fun with common interests attracts students for cooperative activities rather than individual ones.

**Question 8:** Through this method do you think that learning was more attractive?

All the students answered yes, confirming that games with a serious purpose are one of the most important factors in children's contact with elements of culture and contribute to its dissemination to new generations and its preservation.

The main purpose of the educational process of this research work was that the students can achieve knowledge through a playful way and to receive all those elements that will help them to further their knowledge and understanding. They recognized values such as creativity, initiative, cooperation, and imagination and realized that it is possible while playing and having fun to learn. Certainly, they would like this method to be used in other classes to make the acquisition of knowledge (especially in subjects with difficult concepts) much easier.

In addition, one of the important advantages of this process is the cooperation of students. Through group, creative work, students collaborated with their classmates to help each other, exchange opinions, and bring the common desired result to fruition. Many children gained self-confidence and by following their instincts as well as the instructions of their classmates, they developed their critical thinking and the ability to solve problems that arose during the construction part of the course.

One of the most positive outcomes was how the relationships developed between the children, even when they did not exist before. Several children, who did not hang out with some of their classmates e.g., due to misbehavior etc. came closer through the game and took their relationship to another level, more cooperative at first and more friendly afterwards.

It is worth pointing out that at first the children were very cautious about their cooperation, but along the way they realized that they want the same thing, without the existence of competition or anti-jealousy. The encouragement of interpersonal relationships by the game itself contributed to the development of friendships in the yard as well.

With the total participation of the children and their activity in all parts of the construction they understood the definition of applied knowledge. The interest of the students increased, and through the motivations provided, they gained substantial knowledge and not superficial knowledge. Now with the acquisition of experiences through the innovative educational method, access to knowledge became easier and through creation they realized the importance of experiential learning.

#### 4. RESULTS

The students managed to combine theory with practice and transfer the knowledge they gained into a game with excellent results that satisfied both their viewers and the creators. They improved their already existing skills and also developed the skill of architecture through their creations (Figure 6). They understood issues of culture that were completely unknown to them and assimilated information that they deposited in their constructions (Figure 7). Through a holistic approach, they presented their projects to the whole school, asking that this technique, combining theoretical lessons and digital games, be consolidated and integrated into other lessons.

Analyzing the results we received after the analytical questionnaires during the research process, it is concluded that the students (a) expressed their satisfaction positively evaluating the whole project (b) want the inclusion of digital games in the teaching procedure, (c) found that the game had a positive effect on everyone without exception, especially on the children that are considered more introvert and (d) admitted that started

socializing each other more, and developed relationships between that previously did not exist.



**Figure 6.** Approach to the Globe Theatre London, England



**Figure 7.** Approach to the Globe Theatre (Interior) London, England

#### 5. CONCLUSIONS

The inclusion of digital games in the curriculum of Theatre Education offered only benefits as through digital tools, such as the Minecraft game, the students' knowledge of cultural heritage was greatly enriched. The upgrading of the educational process through the improvement of the quality and method of teaching materials encouraged the active participation of students and experiential learning, giving them the opportunity to develop their personality, abilities, and skills. Students were able to express themselves, unleash their imagination and creativity and be transported to different times in the past and understand the history, development, and evolution of culture.

Game in general is the most effective means of learning and is the most enjoyable activity for children. Therefore, by using the digital gaming the performance of the students improves, we gain their interest and, as educators, we communicate elements that constitute essential knowledge and not superficial information.

The inclusion of digital media in the educational program is considered nowadays an imperative for all the benefits that were developed in detail through the theory as well as the practice of the specific work.

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