GAMIRIGHT REPORT TEMPLATE

NATIONAL REPORT

GAMIRIGHT

The right gamification for tackling early school leaving and disadvantage

Erasmus Plus Strategic Partnership – Innovation

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1. INTRODUCTION

During the past few years, there has been noticed a significant interest in Greece concerning the utilization of Game Based Learning and Gamification methods in the educational process. Moreover, technological advances and the incorporation of Information and communications technology (ICT) in the school curriculum have paved the way for utilizing digital gaming in education. This research has the goal to investigate to what extent the Game based Learning and Gamification methods have been used in the Greek educational system, to present initiatives produced and to show obstacles teachers have encountered applying these methods.

2. GAMIRIGHT – NATIONAL CONTEXT

2.1 Desk Research

2.1.1 Legal Framework

The use of games in education is found deep in the past centuries. Some observers mention that the Socratic Method may be considered as a kind of a word game of questions and answers, as he doesn't just wish to transmit knowledge, but also to lead his co-speakers to discover and understand it (Kanakis, 1990). Furthermore, game as a teaching method is welcome, according to Plato, saying that it is more important for the learners to "learn playing" (Plato, Politeia, 537a). Nowadays, a strong trend in the educational process is the introduction of and GamificationGame based Learning methods, which constitute alternative teaching methods. These methods have as a general goal the creation of educational environments combining in balance learning with student satisfaction.

Researches have shown that the use of games but also mechanisms, elements and techniques running games, contribute to the improvement of the learning process and to the enforcement of students' involvement in the learning process, through prompting, positive influence and motivations (Arapitsa, 2019; Papastergiou, 2009). Game Based Learning and Gamification methods don't aim mainly at learners' entertainment, they are methods which remain committed to learning goals. They both boost the educational process, they don't replace it, leading to the achievement of learning goals, like deepening of learning material, acquiring skills and improving school performances.

Education in Greece

Education in Greece is centralized and governed by the Ministry of Education and Religious Affairs (Υ.ΠΑΙ.Θ.) at all levels. The Ministry exercises control over public schools, formulates and implements legislation, administers the budget, coordinates national level university entrance examinations, sets up the national curriculum, appoints public school teaching staff, and coordinates other services[1].

The Greek educational system does not allow much autonomy to its teachers. The analytical programmes and timetables applied at schools have been created by the Pedagogical institute (PI)- Greek Ministry of Education that was later renamed to Institute of Educational Policy (http://iep.edu.gr/en/), which, among others, gives its opinion on or proposes matters concerning: school curriculums, school books, teaching methods and means relevant to each subject. Therefore, the formation of the educational policy takes place away from teachers, although they are the ones asked to apply decisions made. The sectors constituting the basic teachers' activities are the ones relevant to the educational process and decision making in the classroom. They include choosing the methods used for teaching, choosing the educational material and evaluating students.

[1] https://en.wikipedia.org/wiki/Education_in_Greece

Game Based Learning and Gamification

As far as the Greek educational system is concerned, there have been efforts to incorporate the Game Based learning and Gamification methods into the analytical curriculum, mainly in primary education. Simulation games as well as role-playing games are the proposed methodology by the Institute of Educational Policy. Greek teachers have the ability to choose the educational methods and strategies. Central management and school headmasters can propose some teaching methods or approaches to teachers, but the final choice lays on the teachers' discretion. Despite all these, the model of teaching through games, as well as other alternative models, are not exploited satisfactorily in teaching (Kossivaki 2003) because of the following factors:

- ✔ Games take up a lot of time and require more preparation on behalf of the teacher, compared to other teaching methods
- ✔ It requires a holistic participation of students, that is physical, emotional, mental and movement around the room, which is very difficult for schools that are designed in the traditional way.
- ✔ Game is opposed to the prevailing mentality about teaching at school, claiming that anyone playing is thought to be straying from the school curriculum and teacher's profile.
- ✔ Students' performance can't be easily measured (e.g. vocabulary expansion, understanding science or maths etc.)
- ✔ There is the possibility that these learning procedures are considered by some students "easy" so that they refuse doing laborious homework.

Therefore, we realize that concerning the application of Game Based Learning and Gamification methods in the Greek educational system, there is no particular plan by policymakers, but it is up to the teachers' discretion.

Digital games and software

The advance of technology has also contributed to the creation of educational digital games and software. Researches have shown that educational digital games and software run by pedagogical rules, make teaching interactive and cross-curricular and can become an extremely valuable tool for teachers (Panagiotopoulos et al., 2003, Papastergiou 2009). However, the Greek educational community slowly accepts these rapid developments. In Greece, only these last few years, there has been interest in utilizing educational digital games and software in the educational process.

Concerning educational digital software, the Institute of Educational Policy has incorporated the new technologies in the "Joint Cross curricular Framework for schools" and in "Curricula" to teach all cognitive subjects. Furthermore, it has developed the following software / platforms, which utilise the Game Based Learning and Gamification methods:

- a series of educational software (https://ts.sch.gr/software) concerning all educational levels that can be exploited by the educational community.
- the platform titled "Aesop" (http://aesop.iep.edu.gr/#about) that consists of a series of interesting digital interactive educational scenarios following the rules of cross curricula and science (Gklavas et al. 2010).
- the platform titled "Photodentro" (http://photodentro.edu.gr/lor/) which is a digital storeroom of Open Educational Sources and hosts digital educational material used in teaching and learning, like interactive simulations, educational games, 3D maps etc.

The digital material included in the sources above is freely available and it is at every teacher's and student's disposal, whenever they feel it contributes to the achievement of learning goals. Moreover, teachers are free to use other sources available through the internet.

In this framework, teachers must have that "special knowledge" (Gklavas et al., 2010) that will enable them to use this digital software in teaching, but also to check its quality and compatibility to the educational principles. Therefore, to utilize educational software in the classroom, some prerequisites have to be ensured. First of all, schools must have the necessary facilities concerning digital equipment and software appropriate for educational use. Secondly, a high percentage of teachers should have been trained on basic skills on the use of new technologies, but be able to use them as well.

As far as data in Greece goes and according to the Pedagogical Institute findings (Gklavas et al., 2010) school facilities are considered adequate. It is just that not all teachers have been equally acquainted with the Informatics and Communication Technologies, resulting in the non-use of these facilities in the teaching process.

Nevertheless, according to Nikolaou and Barbarousis (2017), there is a set of limiting factors in the exploitation of digital games in a Greek classroom, such as:

- ✔ the school curriculum and the lack of support towards the teachers,
- ✔ the lack of available time to familiarize teachers with the educational digital game,
- ✔ the search of the appropriate educational game for a specific module in the compulsory school curriculum,
- ✔ the lack of experience in the incorporation of digital games in educational activities,
- ✔ the necessary equipment
- ✔ teachers' mentality
- ✔ the readiness to accept a novelty.

Therefore, we realize that despite the efforts of the Ministry of Education to use digital games in the Greek classroom, there are many obstacles that are yet to be overcome.

Student contests based on games

At this point, it would be useful to mention that the Greek Ministry of Education and Religious Affairs, acknowledging that game is an integral part of the educational process and that its educational role is important, it organizes and promotes student contests based on games, mainly for digital creativity, in different subjects throughout the schoolyear. Nonetheless, participation is optional on the teachers' part and is also achieved without hindering the normal operation of the school. Consequently, the participation in such contests is an extra-curricular activity, in after school hours, which explains the low rate of interest and participation on the teachers' part.

Moreover, other important private and public organizations operating in Greece have undertaken significant initiatives to create mainly digital educational applications, as well as school contests based on games. Such organizations are mostly museums like the Acropolis Museum (https://www.theacropolismuseum.gr/en), the National History Museum (http://www.nhmuseum.gr/) but also other organizations like the Onassis Foundation (https://classroom.onassis.org/) etc.

2.1.4 Table with Case Studies – Good Practices

A table listing a few case studies – good practices in Greece are presented below:

CASE STUDIES – GOOD PRACTICES

CASE STUDY 1	
Name	Educational Software for Primary & Secondary Schools
Description	Certified educational software for Primary & Secondary Schools which help students learn, through a series of activities created in the form of animation and with the support of interaction.
Key Stakeholders/ Provider	PI Pedagogical Institute – Greek Ministry of Education (GR)
Level (Organisational, Regional, Local, National)	National
Type (Prevention, Intervention, Postvention)	Intervention
Impact	This material is a useful tool for teachers and parents. It help teachers improve the learning process and make it more interesting and fun. Thus, students are led to a fuller understanding of the concepts, while at the same time they can follow their own learning path.

Available Statistics (if available)	-
Tools/Resources/ Services	software
Link/ Website	https://ts.sch.gr/software

CASE STUDY 2	
Name	Playing with the tangram puzzle
Description	Educational game based on the idea of the Chinese tangram puzzle. Learning goals are to familiarize students with geometrical shapes, as well as cultivating the perception of pace. The game consists of 18 patterns of gradual difficulty. The students are given the opportunity to create these patterns, using basic geometrical shapes.
Key Stakeholders/ Provider	The Greek Ministry of Education and Religious Affairs
Level (Organisational, Regional, Local, National)	National
Type (Prevention, Intervention, Postvention)	Intervention
Impact	It addresses mainly students 4 to 9 years old, teachers but also the wider public
Available Statistics (if available)	-
Tools/Resources/ Services	software
Link/ Website	http://photodentro.edu.gr/lor/r/8521/5623

CASE STUDY 3	
Name	An Ancient Temple
Description	An online educational game on the architecture of Greek ancient temples. Its aim is to familiarize users with the function of the ancient temples, their design, their morphology, type, construction and decorative sculptures. Six characters, each one through its own role relating to the ancient Greek temple, present the game modules. One special application entitled "Learn More" completes the game and enriches its content with more expert knowledge on the topic.
Key Stakeholders/ Provider	The Acropolis Museum
Level (Organisational, Regional, Local, National)	National
Type (Prevention, Intervention, Postvention)	Intervention
Impact	It addresses mainly students from 9 years old, teachers but also the wider public.
Available Statistics (if available)	-
Tools/Resources/ Services	Online educational game
Link/ Website	https://www.theacropolismuseum.gr/polymesa/enas-arhaios-naos

CASE STUDY 4	
Name	Assembling the sculptures of the Parthenon
Description	The Acropolis Museum has created a new website with educational games, interesting videos etc. for children. Among this material there is the game "Assembling the sculptures of the Parthenon", aiming at the familiarization of little children with the temple of the Parthenon.
Key Stakeholders/ Provider	The Acropolis Museum
Level (Organisational, Regional, Local, National)	National
Type (Prevention, Intervention, Postvention)	Intervention
Impact	It addresses mainly students from 9 years old, teachers but also the wider public.
Available Statistics (if available)	-
Tools/Resources/ Services	Online educational game
Link/ Website	https://www.acropolismuseumkids.gr/paixnidi/src/index.html

CASE STUDY 5	
Name	Traditional Greek costumes
Description	It is about a digital game familiarizing the students with traditional Greek costumes.
Key Stakeholders/ Provider	National History Museum
Level (Organisational, Regional, Local, National)	National
Type (Prevention, Intervention, Postvention)	Intervention
Impact	It addresses mainly students from 9 years old, teachers but also the wider public.
Available Statistics (if available)	-
Tools/Resources/ Services	Online educational game
Link/ Website	http://www.nhmuseum.gr/multimedia/foresies/index.html

3. CONCLUSION

The Greek educational system is centralized and as such, the analytical programmes and schedules applied at schools are created by the Institute of Educational Policy which gives its opinion or introduces matters concerning teaching methods and means. So, teachers have to work in a predetermined framework and choose which of the suggested methods they will use in their teaching. Among these methods, there are Game Based Learning and Gamification methods, as the educational benefits coming from the use of these methods are widely recognized.

Greek teachers are reluctant to apply Game Based Learning and Gamification methods proposing as the main obstacle the time needed to prepare and also apply these methods, compared to other teaching forms. The same attitude is noticed in teachers concerning the use of digital games. Only here the difficulties are more, as matters concerning the technological equipment and the teachers' efficiency concerning digital skills are added.

Furthermore, the Greek Ministry of Education and Religious Affairs, wishing to promote the use of Game Based Learning and Gamification methods, organizes and promotes student contests based on games, mainly on digital creativity, throughout the school year. But participation in them is limited because of little interest shown on behalf of the teachers, therefore the students. At this point, we should mention that other important private and public organizations running in Greece have undertaken significant initiatives in the creation of mainly digital educational applications, but also student contests based on games.

So we conclude that despite worthwhile efforts undertaken by both the Ministry of Education and other important private and public organizations, more effort is needed for the Greek educational community to integrate the Game Based Learning and Gamification in the educational process methods.

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