

History and Cartography Meet Youth Through Digital Technology

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Abstract: Through collaboration between the Onassis Foundation, the Historical Archive of the National Bank of Greece, and the Vocational Senior High School of Kamatero, an innovative digital project was developed that is both trendy and geared towards youth. This project showcases how a concept aimed at emphasizing the historical significance of the Capital of Greece inspired students to merge the disciplines of Computer Science and History, resulting in the creation of a 3D game on a popular platform. Additionally, this project demonstrates how Project-based learning can be achieved through collaborative and inquiry-based learning, real-world connections, initiative, and the satisfaction of creating something new. The impetus for the cooperation was the Panhellenic Student Competition of the Onassis Foundation, "Hack the Map: Imaginary Worlds." This competition invited schools to promote the cultural heritage of Greece, especially cartographic exhibits/evidence of the old days, through students' digital projects. The Historical Archive of the National Bank of Greece, which is a significant resource for studying Modern Greek History through primary sources, reached out to the Vocational Senior High School of Kamatero, located in the western sector of Athens, to work on a project. The school has an IT department, among other disciplines. In close collaboration, they developed a scenario that is about the civil war that occurred in Athens during the Interregnum period (October 1862-October 1863) after the dethronement of Greece's first king, Otto I. The scenario highlights the bloody events that took place between political factions in the city. In these conflicts, the implication of "Kyriakos," a dangerous leader of robbers, is a paradoxical historical event that stimulated the 2nd-grade Informatics students' imagination. Therefore, they created a 3D digital game entitled "Thieves and Policemen in the newly established Greek city-state: Iouniana." This presentation intends to demonstrate how the students' team of the Vocational School of Kamatero rebuilt Athenian monuments related to Kyriakos' action in a 3D environment; how they reconstructed the cartography of the capital's center during the second half of the 19th century based on these monuments and how they utilized digital resources (maps, photos, and texts) and books proposed by NBG Historical Archives; how a single player, via Kyriakos' persona, has to accomplish missions-battles and match parts of Athens' map of that era; and finally, how students narrated a historical event in a game constructed in Roblox platform inviting other young people to involve history knowledge.

Keywords: Project-Based Learning, 3d game, Historical cartography, Game based learning (GBL), Civil War

1. Introduction

Vocational Senior High School (VSHS) of Kamatero locates in the western sector of Athens. Its educational sectors of Electricity, Mechanisms, Healthy, Economy, and IT train and teach students who dislike theoretical disciplines. However, they must study History, Sociology in the A' Class, and Modern Greek Language during all their studies. Most of them belong to folk families with low incomes, and in many cases, they face social, emotional, and thus educational difficulties. School is essential for these students, although they need to realize it. That is why teachers implement pedagogical methods such as projects focused on teenagers' interests, educational visits, and digital technologies to reveal capacities and skills, helping them to feel creative, self-confident, and happy. By these principles, the Vocational School of Kamatero develops cooperation with renowned Institutions like the Historical Archive of the National Bank of Greece.

The National Bank of Greece (NBG) is the first credit institution in the country and the oldest in operation today. Its history intertwines with the economy and all the aspects of the history of Modern Greece. Rescuing its history and essential archival material, NBG created the Department of Historical Archive (HA/NBG), for which the Bank has shown special care since its establishment. In the archives of NBG, the economic history of the modern Greek state and essential aspects of its political, cultural, and social history have been recorded. The Historical Archive allows access to its archives, which currently cover the period from 1841 to 1966, and to originals or copies of archives of other institutions and personalities that have come into its own. Today, it is active in archival, historical, research, publishing, and educational work and is a pioneer in applying new technologies to manage

its archival material. The Department of educational programs aims to activate students' interest in history and significant historical evidence of Greek cultural heritage.

In this context, the Vocational School of Kamatero holds a creative relationship with HA/NBG due to its educational programs. So, when the Onassis Library of Onassis Foundation proposed the HA/NBG participate in its Panhellenic Student Competition "Hack the Map: Imaginary Worlds" as a cooperating body providing students with supporting material, the head of the Department of educational programs of the HA/NBG and her colleagues firstly proposed to the Vocational School of Kamatero to deal with scenarios based on NBG historical sources. When the School decided to participate and chose a scenario, HA/NBG provided information material (various archival digital records).

Onassis Library organized this Competition to showcase the cartography of Athens during Modern Times and familiarize students with that. On the other hand, HA/NBG provided scenarios and evidence highlighting the establishment of the National Bank and the modification of its central building in a historical street (Aiolou) in Athens and connected to significant historical events of the Capital. All these built a cooperative bridge because the Panhellenic Competition was the impetus for the team of the Vocational School to construct a digital 3D game. HA/NBG provided three scenarios concerning the political and cultural life in three different periods of Athens; two of them concerned historical events of the 19th century. Students and their educators studied the historical scenarios and sources of HA/NBG. Then, they decided to work with the period of "Iouniana," a conflict appropriate to base upon the story of a digital game.

1.1 Historical Context

Iouniana happened during the Greek Interregnum between the exile of Otto I and the enthronement of George I (1862-63). After Otto's exile, the Triumvirate of Greek politicians (Benizelos Roufos, Konstantinos Kanaris, and Dimitrios Voulgaris) who had taken the lead, formed a temporary government and announced elections for the convergence of the so-called *Second National Assembly of the Greeks in Athens*.

This National Assembly was divided into two large political formations, the "Highlanders" (greek: "Oreini") and the "Lowlanders" (greek: "Pedinii"), names that allegedly referred to how the delegates sat in the seats of the National Assembly and indirectly reminded the corresponding factions of the French National Assembly (*La Montagnards - La Plaine*). Significant politicians of the Highlanders were Roufos, Kanaris, Koumoundouros, and others. The strong leader of the Lowlanders was Dimitrios Voulgaris. The proxies who made up the National Assembly failed in their task and with their omissions, their political and party passions steadily led Greece to anarchy and the civil war of the "Iouniana" (probably "Junians" in English <June 1863), which was fought in the streets of Athens with hundreds of dead and wounded. Among both opposing armies were Athens' citizens and gendarmerie and military units. Conflicts escalated in front of the National Bank's headquarters in Athens. Lowlanders guarded the building of NBG after Georgios Stavros' request (Stavros and Voulgaris were political friends). Stavros was afraid of the looting of the Bank, which could lead Greece to bankruptcy.

Studying the sources of NBG, a historical paradox was revealed. A sketch of a contemporary newspaper depicted the leader of Lowlanders, Voulgaris, allegedly talking (making a deal?) with a very dangerous bandit, the chief of a gang named Kyriakos (<https://padlet.com/chrysalenabw/padlet-yiccu1549e157eum>).

Kyriakos supported the Lowlanders because he had been arrested due to a Highlander's hostile policy against thieves. After a few months of imprisonment, Kyriakos was set free but continued his action in the villages east of Athens. After a second arrest of Kyriakos and his gang, he is led with a convoy of gendarmes to the city's center to put him in jail. However, the gendarmes made a deal not to unarm the thieves. Gendarmerie supported the Lowlanders, and there was a secret order to free Kyriakos. When the convoy arrived at the Petraki Monastery (nearby Palace), Kyriakos was fortifying himself with his men. This event terrified citizens, who took their arms to guard their property or left the city. Kyriakos was now free to enter the city and be integrated into the Lowlanders' army; Kyriakos, with 70 men of his, looted the city like other gangs during June 1863. The first armed skirmish between opposing factions happened on Aiolou Street, in front of the Saint Irene church, leaving many victims. After that, the gang of Kyriakos moved to Plaka, near Adrian's Library. One of the following battles was fought in front of the Palace. Aristidis Kanaris, son of Konstantinos Kanaris, military officer, and Highlander, who defended the Palace, was killed there.

Amazingly, here is the highest paradox: when the Gendarmerie with Lowlanders guarded the NGB, they were attacked by a military corps of the Highlanders, who wanted to take control of the Bank. At that crucial event, Kyriakos helped Lowlanders, but in this chaos, he or some of his men tried to rob the Bank (HHN: 2000).

All these events of "Iouniana" were the raw material for the Imaginary World (script and construction) of the 3D game "Thieves and policemen in the newly established Greek city-state: Iouniana."

2. Game Description

2.1 Main Scenario

Thieves and policemen in the newly established Greek city-state: "Iouniana", is an online role-playing game on the Roblox platform. The main action is set in the historical center of Athens during the Iouniana events (June 1863). The hero of the game, a teenager of 2022, is teleported through a time portal (via his historical book) to Athens in 1863 in front of the Palace (nowadays known as the Greek Parliament) dressed like a man of that age. However, as a modern entity, he is unaware of essential information that he hears from his surroundings in the game or from an omniscient informant narrator assistant (a voice). The voice informs the player about the political situation. It explains his involvement in the running events and at each level, assigns tasks, gives direction, and provides him with information about the monuments he encounters. The goal is to win the battle, earn points and find torn map pieces to complete the game.

2.2 Game Levels

The game was developed in 4 levels. Each one demonstrates a distinctive monument of the battle area. The levels follow the route taken by archrival Kyriakos to lead him to the final battle in front of the building of the National Bank of Greece.

Each level has its difficulty.

- First Level - Petrakis Monastery (Difficulty → Easy, Map pieces 3)

The player must fight against two kinds of enemies (the two Guards and the five highlanders) to gain points. The fight takes place at the side of the Monastery. After that, he must find Dimitrios Voulgaris (chief of Lowlanders) to work out a deal: Voulgaris asks for help (to collect the three hidden torn map pieces). The player must proceed to the portal when he reaches all level goals.

- Second Level - Saint Irene church (Difficulty → Normal. Map pieces 3)

- Part 1

The player stands before Saint Irene, and the voice guide is there to inform him that he must collect three more hidden torn map pieces in the area before proceeding to the second part of the level.

- Part 2

The player reaches the Mosque of Tzistarakis/Library of Adrian, where 5 Highlanders and 4 Guards have defeated some members of the Lowlanders. The player needs to defeat them before proceeding to the third level.

- Secret

Near the Mosque of Tzistarakis/Library of Adrian is the Tower of Winds, where the player can walk by, and a cut scene will play, revealing a secret achievement.

- Third Level - Greek Parliament (Difficulty → Hard, Map pieces 1)

Fight at the side of the Palace. A new kind of enemy will appear named the Elite Guard; he does significantly more damage than normal ones. After defeating all the enemies, he proceeds to a fast travel route with the help of the voice.

- Last Level - National Bank of Greece (Difficulty → Challenging, Map Completed)

The final level is outside the NGB, in front of Loudovikos Square. At this point is the last interaction with the voice assistant, which will warn the player about the final stage. The most glorious battle occurs, and the player ends up versus a large group of enemies. After defeating them, he will step on the designed pad to play the final cut scene and complete the game.

2.3 Features

The game was created based on the idea of the potential of the character's design and abilities. Therefore, was incorporated the following features that have a major impact on the character's functions:

- Vitality: Increase the character's Max Health Power <HP>
- Offense: Increase the character's Attack Damage <AD>
- Blessing: Saves the character from dying every 2 min, recovering an amount of his max health by the voice's help
- Ability: (Under construction)

The game has also a currency that can be exchanged for new upcoming features in the game, such as clothes, skins, weapons, effects. These items could be purchased from the market areas that will be around the map, the locations will be marked so that each player can find them on their way through the story.

The idea came from the "robux" used by Roblox players, the currency of our game is gold pieces dropped as loot by enemies.

3. Pedagogical Goals

The initial goal of the 3D game project was to highlight the historical cartography of Athens. However, the critical objective was to foster collaborations that help cultivation of the youth's historical consciousness, improve educators' teaching methods in schools and museums, and sharpen the perception of future citizens regarding the built environment and visible monuments. (Αλτάνης: 2019).

Moreover, creating a 3D game serves the policy of the Vocational School of Kamatero to implement modern pedagogical methods integrating collaborative and inquiry learning and digital technologies (Ren:2019). So, we participate in relevant programs and competitions. Otherwise, a formal Project lesson prepares the students of A class for project work.

So, more specifically, the pedagogical goals who contributed to this project were:

1. Benefits for educators:

1.1 Training educators:

- To become acquainted with new technologies in project development through seminars offered.
- To apply project-based learning and game-based learning combining the disciplines of IT and History.

1.2 Removing teacher burnout risk by breaking classroom routine and providing new challenges in their disciplines (history and IT) (Farber:2000).

2. Benefits for the students

2.1 Knowledge

- To connect knowledge with life and activate the student's involvement in learning according to Dewey.
- To learn how to plan and accomplish a goal/project through project-based learning according to Kilpatrick.
- To apply the exploratory approach to learning through well-organized historical sources.
- To apply digital knowledge that students had already reached on their own (use of Roblox)
- To get acquainted with innovative digital tools and techniques.

2.2 Application and creativity

- To visualize ideas by using their knowledge and imagination.
- To encourage narrative capacity and apply cinematographic techniques.
- To bring out students' talents.

2.3 Affective objectives

- To harness unique skills – abilities that make them feel creative and self-confident.
- To improve communication and empathic skills through Collaborative and Peer Learning.
- To cultivate personal relationship of trust and esteem between educators and students.
- To learn to work in a democratic environment.

3. Benefit for the player

- To cultivate historical consciousness, cultural awareness, and civilian activity.

- To urge students to study and interpret history through sources.
- To get in touch with the cultural elements of the new Greek world.
- To understand the role of a Bank for the political and economic life of a modern state.
- To realize what a civil war cause.

This project won 1st Prize in the “3D Game” category in the student competition of the Onassis Foundation. Therefore, the most outstanding award was completing a challenging project in a limited timeframe.

4. Methodology

Basically, the working team applied the Project-based learning methods. That means collaborative group learning, inquiry, and discovery learning and completion of a meaningful project. However, a digital project based on a screenplay requires the application of a specific methodology (Prieto de Lope: 2015).

The methodology chosen for the development of the game is the Scrum methodology. Scrum is a management framework that teams use to self-organize and work towards a common goal. It describes a set of meetings, tools, and roles for efficient project delivery.

The students were divided into groups, each undertaking to implement part of the project. Therefore, the following groups emerged: archival material search team, script writing team, 3D model creation team, programming team, and project presentation team. Collaborative platforms such as Discord, google docs and social media were used for communication between the groups.

Stage 1 - Research and collection of material

The Department of Educational Programs of NBG/HA carried out thorough research and prepared rich educational content regarding elaborated texts written in order to outline the historical context, digital archival primary sources about the places and times to which their proposal scenarios referred (original excerpts of old books, photographs, maps, postcards, architectural drawings, worksheets, bibliography, and other educational resources in order to encourage, inspire and support students to the search and in-depth study of the main topic. All the relevant material was uploaded as a padlet to an open-access educational platform, Classroom, aiming at providing students and professors with complete and more direct services.

Stage 2 – Training through Seminars

Teachers involved in the "Hack the Map -Imaginary Worlds" Competition needed further training. Therefore, they attended webinars organized by Onassis Foundation to provide assistance and know-how to students and teachers. The following webinars were attended:

- Create 3D models for fantasy worlds
- Apply color and textures to 3D models
- Generate motion for 3D models (animation)
- Build your animation (gif)
- Integrate 2D and 3D elements into game engines - Q&A

Education on issues such as copyright recognition and management, digital storytelling techniques, 3D Game creation, and good practices in creating digital worlds was also deemed necessary. Thus, educators followed posted videos by Onassis Foundation on the relevant topics.

Stage 3 - Human resources

Teachers who responded to the first call of Onassis Competition motivated colleagues and students to participate in this project: a teacher of History and three teachers of Information Technology (IT) formed a team of educators who invited students and informed them about the Competition and the related scenarios of HA/NBG. After that, some students of the Second grade of the IT sector and students of the First grade during the school year 2022-23 participated in constructing a 3D game. They all had high digital literacy, and some had complex learning difficulties. The students grouped into work teams, each undertaking to implement part of the project. Therefore, the following groups emerged: archival material search team, script writing team, 3D model creation team, programming team, and project presentation team.

Stage 4 - Scenario selection – writing new scenario – character selection.

Firstly, the team of educators and students studied the scenarios of HA/NBG and chose the event of Iouniana. These events became the scenes of the game. By studying the sources connected to Iouniana, the team decided

to write a new script based on the bandit Kyriakos' story. The skirmishes and battles he may have been involved in became the scenes of the script. The scenario presents the events in the true chronological order. Around Kyriakos is depicted Highlanders and Lowlanders and as individuals the politician Voulgaris, Normal Guard and Elite Guard.

Stage 5 - Enrichment of sources based on the final scenario - world construction.

Once the scenario was decided, it was necessary to find more sources to reconstruct the monument and Athens's cartography in 1863. The material of HA/NBG and the book of Tsiomis (Τσιώμης: 2021) were the essential sources. Many photos, etchings, and paintings from the internet were also used as references for the modeling. By consulting the maps, students proceeded to map the imaginary digital world. The construction of the buildings and characters of the game was based on photographic material collected.

Stage 5.1 World Construction





Figure 1a: Urban plan of the city of Athens by the Stavridis committee (1860)









Figure 1b: Digital model of the city of Athens

Stage 5.2 Building construction

Greek Parliament, Petrakis Monastery, Saint Irene church, Mosque of Tzistarakis, Library of Adrian, Horologium of Kyristos (also known as the "Tower of the Winds"), and the building of National Bank of Greece was designed and built piece by piece. During the construction of the buildings, attention was given to every detail. The challenge was to make them look identical to the originals so that when the player is in the city center, he can recognize them and recall the information he heard during the game.

Real Monument	Description	Digital Model
	<p>The Petraki Monastery or Holy Incorporeal Taxiarchs, is a medieval Byzantine church. This 10th century Byzantine Temple has been in continued use except for the period between 1500 and 1673, when it was abandoned.</p>	
<p>Figure 2a: Petrakis Monastery</p>		<p>Figure 2b: Petrakis Monastery</p>

	<p>It's built atop the hill of Bubunistras. The palace designer was Friedrich Von Gertner, architect of the Bavarian court. On February 6, 1836, the foundation stone was laid, following Otto's order. Today it is the Greek Parliament, a timeless symbol that is part of the collective memory</p>	
<p>Figure 2a: Greek Parliament</p>		<p>Figure 2b: Digital model of Greek Parliament</p>
<p>Real Monument</p>	<p>Description</p>	<p>Digital Model</p>
	<p>Mosque Tzisdarakis was built in 1668-1670, is located in the northern part of the Roman Agora. It was built on the ruins of a three-aisled basilica of the Middle Byzantine period.</p> <p>Andrians building was a big library in ancient Athens. It was founded in the 2nd century. Its largest part was demolished by the Heruli's looting in 267.</p>	
<p>Figure 3a: Mosque Tzisdarakis / Adrian's Library</p>		<p>Figure 3b: Mosque Tzisdarakis / Adrian's Library</p>
	<p>The building of the National Bank used to be the house of Kyriakos Domnados, at the corner of Aiolou Street and today's Georgiou Stavrou.</p> <p>The bank was founded in March 1841 and started operating in 1842. It was housed in the building of the Xaireti brothers in Sofokleous street as a rental. Then it moved at Aiolou Street.</p>	
<p>Figure 4a: National Bank of Greece</p>		<p>Figure 4b: National Bank of Greece</p>
	<p>The Loudovikos Square known today as National Resistance Square, commonly known as Kotzias Square. It is a central square of Athens and is enclosed by Athinas, Kratinou, Aiolou and Eupolidos streets.</p>	
<p>Figure 5a: Ludovico's (Ludwig) Square</p>		<p>Figure 5b: Ludovico's (Ludwig) Square</p>

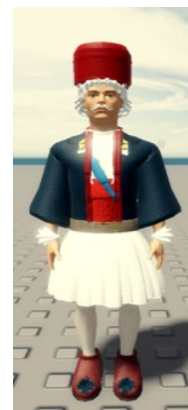
Stage 5.3 Character construction

Existing character models were utilized and had been modified according to the dress code of the epoch, as presented below. The gamers will have the opportunity to gain an insight into the traditional costumes and cultural characteristics of the period and realize that 42 years after the revolution of 1821, the Greeks continued to wear fustanella.

Bandit - "Kyriakos" - Voice Assistant		Consultant	
			
Rival Tribes			
			
	Highlander(Damage 5)	Lowlander(Damage 5)	
Guards			
			
	Normal Guard (Damage 7.5)	Elite Guard(Damage 10)	



Dimitrios Voulgaris
 Politician from the island of Hydra
 Chief of Lowlanders
 consultant



Stage 5.3.1 Assumptions

1. The Loudovikos Square has been modified, based on a later redesign to make the level environment more attractive to the gamers.
2. In 1863 the building of the building of hotel "Great Britain" was smaller (a wing missed).
3. Boulgaris wore Ottoman clothes as Greek leaders-politicians did in the Ottoman Empire. But his character in the game is presented in a fez in an Ottoman style but with a fustanella. This mixture of styles was selected to emphasize the Greek identity of Boulgaris. The ottoman style was also chosen according to the material picture.

Stage 6 Evaluation and Presentation

Evaluation of the game by a jury.

Online Presentations of Prize-winning Digital Projects.
(<https://classroom.onassis.org/mod/page/view.php?id=1516>)

4.1 Technological Equipment

The school organized a room-place suitable for students' work in purpose to work without distractions. For this purpose, the Municipality of Agioi Anargyroi - Kamatero donated two computers with features to manage multimedia applications with the following characteristics:

- C.P.U. : Intel Core i5 8500 3.00 GHz
- R.A.M.: 16.0 GB Dual Channel DDR4 1063 MHz
- MOTHERBOARD: DELL inc. 0654dc
- GRAPHICS: INTEL HD GRAPHICS 630

SOFTWARE

The game was developed on the Roblox platform mainly because it can be accessible to everyone (Roblox is a game that everyone plays, even primary school students). Secondly, it is a familiar platform to students participating in the project that could edit the game wirelessly and cooperate simultaneously. The creation of the imaginary world was developed on the Roblox studio platform through a student's account. For the needs of ECGBL - 17th European Conference on Games-based Learning of 5-6 Oct. 2023, Enschede, Netherlands, the game has been moved to a school's account, its graphics have been upgraded, new features and difficulty levels have been added, and it is currently available in English version.

Other software used:

- KineMaster - Video editing
- Photoshop - photo editing
- Sound recording by mobile & FL Studio
- PowerPoint Office 11 for the presentation of the project to real audience.

4.2 3D Video Game Development

Since our imaginary digital world was completed through the Roblox studio platform, the next step was to proceed to the programming. The coding language was "Lua" which is provided by Roblox platform. The students had to develop the character coding (movements, interactions), the character statistics and their upgrades, the collection system for the map pieces and items, recording narration, the voice coordination with the character, the integration of music, and synchronization of narration where the significant functions needed to be implemented.

5. Conclusions

At the beginning of the project, educators and students encountered various difficulties regarding the collaboration between participants and time shortages due to parallel educational responsibilities. Despite these obstacles, the Vocational School of Kamatero participated in the Onassis Competition "Hack the Map: Imaginary Worlds" and won the first award. This distinction filled not only the participants but all the school members with pride and joy. The social media shares were well received, and the school's prestige was enhanced in the local community. After this project, the relationship between the students was evaluated. Their collaboration capacity improved, and they became more eager to be involved in new tasks (Qian:2016); and they cultivated their computational thinking (Αλτάνης; 2019). They learned about a neglected historical period, all characteristic of

the Greek past. Surprisingly, the pupils realized that many elements of Greek folk culture, like bandits or the dressing, were maintained the same forty years after the Independence War, a period well-known due to national celebrations. At last, they understood how to study a map to recognize historical paths and estimate the monuments of the Capital they usually visit.

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Abbreviations

NGB: National Bank of Greece

HA/NGB: Historical Archives of National Bank of Greece

HHN: History of the Hellenic Nation

References

- Τσιώμης, Ι. (2021) *Η Αθήνα ξένη στον εαυτό της, Η Γέννηση μια Νεοκλασικής Πρωτεύουσας*, Ηράκλειο: Πανεπιστημιακές εκδόσεις Κρήτης.
- (*Prototype title*: Tsiomis, Y. (2017) *Athènes à soi-même étrangère. Naissance d'une capitale néoclassique*, France: Éditions Parenthèses)
- Exterior of Athenian Houses*, (Bilingual) (1992) Athens: The National Mortgage Bank of Greece.
- Farber, B. (2000), Treatment Strategies for Different Types of Teacher Burnout Teachers College, *Journal of Clinical Psychology (JCLP/In Session: Psychotherapy in Practice*, Vol. 56(5), 675–689)
- History of the Hellenic Nation* (2000) Athens: Ekdotike Athinon, Volume IX, pp 226-229.
- <https://classroom.onassis.org/mod/resource/view.php?id=1181&forceview=1>
- <https://ha.nbg.gr/el>
- <https://padlet.com/chrysalenabw/padlet-yiccu1549e157eum>
- <https://el.wikipedia.org/wiki/%CE%99%CE%BF%CF%85%CE%BD%CE%B9%CE%B1%CE%BD%CE%AC>
- <https://www.kaliterilamia.gr/2020/03/1863.html>
- https://create.roblox.com/docs/platform?fbclid=IwAR3FkOJ_QibSVk50MFs9bDzaAnwdBildejgQW3wqZollmWVoawU-shtj5hQ
- <https://education.stateuniversity.com/pages/2337/Project-Method.html?fbclid=IwAR3xWPjMCLsGonSPiea8UZb0eY3ZN9UAz4fS0hvCZMh3ileTnFnZUwFf9u0>
- <https://www.pblworks.org/what-is-pbl?fbclid=IwAR3Pu1a-hQS7UrFfQHWxVh2YXf9zMQRYJ8IDV7C4cWhKiBTxjP1D5jq60I>
- https://www.projectmanager.com/blog/project-management-methodology?fbclid=IwAR2NRW3QOrE4gQyaG-O_ZFJdHLZUEEUokpxp8214eFCyqSVF-S35FNHHzAk
- Landers, R., Auer, El., Collmus, A. and Armstrong, M. (2018). *Gamification Science, Its History and Future: Definitions and a Research Agenda. Simulation & Gaming* (online) https://www.researchgate.net/profile/Richard-Landers-2/publication/325297221_Gamification_Science_Its_History_and_Future_Definitions_and_a_Research_Agenda/links/5b098e6f4585157f8718cf6f/Gamification-Science-Its-History-and-Future-Definitions-and-a-Research-Agenda.pdf
- Papadakis, S., & Kalogiannakis, M. (2019). Evaluating the effectiveness of a game-based learning approach in modifying students' behavioural outcomes and competence, in an introductory programming course. A case study in Greece. *International Journal of Teaching and Case Studies*, 10(3), 235-250.
- Prieto de Lope, R. Medina-Medina, N. Paderewski, P, Gutiérrez F.L. (2015), Design methodology for educational games based on interactive screenplays, Conference: Cossecivi, Barcelona. (online) https://www.researchgate.net/publication/279763791_Design_methodology_for_educational_games_based_on_interactive_screenplays
- Ren, X. (2019) Stealth Assessment Embedded in Game-Based Learning to Measure Soft Skills: A Critical Review, Chapter 4 in Ifenthaler, D., Kim, Y. J. (ed.), *Game-Based Assessment Revisited*, (2019) Switzerland: Springer.
- Qian, M. and Clark, K. (2016) Game-based Learning and 21st century skills: A review of recent research (online), in Elsevier, *Computer in Human Behavior* 63, pp. 50-58, <https://www.sciencedirect.com/science/article/abs/pii/S0747563216303491?via%3Dihub>
- Αλτανης, Ι. (2019), Πλαίσιο σχεδίασης και ανάπτυξης ψηφιακών παιχνιδιών ενσώματης αλληλεπίδρασης από μαθητές για την προαγωγή δεξιοτήτων και θετικών μαθησιακών εμπειριών, Πειραιάς: Διδακτορική Διατριβή ΠΑΠΕΙ (online) <https://freader.ekt.gr/eadd/index.php?doc=46381>
- Μυρώνη, Β., Μεμτσας, Δ. (2014), *Η-Εκπαίδευση με Serious Games*, Πρακτικά Εργασιών 8ου Πανελληνίου Συνεδρίου Καθηγητών Πληροφορικής, Βόλος.
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