



View of the Parthenon cella from the East. Photo R. Christodouloupoulou, 2018

V. Eleftheriou, 2017-2018 - The progress of the Acropolis restoration works

V. Manidaki, J. Dourakopoulos - Restoring the orthostates of the Parthenon west pediment

Ch Pinatsi, C.Koutsadelis, E. Kakogiannou -The strategic plan for the interventions on the Acropolis walls

R. Christodouloupoulou, V. Manidaki - Moving and re-arranging the cranes of the Parthenon

E. Karakitsou, E. Petropoulou, Activities to promote research and bring the restoration works on the Acropolis monuments to the fore

I. Kaimara, A. Leonti, M. Tsiolaki - «A Greek Temple»: A new web application on the architecture of ancient Greek temples

E. Petropoulou - News from the Acropolis



The introductory video of the game

Preface

In October 2018 the YSMA’s Department of Information and Education completed the creation of a new educational web application named “A Greek Temple” (ancienttemple.ysma.gr). The application draws elements from the Department’s museum kit, of the same name. Similar applications have already been developed and had been used, such as the museum kit “The Parthenon Frieze” and the teacher’s pack “Acropolis and Restoration”, whereas the Acropolis Museum family backpacks developed by YSMA have had their printed material similarly enriched with web games.

The subject of the new application is the architecture of the ancient Greek temples. It targets children older than 9 years, teachers interested in using it within the classroom environment and also parents who wish to use the educational games of the application together with their children.

The use of new technologies in the field of culture has the potential to attract greater public interest, in particular the young, offering multifaceted educational experiences. It also contributes to increasing people’s awareness and the cognitive, aesthetic and emotional familiarity of the public with the monu-

ments. Finally it enables public understanding of the importance attached to the protection of cultural heritage. YSMA’s Department of Information and Education has extensive experience in designing digital activities, commencing the development of educational web applications as far back as 2008. “A Greek Temple” is the sixth successive digital application and there has been an effort to encompass the conclusions drawn from the evaluations of earlier applications.

The application is designed in Greek and English and was funded through the National Strategic Reference Framework

“ESPA 2014-2020”. Its design, development and artistic editing was carried out by DIADRASIS.

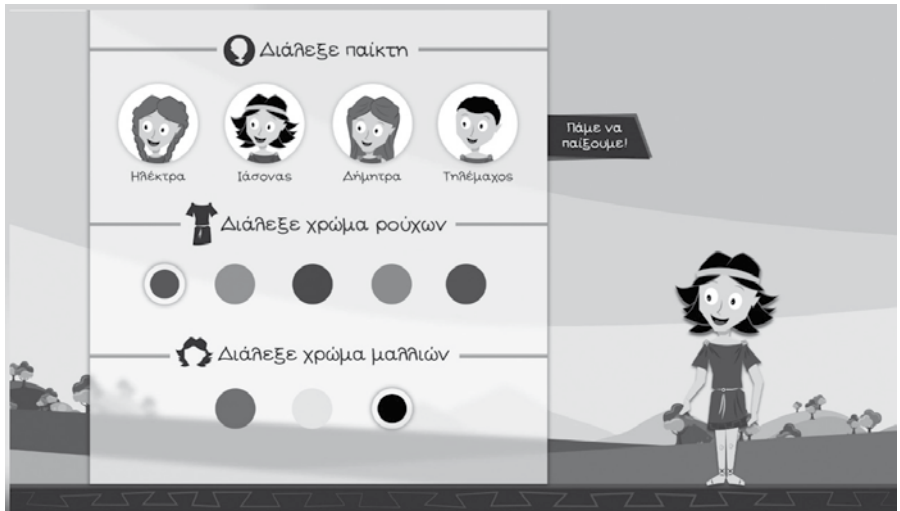
The design of the application

Exploiting the full potential of new information and communication technologies in the area of museum education has enabled us to engage the visitor in the learning experience. For this reason, in addition to the prime objective, of acquainting the users with the architecture of the classical temples of the antiquity, the following goals were set to:

- promote the gamification of learning
- enrich the school lesson
- expand the experience of visiting the monument
- encourage further learning
- help children develop various skills (imagination, observation, language skills, critical thinking, collaboration).

It was also imperative that the necessary principles used for the design of the application should be defined and based on contemporary theoretical approaches of museum education.

Thus, a balance between educational games and entertainment had to be initially established and maintained. That is, besides providing knowledge of the particular subject matter the application needed to include games that could



Creating an avatar

contribute to recreation, inspiration and pleasure, but retain their educational dimension. Users should not need to have specialized knowledge to navigate the application, the content would be arranged and structured in levels of thorough knowledge and finally there should be a separate unit for teachers.

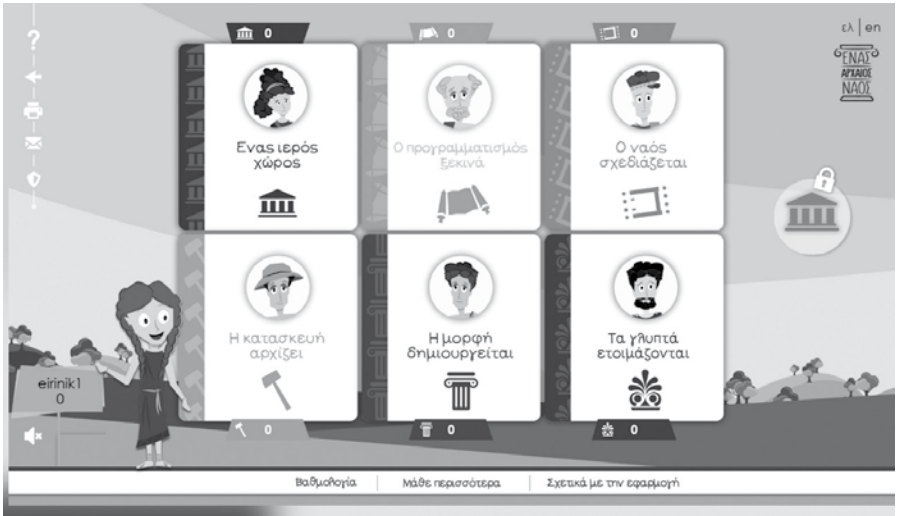
Consequently, there are visitors in a web page who would be able to choose to participate in an activity based on their available time or their level of familiarity with the subject. Moreover, the development of the application drew on the principles of Discovery Learning, according to which, digital activities function as entry point to the content and not as a monitoring role, strengthening as such, the user’s propensity for interaction and exploration. Discovery Learning also accords with contemporary theories of Constructivism where learning is considered as a continuous and dynamic communication process, both personal and social, which presupposes active receivers who process the messages according to past experience, beliefs and interests. Likewise, the users are given the possibility to creatively exploit the content by encouraging self-expression. Other important parameters that influenced the design of the appli-

cation arose from the desire to motivate the visitors to replay the games, and also to provide feedback from their answers.

Finally, priority was also given to matters concerning the clarity of the rules of each game, an attractive layout, the visual coherence of the screens and the usability of the navigation.

Technical characteristics of the application

As it can be seen from the technical specifications of the project the application complies with the accepted standards that correspond to the demands for designing a website and is compatible with the most widely used operating systems and web browsers. In addition, all the necessary processes-interventions have been carried out in its structure and content in order to allow and search engine optimization. Contemporary techniques for the promotion and presentation of cultural content on the Internet have also been used to ensure the application’s best possible presentation and its integration into different environments. Finally, the application also facilitates the production of reports and statistical data analysis based on multiple criteria (Google analytics) and supports an interactive access to all its content.



Presenting the thematic units of the game

The content of the application

The application is exclusively focused on the architecture of monuments found in Greece that belong mainly to the Archaic and Classical periods. Its emphasis is on the monuments of the Athenian Acropolis as they epitomize the fullest and most beautiful expression of Ancient Greek temples during the Classical period. Moreover, the procedures of planning and construction of these monuments are better known from Athens, where the democratic regime had elaborated institutions for all public matters.

The educational storyline of the application combines characters, challenges and rewards for children. The core mission of the user is to become an architect who will design a new temple for a small town in Attica during the Classical period. The user is introduced to the application by a short video that explains the goal of the game in a pleasant, brief and easy to understand manner.

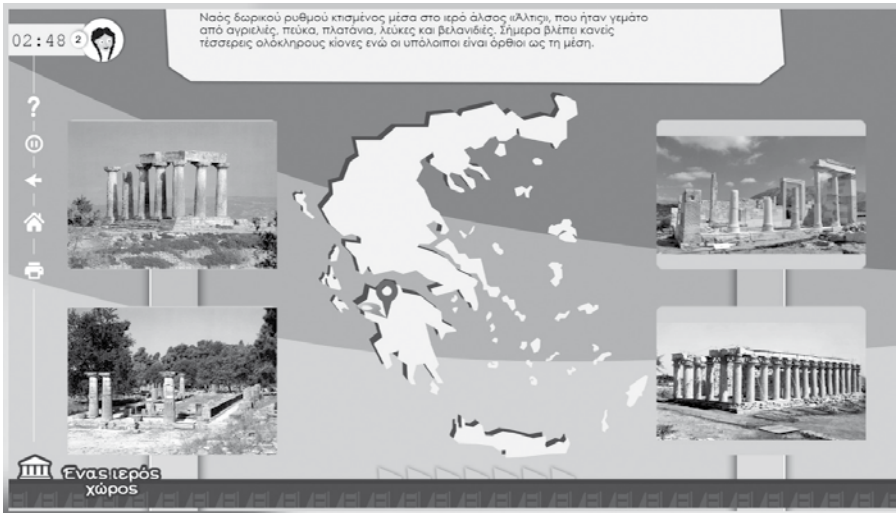
Then the user can access the main part of the application by creating a user name that enables the players to return to the game as many times as they wish either to complete the challenges or better their score. The next step for the player involves creating an avatar. Users can customize the appearance of their avatar by choosing names and characteristics, so they can identify with the specific hero each time they log in to play the game or even create multiple avatars.

Similar opportunities are available for identification with the six characters that appear in the next screen of the application and correspond to its six thematic units. Every character through his/her role that is relevant to an ancient Greek temple presents a corresponding theme.

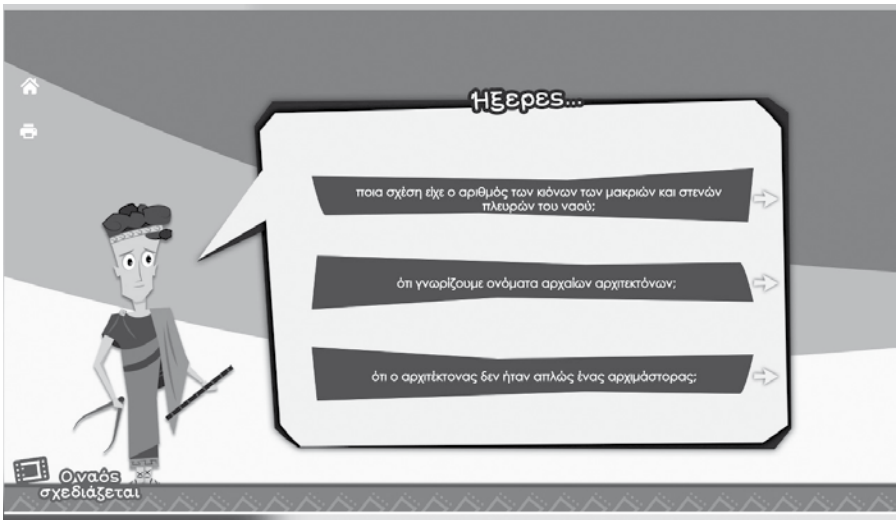
Thus, the Priestess presents the unit that concerns the functions and uses of a temple and its surrounding space, the



Presenting a character of the game



Game: "A sacred Space"



Unit "Did you know that..."

temple Builder presents matters related to the planning and design of a temple, the Architect presents the unit about the typology of ancient temples, the Quarryman the necessary construction steps from the quarry to the worksite, the Stonemason the morphology of the temple and finally the Sculptor its sculptural decoration. In every unit, apart from the character that presents the specific topic, there is also a game or an activity.

The information that the user is expected to study is integrated in the activity, so the player has to read the texts and look into the pictures in order to complete each challenge. The exploration of the content is thus carried out through the game that also entertains and at the same time allows the children to develop various skills. The different challenges of the games accord with the known typology of mini games (puzzles, matching games, quizzes, dexterity games, and observation and memory games) with which the children are familiar. Short and explicit instructions help the users to understand what is required by them in each challenge. Likewise, popular game tools, such as game points, levels of difficulty, time and scoring tables are used in order to motivate the users' interest and encourage further engagement with the challenges.

Every time the player answers correctly, feedback information is displayed on the screen, which helps the user deepen their knowledge in the specific topic. The additional information is introduced progressively avoiding a teacher-centered model of information provision and the exercise of teacher control that underlies traditional educational processes in school based learning. The next level of the game, "Did you know that...", operates on the same educational principles. Here again the character that guides the player's avatar uses a question and

answer format to shed light on various views of the past, relevant to the topic presented.

Monuments as they are displayed in rich photographic and graphic visual material, the three dimensional representations, and also the design adaptations of the application, become a vehicle for the user's time travel. Thus by exploiting the pedagogical significance of the monuments, such as the themes of authenticity, materiality and aesthetics, the students feel that the challenge they participate is not another school activity but an exploration of new content in a much broader meaning.

The narrative is completed with the unit that refers to neoclassicism and how ancient architecture influenced modern times. The user has already completed their mission, he/she has become an architect who is asked to help another architect of the 19th century to draw a Neoclassical building, which subsequently appears on the screen with the total score

and the player's ranking. This reward encourages the children to play again and spend longer time on the games.

The application is supported with additional features, such as a term explanation mechanism (active data glossary), and the design of 2D/3D animation, where the content is shown in a flexible and attractive way motivating as such the students to learn. In addition, printing and email options are available so the players are facilitated and the communication with other users is enhanced.

Finally a separate webpage entitled "Learn more" supplements the game and adds more specialised content knowledge on the subject. The application follows the structure of a game, as there are corresponding subject units where the user can find more information to enrich their lesson. The webpage also offers the possibility to incorporate other applications (video, ppt, pdf), allowing constant updates of information and content enrichment.

Among the future plans of the Department are the systematic evaluation of the application after a period of time and the collection of evaluative information that can be used in to the development of similar activities. A pilot evaluation has already been conducted with teachers and students completing questionnaires during the final stage of the applications development in order to assess its usability; yet, the whole experience of application also requires evaluation.

Epilogue

The educational web application "A Greek Temple" attempts to offer to its users a comprehensive multifaceted and visual representation of the past, shifting the educational focus from passive information to activity. The users have a central role in structuring their own knowledge as they learn through their own actions in the world of play. History, characters, objects, the environment of the game, levels, movements, sound and visual effects, effective interface with the user, combination of challenges and actions, are all features that characterize the application and contribute to the creation of an interactive, pleasant and meaningful experience.

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Unit "Learn More"