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The methodology frame of utilization of cultural heritage in education through the gamification strategy (Pedagogical frame, bibliography, researches from Europe and Greece, Italy, Spain)

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Gamification and Cultural Heritage: Researches and Activities in Greece, Italy and Spain

In order to address the lack of motivation and involvement of students in educational processes, new methodological strategies have emerged to bring educational processes closer to the interests and needs of 21st century students. The best way to involve students in the teaching-learning process is to motivate them. Gamification is, therefore, an ideal methodology for motivating students in the learning process (Zichermann & Cunningham, 2011).

Regarding cultural heritage issues, whose importance for young people has been highlighted above in this study, it is worth noting that in recent decades digital technologies have permeated every aspect of the production of general archaeological knowledge, both in terms of data collection, analysis and interpretation, and interaction with the public (Hugget 2019, Morgan 2019). Archaeologists have been experimenting with digital data for a long time, because the archaeological record is often difficult to read and to be explained to the general public, let alone schoolchildren. Digital technologies have helped archaeologists to bridge the communication gap between cultural records of the past and their coupling with

the present and the future, a necessity that has been gaining ground over the years. Lately the use of gamification methodology for the enhancement of cultural heritage has been discussed and researched in order to optimize the learners' cultural experience. Museums are primarily a space that encourages the implementation of such educational games.

As gamification in the educational process has been the subject of research, studies, publications and conferences in recent years, some examples of these activities are presented below regarding the countries Greece, Italy and Spain, which participate in the project Erasmus KA227 Culture heritage and Gamification in Education, with emphasis on cultural heritage topics.

Greece

Various papers and studies have been carried out on gamification. Among them, we highlight the thesis entitled "Methodology of gamification utilization for enhancing high-order thinking skills" (2016) by Anna Kassimati. She proposes a new conceptual framework, integrates and connects the principles of cognitive theory through self-regulated learning, with the basic principles of educational games, the basic mechanisms of gamification and the utilization of the possibilities and features offered by mobile devices. This framework aims to provide a good practice in the field of utilizing gamification techniques for educational purposes through mobile devices, which can be effectively applied in more than one educational disciplines for the development of high thinking skills. Chr. Alevisos (2021) refers in his postgraduate thesis "Gamification in education" to both the concept of play and gamification. He outlines the basic characteristics of games and makes extensive reference to the types of games for gamification, its consequences and the theories of gamification in learning and education. He also discusses the context of gamification, the good practices for implementing a gamified environment and the technology available to carry out such gamification projects. He also presents cases of gamification in education and even more specific platforms for gamified education oriented towards the arts, social sciences as well as applied sciences and technology. Stavros Dimitriadis (2015) has also dealt with Gamification in his extensive publication entitled "Learning theories and educational software".

At the 8th Conference on Informatics in Education (8th CIE2016), the paper entitled "The Agile methodology and its application in the learning process enhance Computational Thinking" was presented by Kotini and Tzelepi (2016). The paper deals with a theoretical game-based framework (gamification) for enhancing learning and cultivating Computational Thinking based on modern agile system development techniques.

At the 5th Panhellenic Educational Conference of Central Macedonia on "Utilization of ICT in Teaching Practice" (Special thematic section: "Technologies, Arts & Culture in Education", Thessaloniki 2018) the paper by M. Peraki entitled "Gamification and self-regulated learning" examined whether an educational scenario in a technology-supported environment (Moodle) based on the theory of self-regulation learning and the technique of gamification can contribute to the development of cognitive, social and motivational factors in the self-regulation learning process.

The thesis of Vasiliki Goula entitled "Gamification and intercultural education: an educational intervention for second grade students" (2019) is about gamification and intercultural education. More specifically, it deals with the study of applications with gamification elements such as points, leaderboards, etc., in an intercultural class of 2nd grade students, who come from different countries and therefore, Greek is not their native language (PSIFIDA: Gamification and intercultural education: an educational intervention for 2nd grade students).

At the 1st Panhellenic Conference on "Educational play in formal and non-formal learning" (National Centre of research and preservation of school material, 2020), the paper by M. Athanasekou and E. Leventi entitled "Art in play - Play in art" had to do with the role of play in art and the role of art in play. The paper "Gamification as a means of mobilising the educational process in primary schools" by D. Amarantidou focuses on the development through play of scenarios applied to real-life situations, mobilising specific behaviours in the context of the game. The main purpose of the project "Creating playful digital quizzes aimed at familiarising students with the ancient Greek language" by N. Apostolou is the presentation of an interesting teaching method, which will facilitate the familiarization of pupils in Elementary School with the ancient Greek language through the creation of educational quiz games as a pleasant experience with pedagogical benefits.

At the 2nd Panhellenic Conference on "Educational play and art in education and culture" (National Centre of research and preservation of school material, 2021), the paper by A. Athanasopoulos entitled "Digital European Museum of Culture" dealt with a pan-European project (An Erasmus+ KA3 Project about digital cultural heritage) on digital cultural heritage, which was successfully completed at European level with posters in a digital forum. The project aimed to promote culture as a factor of cohesion in the European Union. It also looks forward to the creation of a digital museum (Europa square), where Europe's youth will create a digital narrative, inspired by the region in which they live.

At the Digital Heritage International Congress (Digital Heritage International Congress, 2015) the study by Kontogianni and Georgopoulos entitled "A realistic Gamification attempt for the Ancient Agora of Athens" was a first attempt to create a Serious Game for the Ancient Agora of Athens. The aim of this game is to help non-specialists, such as schoolchildren, students, tourists, museum visitors, etc. to gain basic knowledge about the Agora and its monuments.

At the 1st Panhellenic Conference on "Educational game in formal and non-formal learning" (National Centre of research and preservation of school material, 2020), the paper by A. Pagoulatou entitled "The Secrets of Patras: a space-sensitive game as a tool for learning and cultural mediation in the French as a foreign language" focused on the process of designing, developing content and evaluating a game for mobile devices. The game was developed in the context of a cultural action project aimed at promoting interactivity, cultural curiosity and cultural/intercultural mediation.

Italy

In Italy, several university courses have already been introduced on digital technologies, 3D modelling or computer simulation, which until a few years ago were considered specialised. At the same time, several digital tools are becoming more and more accessible to students, such as virtual reality applications on computers as well as interactive displays in mobile applications (Hageneuer, Schmidt 2020).

At the same time the use of new technologies has increased considerably, permeating every aspect of school and student life. Consequently, it has also influenced the way students think about cultural heritage. Nowadays, the Italian government and of course the museums in Italy have started to consider video games as a useful tool to immerse students in their cultural past and heritage through entertainment (Mariotti 2020a). The curriculum for secondary education encourages projects involving archaeologists that aim to interactively entertain students through educational digital games.

In recent years, "serious games" related to cultural heritage have been developed, gaining the interest of museum institutions, academics and local administrations. As a result, a wide variety of digital games of various forms are appearing:

- trivia, puzzle and mini-games (e.g. "Time Tales - The Etruscans", a serious game for children, designed by two archaeologists (Mariotti, Marotta 2020) in collaboration with a "serious game" company, Entertainment Game Apps Ltd.),

- games in which users participate in interactive exhibitions and visits (e.g. "Inventum" (2018), a 3D application (3D) in AR to enhance the Archaeological Park of Venosa, Potenza),

- games in mobile apps for museums or tourist parks on websites, motivated by a reward or commitment mechanism, e.g.

1. "Mi Rasna", developed by Entertainment Game Apps Ltd. and has to do with Etruscan culture (Amoroso 2020)

2. "Mediterranean" re-developed by Entertainment Game Apps Ltd. and is dedicated to the Phoenician culture,

3. "Father and Son" (Solima 2018) created by the Tuo Museo for the Archaeological Museum of Naples.

4. "Beyond our lives" an adventure game by Tuo Museo to promote the first ancient Etruscan cities in Tuscany),

- simulations relating to past events, e.g.

"Difendiamo le Mura", it is based on the siege of the city of Paestum by Alexander Molossus, until recently was available within the city's archaeological museum.

- Adventure Games, e.g.

"A Night in The Forum" (Ferdani et al. 2020; Pescarin et al. 2020), a 3D video game for PlayStation VR, created by VRTRON in collaboration with the Italian CNR concerning the Roman market of the Augustan era.

Cf. also the following links:
<https://www.tandfonline.com/doi/abs/10.1080/09548963.2021.1910490>

<https://www.tuomuseo.it/la-gamification-per-il-turismo-culturale-della-lombardia/>

<https://www.art-usi.it/videogame-e-patrimonio-culturale-un-libro-francoangeli-open-access/>

https://www.researchgate.net/publication/49588460_Designing_Effective_Serious_Games_Opportunities_and_Challenges_for_Research

<https://www.tandfonline.com/doi/abs/10.1080/09548963.2021.1910490>

<https://edizionicafoscari.unive.it/it/edizioni4/riviste/magazen/2021/1/the-use-of-serious-games-as-an-educational-and-dis/>

https://www.academia.edu/49640635/The_Use_of_Serious_Games_as_an_Educational_and_Dissemination_Tool_for_Archaeological_Heritage_Potential_and_Challenges_for_the_Future

<https://edizionicafoscari.unive.it/it/edizioni/riviste/magazen/2021/1/the-use-of-serious-games-as-an-educational-and-dis/>

Spain

In recent years, particularly in Spain, several research projects have taken place. Ortiz-Colon et al. (2018) select and study a series of surveys in school and university institutions:

- The "Minecraft Edu." application. of Saéz and Domínguez (2014), with 41 student participants. They dedicated a large number of sessions, using the application for

educational purposes, and the results were quite encouraging. Compared to students that followed a more traditional learning method, important interactive benefits were documented and captured.

- "Strategies for improving learning and competence acquisition in a university context" is another research project. The authors (Villatustre, Del Moral, 2015) propose a quantitative social simulation game with 161 university students who are asked to jointly develop an intervention plan capable of promoting sustainable development in a rural environment with missions, rules, challenges and points.
- "Competition as a mechanism of gamification in the classroom": the study developed by Cantador (2016) targets both healthy competition, cooperative learning, the mechanisms of gamification and the extent to which this methodology increases students' motivation.

An important application of the gamification methodology in a museum is that of the Museum of Prado. On the occasion of the exhibition "Gabinete de Descanso de sus Majestades", a virtual representation of room 39 in different time periods has been developed, which can be visited using mobile devices, computers and virtual reality glasses. In this gamification experience the user can approach the museography of the last two hundred years through Luis Eusebi, the first custodian of the Museo de Prado, who invites us to reflect on aspects and themes of cultural heritage, the history of the Museum and the history of Spain.

It is noteworthy that in recent years more and more postgraduate programmes on gamification and technology applications in education have been offered, such as "Máster en Juego, Gamificación y Tecnología aplicados a la Educación" from the Escuela de Nuevas Tecnologías Interactivas of the University of Barcelona (ENTI-UB). At the University of Burgos, Picón Ibañez Adrián's master's thesis (2019), "Ludificación y Gamificación en el aula de secundaria", was carried out. This work presents different practical proposals for gamification, which can be implemented in secondary schools.

As gamification is gaining ground in both academia and industry, as shown by the large number of publications in recent years, more and more conferences, workshops and webinars are being organised on this topic. As for example, the 5th International Symposium "Gamification and Learning Games (GamiLearn'21)", which took place in Barcelona (27-29 October 2021). There, various gamification approaches, strategies, tools, methodologies, innovations and studies in progress to encourage games in the educational process were presented.

The value of teaching cultural heritage is undeniable. However, interest in cultural heritage in education is not strong, as participation in cultural events is usually limited. Also, cultural heritage is usually taught in traditional settings, making learning unattractive. An attempt to change these facts is a gamification and cultural heritage project named El Juego de la Alhama Medieval. This game focuses on the interpretation, protection and dissemination of part of the valuable historical, artistic, cultural and natural heritage of Alhama in Granada. It is an important tool to approach the medieval past of the city in an educational way, as

users can walk through towers and gates of the medieval city and complete their tour up to the citadel.

Cf. also the following links:

<https://www.museodelprado.es/recurso/experiencia-gamificada-de-la-sala-39/360332b6-adbe-fef0-480b-350c1fd8dff5>

<https://gamilearn.webs.ull.es/>

<https://axfitoculture.com/portfolio-item/proyecto-delimitacion-del-perimetro-amurallado-de-la-alhama-medieval/>

A thorough bibliography review on the positive impacts of gaming in learning, skill enhancement, and engagement settings has been presented by Connolly, Boyle, MacArthur, Hainey, and Boyle (2012). This paper examines the literature on computer games and serious games in regard to the potential positive impacts of gaming on users aged 14 years or above, especially with respect to learning, skill enhancement and engagement. Search terms identified 129 papers reporting empirical evidence about the impacts and outcomes of computer games and serious games with respect to learning and engagement and a multidimensional approach to categorizing games was developed. The findings revealed that playing computer games is linked to a range of perceptual, cognitive, behavioural, affective and motivational impacts and outcomes. The most frequently occurring outcomes and impacts were knowledge acquisition/content understanding and affective and motivational outcomes. The range of indicators and measures used in the included papers are discussed, together with methodological limitations and recommendations for further work in this area.

References

Abowd, G. D., & Mynatt, E. D. (2000). Charting past, present, and future research in ubiquitous computing. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 7(1), 29-58.

Alevizos, Chr. (2021). Η παιχνιδοποίηση στην εκπαίδευση. Ελληνικό Μεσογειακό Πανεπιστήμιο. Σχολή Επιστημών Διοίκησης και Οικονομίας. Τμήμα Διοικητικής Επιστήμης και Τεχνολογίας. Retrieved from <https://apothesis.lib.hmu.gr/handle/20.500.12688/9956>

Alfrink, K. (2011). New games for new cities. Presentation, FutureEverything Hubbub, Design for a Playful World 1. Retrieved from <https://whatsthehubbub.nl/blog/2011/05/new-games-for-new-cities-at-futureeverything/>.

Amarantidou, D. (2020). Η παιχνιδοποίηση ως μέσο κινητοποίησης της εκπαιδευτικής διαδικασίας στο Δημοτικό Σχολείο. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Amoroso, M. (2020). Videogame archeologici e storici: luci, ombre e lezioni imparate con Mi Rasna. In S. Pescarin, (Ed.), *Videogames, Ricerca, Patrimonio Culturale*. Milano: Franco Angeli, 55-59.

Anderson, L. W., Krathwohl, D. R., et al (Eds.) (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Boston, MA: Allyn & Bacon. Pearson Education Group.

Antin, J., & Churchill, E. F. (2011). Badges in social media: A social psychological perspective. Paper presented at the CHI 2011 Gamification Workshop Proceedings, Vancouver, BC, Canada.

Apostolou, N. (2020). Δημιουργώντας παιγνιώδη ψηφιακά κουίζ με στόχο την εξοικείωση των μαθητών με την αρχαία ελληνική γλώσσα. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Athanasopoulos, A. (2021). Ψηφιακό Ευρωπαϊκό Μουσείο Πολιτισμού. Το εκπαιδευτικό παιχνίδι και η τέχνη στην εκπαίδευση και στον πολιτισμό» (National Centre of research and preservation of school material, 2021).

Attard, A., Di Iorio, E., Geven, K., & Santa, R. (2011). *Student-Centred Learning: Toolkit for Students, Staff and Higher Education Institutions*. European Students' Union. Retrieved from <https://eric.ed.gov/?id=ED539501>.

Azzam, M. (2009). Why Creativity Now? A Conversation with Sir Ken Robinson. *Teaching for the 21st century*, 67(1), 22-26.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. NJ: Prentice-Hall.

- Bandura, A. (2002). Self-efficacy assessment. In R. Fernandez-Ballesteros (Ed.), *Encyclopedia of psychological assessment*. London: Sage Publications, 1-2.
- Barr, P. (2007). *Video Game Values: Play as Human-Computer Interaction*. Doctoral Dissertation, Victoria University of Wellington.
- Bernhaupt, R. (2010). *Evaluating User Experience in Games: Concepts and Methods*. London: Springer.
- Bjork, S., & Holopainen, J. (2005). *Patterns in Game Design*. Boston, MA: Charles River Media.
- Boyan, A., & Sherry, J. (2011). The Challenge in Creating Games for Education: Aligning Mental Models With Game Models. *Child Development Perspectives*, 5(2), 82-7. Retrieved from <https://doi.org/10.1111/j.1750-8606.2011.00160.x>.
- Brown, T. H. (2005). Towards a model for m-learning in Africa. *International Journal on E-learning*, 4(3), 299-315.
- Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, 93(1), 43–54. Retrieved from <https://doi.org/10.1037/0022-0663.93.1.43>
- Clarke, I. (2001). Emerging value propositions for m-commerce. *Journal of Business Strategies*, 18(2), 133-148.
- Connolly, T. M., Boyle, E. A., MacArthur, E., Hailey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education*, 59(2), 661–686. <https://doi.org/10.1016/j.compedu.2012.03.004>
- Cosovic, M., Ramic, B. (2020). Game-Based Learning in Museums — Cultural Heritage. *Information* 2020, 11, 22, 1-13. doi:10.3390/info11010022.
- Covington M. V., & Omelich C. L. (1984). Task-oriented versus competitive learning structures: motivational and performance consequences. *Journal of Educational Psychology*, 76, 1038-1050.
- Csikszentmihalyi, M. (2000). The contribution of flow to positive psychology. In J. E. Gillham (Ed.), *The science of optimism and hope: Research essays in honor of Martin E. P. Seligman* Templeton Foundation Press, 387–395.
- De-Marcos, L., Domínguez, A., Saenz-de-Navarrete, J., & Pagés, C. (2014). An empirical study comparing gamification and social networking on e-learning. *Computers & education*, 75, 82-91.
- Dempsey, J. V., Lucassen, B. A., Haynes, L. L., & Casey, M. S. (2002). Forty simple computer games and what they should mean to educators. *Simulation and Gaming* 33 (2), 157-168.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From Game Design Elements to Gamefulness: Defining "Gamification". In Proceedings of the 15th International Academic Mind Trek Conference Envision Future Media Environments, New York, 9-15.

Dewey, J. (1938). Experience and Education. New York: MacMillan.

Dimitriadis, S., (2015). Θεωρίες μάθησης και εκπαιδευτικό λογισμικό. Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: <http://hdl.handle.net/11419/3397>

Din, H. W. H. (2006). Play to Learn: exploring online educational games in museums. Paper presented at the International Conference on Computer Graphics and Interactive Techniques.

Dominguez, A., Saenz-de-Navarrete, J., de-Marcos, L., Fernandez-Sanz, L., Pages, C., & Martinez-Herraiz, J. J. (2013). Gamifying Learning Experiences: Practical Implications and Outcomes. Computers & Education, 63, 380- 392.

Elliot, A. J. (1994). Approach and avoidance achievement goals: An intrinsic motivation analysis. In Elliot, A.J. & Church, M.A. (1997), A hierarchical model of approach and avoidance achievement motivation. Journal of Personality and Social Psychology, 72, 218--232.

Elliot, A.J. (1999). Approach and Avoidance Motivation and Achievement Goals, Educational Psychologist, 34(3), 169-189.

Faria, A. J., & Whiteley, T. R. (1990). An empirical evaluation of the pedagogical value of playing a simulation game in a principles of marketing course. Developments in Business Simulation and Experiential Learning, 17, 53--57.

Feather, J. (2006). Managing the documentary heritage: issues from the present and future. In Gorman, G.E. and Sydney J. Shep (Eds), Preservation management for libraries, archives and museums, London: Facet, 1-18.

Ferdani, D. et al. (2020). 3D Reconstruction and Validation of Historical Back-ground for Immersive VR Applications and Games: The Case Study of the Forum of Augustus in Rome. Journal of Cultural Heritage, 43, 129-43. Retrieved from <https://doi.org/10.1016/j.culher.2019.12.004>

Festinger, L. (1954). A theory of social comparison processes. Human Relations, 7(2), 117--140.

Froschauer, J. (2012). Serious Heritage Games: Playful Approaches to Address Cultural Heritage [PhD Dissertation]. Wien: Wien University of Technology.

Gibbons, P. (2002). Scaffolding Language, Scaffolding Learning. Teaching Second Language Learners in the Mainstream Classroom. Portsmouth NH: Heinemann.

Goula, V. (2019). Παιχνιδοποίηση (gamification) και διαπολιτισμική εκπαίδευση: μια εκπαιδευτική παρέμβαση σε μαθητές Β' Δημοτικού. Πρόγραμμα Μεταπτυχιακών Σπουδών

Επιστήμες της Εκπαίδευσης και της Δια Βίου Μάθησης. Διπλωματική εργασία, Πανεπιστήμιο Μακεδονίας, Θεσσαλονίκη. <http://dspace.lib.uom.gr/handle/2159/23260>.

Groh, F. (2012). Gamification: State of the Art Definition and Utilization. RTMI Ulm University, Institute of Media Informatics, 39-46.

Hageneuer, S., & Schmidt, S. C. (2020). Introduction. In Hageneuer, S. (Ed.), *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology*. London, 12-13 October 2018. London: Ubiquity Press, 1-10.

Hakulinen, L., Auvinen, T., & Korhonen, A. (2013). Empirical study on the effect of achievement badges in TRAKLA2 online learning environment. In *Proceedings of Learning and Teaching in Computing and Engineering (LaTICE) Conference, Macau: IEEE*, 47-54.

Halavais, A. M. C. (2012). A genealogy of badges, *Information. Communication & Society*, 15(3), 354-373.

Hoffman, B. T. (2006). *Art and cultural heritage: law, policy, and practice*. Cambridge: University Press.

Hsin-Yuan Huang, W. and Soman, D. (2013). *A Practitioner's Guide to Gamification of Education (Research Report Series: Behavioural Economics in Action, Rotman School of Management, University of Toronto, 10 December 2013)* <<http://www.rotman.utoronto.ca/-/media/files/programs-and-areas/behavioural-economics/guidegamificationeducationdec2013.pdf>>

Huggett, J. (2019). Resilient Scholarship in the Digital Age. *Journal of Computer Applications in Archaeology*, 2(1), 105-19. Retrieved from <https://doi.org/10.5334/jcaa.25>.

Johnson, L., Adams, S., & Cummins, M. (2012). *The NMC Horizon Report: 2012 Higher Education Edition*. Austin, Texas: The New Media Consortium.

Juul, J. (2005). *Half-real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press.

Juul, J. (2010). *A Casual Revolution: Reinventing Video Games and Their Players*. Cambridge, MA: MIT Press.

Kakihara, M. & Sørensen, C. (2001). Expanding the 'Mobility' Concept, *ACM SIGGROUP Bulletin*, 22(3), 33-37.

Kampmann W. B., (2003). *Playing and Gaming: Reflections and Classifications*. *The International Journal of computer game research*, 3(1).

Kapp, K. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. San Francisco, CA: Pfeiffer.

Kassimati, A. (2016). Μεθοδολογία αξιοποίησης gamification για την ενίσχυση high order thinking skills. Πανεπιστήμιο Πειραιώς. Διπλωματική εργασία. Τίτλος Προγράμματος

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<https://dione.lib.unipi.gr/xmlui/handle/unipi/10067>

Klopper, E. & Squire, K. (2008). Environmental Detectives—the development of an augmented reality platform for environmental simulations. *Educational technology research and development*, 56 (2), 203-228.

Koliadis, E. (2002). Γνωστική Ψυχολογία, γνωστική Νευροεπιστήμη και Εκπαιδευτική Πράξη. Αθήνα: Σύνοψη.

Kontogianni, G. & Georgopoulos, A. (2015). A realistic Gamification attempt for the Ancient Agora of Athens. *Digital Heritage 2015*, 377-380, doi: 10.1109/DigitalHeritage.2015.7413907.

Kotini, I. & Tzelepi, S. (2016). Η μεθοδολογία Agile και η εφαρμογή της στην μαθησιακή διαδικασία ενισχύουν την Υπολογιστική Σκέψη. Πρακτικά 8th Conference on Informatics in Education 2016, 212-222.
http://events.di.ionio.gr/cie/images/documents16/cie2016_cd_v1.0/new/custom/pdf/5.2%20212%20-%20222%20cie2016_095.000_kot_accepted_final_p.pdf

Kumar, B., & Khurana, P. (2012). Gamification in education-learn computer programming with fun. *International Journal of Computers and Distributed Systems*, 2(1), 46–53.

Li, W., Grossman, T., & Fitzmaurice, G. (2012, October). GamiCAD: A gamified tutorial system for first time autocad users. In *Proceedings of the 25th annual ACM symposium on user interface software and technology* (pp. 103–112). Cambridge, MA: ACM.

Lyytinen, K. & Yoo, Y. (2002). Research Commentary: The Next Wave of Nomadic Computing. *Information Systems Research*, 13(4), 377-388.

Mariotti, S. (2020a). What if Lara Croft Becomes a Video Game Designer? When Archaeologists ‘Dig’ Serious Games. In I. Marfisi-Schottman, et al. (Eds), *Games and Learning Alliance = Proceedings of the 9th International Conference, GALA2020* (Laval, France, December 9-10, 2020). Cham: Springer, p.p. 395--400. Retrieved from https://doi.org/10.1007/978-3-030-63464-3_37.

Mariotti, S., Marotta, N. (2020). Gioco e storydoing: strumenti didattici per l’insegnamento della storia nella scuola primaria. *Didattica Della Storia - Journal of Research and Didactics of History*, 2(1S), 608-29. <https://doi.org/10.6092/issn.2704-8217/11224>

Mariotti, S., Marotta, N. (2020). Gioco e storydoing: strumenti didattici per l’insegnamento della storia nella scuola primaria. *Didattica Della Storia - Journal of Research and Didactics of History*, 2(1S), 608-29. <https://doi.org/10.6092/issn.2704-8217/11224>

Matsangouras, I., (2002). Στρατηγικές Διδασκαλίας: Η Κριτική Σκέψη στη Διδακτική Πράξη. Αθήνα: Gutenberg

McGonigal, J. (2011). *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. London: Penguin.

Moran, T. P., & Dourish, P. (2001). Introduction to this special issue on context aware computing. *Human-Computer Interaction*, 16(2), 87-95.

Morgan, C. (2019). Avatars, Monsters, and Machines: a Cyborg Archaeology. *European Journal of Archaeology*, 22(3), 324-37. Retrieved from <https://doi.org/10.1017/eea.2019.22>.

Mortara, M. et al. (2014). Learning Cultural Heritage by Serious Games. *Journal of Cultural Heritage*, 15(3), 318-25. Retrieved from <http://dx.doi.org/10.1016/j.culher.2013.04.004>.

Mortara, M.; Catalano, C.E.; Bellotti, F.; Fiucci, G.; Houry-Panchetti, M.; Petridis, P. (2014). Learning Cultural Heritage by Serious Games. *Journal of Cultural Heritage*, 15(3), 318-325.

Nah, F. F. H., Zeng, Q., Telaprolu, V. R., Ayyappa, A. P., & Eschenbrenner, B. (2014). Gamification of education: A review of literature. In F. H. H. Nah (Ed.), *Proceedings of 1st International Conference on Human-Computer Interaction in Business*, Crete, Greece: LNCS Springer, 401–409.

Pagoulatou, A. (2020). Τα μουσικά της Πάτρας: Ένα χώρο - ευαίσθητο παιχνίδι ως εργαλείο μάθησης και πολιτισμικής διαμεσολάβησης στην τάξη της γαλλικής ως ξένης γλώσσας. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Palazón-Herrera, J. (2015). Motivación del alumnado de educación secundaria a través del uso de insignias digitales. *Opción*, 31(1), 1059-1079.

Pea, R., & Maldonado, H. (2006). WILD for learning: Interacting through new computing devices anytime, anywhere. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences*. Cambridge: Cambridge University Press, 427-441.

Peraki, M. (2018). Παιχνιδοποίηση και αυτορρυθμιζόμενη μάθηση. *Πρακτικά: 5ο Πανελλήνιο Εκπαιδευτικό Συνέδριο Κεντρικής Μακεδονίας*, 205-213.

Pescarin, S. et al (2020). Optimising Environmental Educational Narrative Videogames: The Case of 'A Night in the Forum'. *Journal on Computing and Cultural Heritage*, 13(4), 1-23. <https://doi.org/10.1145/3424952>.

Prensky, M. (2001). *Digital Game-Based Learning*. New York, NY: McGraw-Hill Pub. Co.

Randel, J. M., Morris, B. A., Wetzel, C. D., & Whitehill, B. V. (1992). The effectiveness of games for educational purposes: A review of recent research. *Simulation and Gaming*, 23(3), 261–276.

Rao, B., and Minakakis, L. (2003). Evolution of mobile location-based services. *Communications of the ACM*, 46(12), 61-65.

Reeves, B., & Read, J. L. (2009). Total engagement: How games and virtual worlds are changing the way people work and businesses compete. Boston, MA: Harvard Business Press.

Rott, G., (2010). Guidance and Counseling Services in the Learner - Centred Approach in HE, Bologna Handbook - Making Bologna Work Student Centered Learning - An Insight Into Theory And Practice. T4SCL.

Salen, K., & Zimmerman, E. (2004). Rules of play: Game design fundamentals. Cambridge, MA: MIT Press.

Sangkyun, K., Kibong, S., Lockee, B. and Burton, J. (2018). Gamification in Learning and Education. Enjoy Learning Like Gaming. Cham, Switzerland: Springer.

Schell, J. (2008). The Art of Game Design: A Book of Lenses. Burlington, MA: Morgan Kaufmann Publishers.

Schunk, D. H., & Zimmerman, B. J. (Eds). (1994). Self-regulation of learning and performance: Issues and educational applications. Hillsdale, NJ: Lawrence Erlbaum Associates.

Shapiro, J. (2018). The New Childhood: Raising Kids to Thrive in a Connected World. New York: Little, Brown and Company.

Shuler, C. (2009). Pockets of potential: Using mobile technologies to promote children's learning. New York, NY: The Joan Ganz Cooney Center at Sesame Workshop.

Simons R., J., Van der Linden, J., & Duffy, T., A. (2000). New learning: three ways to learn in a new balance. Retrieved from Utrecht University Repository, <http://dspace.library.uu.nl/handle/1874/6952>.

Singh, M. (2021). Acquisition of 21st Century Skills Through STEAM Educa-tion. Academia Letters, Article 712. Retrieved from <https://doi.org/10.20935/AL712>.

Sitzmann, T. (2011). A meta-analytic examination of the instructional effectiveness of computer-based simulation games. *Personnel Psychology*, 64(2), 489–528.

Smith, A. L., & Baker, L. (2011). Getting a clue: Creating student detectives and dragon slayers in your library. *Reference Services Review*, 39 (4), 628–642.

Solima, L. (2018). Gaming for the Museums. The MANN Experience. *Economia della Cultura*, 28(3), 275-290.

Su, C., & Cheng, C. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268–286.

Taylor, T. L., (2009). The Assemblage of Play. *Games and Culture*, 4(4), 331-339.

Thurley, S. (2005). Into the future. Our strategy for 2005-2010. In Conservation Bulletin [English Heritage] (49). Retrieved from <https://content.historicengland.org.uk/images-books/publications/conservation-bulletin-49/cb4926-27.pdf/>

Valle, A., Cabanach, R., González-Pienda, J., Rodríguez, S., & Piñeiro, I. (2003). Multiple goals, motivation and academic learning. *The British Journal of Educational Psychology*, 73, 71-87.

Van't Hooft, M., Swan, K., Lin, Y-M., & Cook, D. (2007). What is ubiquitous computing? In M. van't Hooft, & K. Swan, K. (Eds), *Ubiquitous Computing in Education*. London: Routledge, 3-17.

Villalustre, Lourdes; Del Moral, María Ester. (2015). Gamificación: estrategia para optimizar el proceso de aprendizaje y la adquisición de competencias en contextos universitarios. *Digital Education Review*, Barcelona, n. 27, 13-31.

Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Philadelphia, PA: Wharton Digital Press.

Wilshire, B., (1990). *The moral collapse of the university: Professionalism, purity, and alienation*. Albany, NY: State University of New York Press.

Yildirim, I. (2017). The effects of gamification-based teaching practices on student achievement and students' attitudes toward lessons. *The Internet and Higher Education*, 33, 86-92.

Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in web and mobile apps*. Sebastopol, CA: O'Reilly Media.

Zimmermann, B. J. and Schunk, D.H. (2001). *Self-regulated learning and academic achievement: theoretical perspectives* (2nd ed.). NJ: Lawrence Erlbaum.

General Bibliography

Abowd, G. D., & Mynatt, E. D. (2000). Charting past, present, and future research in ubiquitous computing. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 7(1), 29-58.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*. 50(2), 179-211.

Alfrink, K. (2011). New games for new cities. Presentation, FutureEverything Hubbub, Design for a Playful World 1. Retrieved from <https://whatsthehubbub.nl/blog/2011/05/new-games-for-new-cities-at-futureeverything/>.

Amarantidou, D. (2020). Η παιχνιδοποίηση ως μέσο κινητοποίησης της εκπαιδευτικής διαδικασίας στο Δημοτικό Σχολείο. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Anderson, L. W., Krathwohl, D. R., et al (Eds.) (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Boston, MA: Allyn & Bacon. Pearson Education Group.

Antin, J., & Churchill, E. F. (2011). Badges in social media: A social psychological perspective. Paper presented at the CHI 2011 Gamification Workshop Proceedings, Vancouver, BC, Canada.

Apostolou, N. (2020). Δημιουργώντας παιγνιώδη ψηφιακά κουίζ με στόχο την εξοικείωση των μαθητών με την αρχαία ελληνική γλώσσα. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Athanasopoulos, A. (2021). Ψηφιακό Ευρωπαϊκό Μουσείο Πολιτισμού. Το εκπαιδευτικό παιχνίδι και η τέχνη στην εκπαίδευση και στον πολιτισμό» (National Centre of research and preservation of school material, 2021

Attard, A., Di Lorio, E., Geven, K., & Santa, R. (2011). *Student-Centred Learning: Toolkit for Students, Staff and Higher Education Institutions*. European Students' Union. Retrieved from <https://eric.ed.gov/?id=ED539501>.

Azzam, M. (2009). Why Creativity Now? A Conversation with Sir Ken Robinson. *Teaching for the 21st century*, 67(1), 22-26.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. NJ: Prentice-Hall.

Bandura, A. (2002). Self-efficacy assessment. In R. Fernandez-Ballesteros (Ed.), *Encyclopedia of psychological assessment*. London: Sage Publications, 1-2.

Barr, P. (2007). *Video Game Values: Play as Human-Computer Interaction*. Doctoral Dissertation, Victoria University of Wellington.

Bell, K. (2018). *Game On! Gamification, Gameful Design, and the Rise of the Gamer Educator*. John Hopkins University Press: Baltimore.

Belman, J. & Flanagan, M. (2010). Exploring the Creative Potential of Values Conscious Game Design: Student's Experiences with the VAP Curriculum. *Eludamos*. 4(1).

Bernhaupt, R. (2010). *Evaluating User Experience in Games: Concepts and Methods*. London: Springer.

Beylefeld, A., & Struwig, M. (2007). A Gaming Approach to Learning Medical Microbiology: Student's Experiences of Flow. *Medical Teacher*. 29(9-10), 933-940.

Bhattacharjee, A. (2001). Understanding Information Systems Continuance: An Expectation Confirmation Model, *MIS Quarterly*, 25(3), 351-370.

Bishop, J. (2014). *Gamification for Human Factors Integration: Social, Education, and Psychological Issues*. Hershey: Information Science Reference (an imprint of IGI Global).

- Bleumers, L., All, A., Marien, I., Schurmans, D., Van Looy, J., Jacobs, A., et al. (2012). State of Play of Digital Games for Empowerment and Inclusion: A Review of the Literature and Empirical Cases. Spain: JRC Technical Reports Institute for Prospective Technological Studies.
- Bjork, S., & Holopainen, J. (2005). *Patterns in Game Design*. Boston, MA: Charles River Media.
- Bourgonjon, J., Valcke, M., Soetaert, R., & Schellens, T. (2010). Student's Perceptions About the Use of Video Games in the Classroom. *Computers & Education*, 54(4), 1145--1156.
- Brathwaite, B., & Schreiber, I. (2008). *Challenges for Game Designers*. Boston, MA: Charles River Media.
- Brown, T. H. (2005). Towards a model for m-learning in Africa. *International Journal on E-learning*, 4(3), 299-315.
- Carroll, J. M. & Thomas, J. C. (1982). Metaphor and the cognitive representation of computing systems. *IEEE Transactions on Systems, Man, and Cybernetics*, 12, 107-116.
- Csikszentmihalyi, M. (2000). The contribution of flow to positive psychology. In J. E. Gillham (Ed.), *The science of optimism and hope: Research essays in honor of Martin E. P. Seligman* Templeton Foundation Press, pp. 387--395.
- Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, 93(1), 43--54. Retrieved from <https://doi.org/10.1037/0022-0663.93.1.43>
- Clarke, I. (2001). Emerging value propositions for m-commerce. *Journal of Business Strategies*, 18(2), 133-148.
- Consalvo, M., (2009). There is No Magic Circle. *Games and Culture*, 4, 408-417.
- Costello, B.M., & Edmonds, E.A. (2007). *A study in play, pleasure and interaction design*. DPPI. ACM Press, 76-91.
- Covington M. V., & Omelich C. L. (1984). Task-oriented versus competitive learning structures: motivational and performance consequences. *Journal of Educational Psychology*, 76, 1038-1050.
- De Aizpurua, M., Price E., Tucker, K. (2018). Give Gaming a Go! Enhancing learning through gamification. *Australian Law Librarian*, 26, 2, 92-100.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- De-Marcos, L., Domínguez, A., Saenz-de-Navarrete, J., & Pagés, C. (2014). An empirical study comparing gamification and social networking on e-learning. *Computers & education*, 75, 82-91.

Dempsey, J. V., Lucassen, B. A., Haynes, L. L., & Casey, M. S. (2002). Forty simple computer games and what they should mean to educators. *Simulation and Gaming* 33 (2), 157-168.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From Game Design Elements to Gamefulness: Defining "Gamification". In *Proceedings of the 15th International Academic Mind Trek Conference Envision Future Media Environments*, New York, 9-15.

Dimitriadis, S., (2015). Θεωρίες μάθησης και εκπαιδευτικό λογισμικό. Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: <http://hdl.handle.net/11419/3397>

Din, H. W. H. (2006). Play to Learn: exploring online educational games in museums. Paper presented at the International Conference on Computer Graphics and Interactive Techniques.

Dominguez, A., Saenz-de-Navarrete, J., de-Marcos, L., Fernandez-Sanz, L., Pages, C., & Martinez-Herraiz, J. J. (2013). Gamifying Learning Experiences: Practical Implications and Outcomes. *Computers & Education*, 63, 380- 392.

Elliot, A. J. (1994). Approach and avoidance achievement goals: An intrinsic motivation analysis. In Elliot, A.J. & Church, M.A. (1997), A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72, 218--232.

Elliot, A.J. (1999). Approach and Avoidance Motivation and Achievement Goals, *Educational Psychologist*, 34(3), 169-189.

Faria, A. J., & Whiteley, T. R. (1990). An empirical evaluation of the pedagogical value of playing a simulation game in a principles of marketing course. *Developments in Business Simulation and Experiential Learning*, 17, 53--57.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117--140.

Fogg, B. (2009). A behavior model for persuasive design. Fourth Persuasive Technology International Conference. Claremont, California, April 26-29, 2009.

Fernandes, J., Duarte, D., Ribeiro, C., Farinha, C., Pereira, J. M., & Silva, M. M. (2012). I think: A Game-Based Approach Towards Improving Collaboration and Participation in Requirement Elicitation. *Procedia Computer Science* (15), 66-77.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Fullerton, T. (2008). *Game Design Workshop: A Playcentric Approach to Creating Innovative Games*. Amsterdam: Morgan Kaufmann.

Gaver, W. W., Bowers, J., Boucher, A., Pennington, S., Gellersen, H., Schmidt, A., Steed, A., Villars, N., & Walker, B. (2004). The drift table: designing for ludic engagement. In CHI '04 extended abstracts on Human factors in computing systems. ACM Press, 885-900.

- Gaver, W. W. (2002). Designing for Homo Ludens. *I3 Magazine*, 12.
- Gibbons, P. (2002). *Scaffolding Language, Scaffolding Learning. Teaching Second Language Learners in the Mainstream Classroom*. Portsmouth NH: Heinemann.
- Gnauk, B., Dannecker, L., & Hahmann, M. (2012). Leveraging gamification in demand dispatch systems. *Proceedings of the 2012 Joint EDBT/ ICDT Workshops*, 103-110.
- Goula, V. (2019). Παιχνιδοποίηση (gamification) και διαπολιτισμική εκπαίδευση: μια εκπαιδευτική παρέμβαση σε μαθητές Β' Δημοτικού. Πρόγραμμα Μεταπτυχιακών Σπουδών Επιστήμες της Εκπαίδευσης και της Δια Βίου Μάθησης. Διπλωματική εργασία, Πανεπιστήμιο Μακεδονίας, Θεσσαλονίκη. <http://dspace.lib.uom.gr/handle/2159/23260>.
- Groh, F. (2012). Gamification: State of the Art Definition and Utilization. RTMI Ulm University, Institute of Media Informatics, 39-46.
- Hakulinen, L., Auvinen, T., & Korhonen, A. (2013). Empirical study on the effect of achievement badges in TRAKLA2 online learning environment. In *Proceedings of Learning and Teaching in Computing and Engineering (LaTiCE) Conference*, Macau: IEEE, 47-54.
- Halavais, A. M. C. (2012). A genealogy of badges, *Information. Communication & Society*, 15(3), 354-373.
- Harland, P., Staats, H., & Wilke, H. A. M. (1999). Explaining Proenvironmental Intention and Behavior by Personal Norms and the Theory of Planned Behavior. *Journal of Applied Social Psychology* 29(12), 2505-2528.
- Hassenzahl, M. (2003). The thing and I: Understanding the relationship between user and product. In M. Blythe, C. Overbeeke, A. Monk, & P. C. Wright (Eds), *Funology: From usability to enjoyment*. Dordrecht: Kluwer, 31- 42.
- Helgason, D. (2010). Trends Unity Blog. Retrieved from <https://blog.unity.com/technology/2010-trends>.
- Hsin-Yuan Huang, W. and Soman, D. (2013). *A Practitioner's Guide to Gamification of Education* (Research Report Series: Behavioural Economics in Action, Rotman School of Management, University of Toronto, 10 December 2013) <http://www.rotman.utoronto.ca/-/media/files/programs-and-areas/behavioural-economics/guidegamificationeducationdec2013.pdf>.
- Hunicke, R., Leblanc, M.G., & Zubek, R. (2004). MDA : A Formal Approach to Game Design and Game Research. In *Proceedings of the AAAI Workshop on Challenges in Game AI* (Vol. 4, No. 1).
- Huizenga, J., Admiraal, W., Akkerman, S. & Dam, G. (2009). Mobile game-based learning in secondary education: engagement, motivation and learning in a mobile city game. *Journal of Computer Assisted Learning*, 25, 332-344.

Ibrahim, R., Che Mohd Yusoff, R., Mohamed Omar, H., and Jaafar, A. (2011). Students Perceptions of Using Educational Games to Learn Introductory Programming. *Computer and Information Science*, 4(1), 205-216.

Johnson, L., Adams, S., & Cummins, M. (2012). *The NMC Horizon Report: 2012 Higher Education Edition*. Austin, Texas: The New Media Consortium.

Juul, J. (2005). *Half-real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press.

Juul, J. (2010). *A Casual Revolution: Reinventing Video Games and Their Players*. Cambridge, MA: MIT Press.

Ioannides, M., Magnenat-Thalmann, N., & Papagiannakis, G. (2017). *Mixed Reality and Gamification for Cultural Heritage*. Cham: Springer.

Kakihara, M. & Sörensen, C. (2001). Expanding the 'Mobility' Concept, *ACM SIGGROUP Bulletin*, 22(3), 33-37.

Kampmann W. B., (2003). Playing and Gaming: Reflections and Classifications. *The International Journal of computer game research*, 3(1).

Kassimati, A. (2016). Μεθοδολογία αξιοποίησης gamification για την ενίσχυση high order thinking skills. Πανεπιστήμιο Πειραιώς. Διπλωματική εργασία. Τίτλος Προγράμματος Μεταπτυχιακών Σπουδών: Ηλεκτρονική Μάθηση. Τμήμα: Σχολή Τεχνολογιών Πληροφορικής και Επικοινωνιών. Τμήμα Ψηφιακών Συστημάτων. <https://dione.lib.unipi.gr/xmlui/handle/unipi/10067>

Kaufman, D., Sauv , L. (Eds.) (2010). *Educational Gameplay and Simulation Environments: Case Studies and Lessons Learned*. Hershey/New York.

Kim, S., Song, K., Lockee, B., & Burton J. (2018). *Gamification in Learning and Education. Enjoy Learning Like Gaming*. Cham: Springer.

Klopfer, E., & Squire, K. (2008). Environmental Detectives: the development of an augmented reality platform for environmental simulations. *Educational Technology Research and Development*, 56(2), 203-228.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Prentice Hall / Cambridge: Englewood Cliffs.

Korhonen H., Montola M., & Arrasvuori J. (2009). Understanding Playful Experiences Through Digital Games, *Proceedings of the 4th International Conference on Designing Pleasurable Products and Interfaces, DPPI 2009*, 274-285.

Kotini, I & Tzelepi, S. (2016). Η μεθοδολογία Agile και η εφαρμογή της στην μαθησιακή διαδικασία ενισχύουν την Υπολογιστική Σκέψη. Πρακτικά 8th Conference on Informatics in Education 2016, 212-222.

http://events.di.ionio.gr/cie/images/documents16/cie2016_cd_v1.0/new/custom/pdf/5.2%20212%20-%20222%20cie2016_095.000_kot_accepted_final_p.pdf

Kreuger, C., & Tian, L. (2004). A Comparison of the General Linear Mixed Model and Repeated Measures Anova Using a Dataset with Multiple Missing Data Points. *Biological Research for Nursing*, 6(2), 151-157.

Kukulka-Hulme, A., & Traxler, J. (2005). *Mobile learning: A handbook for educators and trainers*. London: Routledge.

Kumar, B., & Khurana, P. (2012). Gamification in education-learn computer programming with fun. *International Journal of Computers and Distributed Systems*, 2(1), 46–53.

Landis, D., Triandis, H. C., & Adamopoulos, J. (1978). Habit and Behavioral Intentions as Predictors of Social Behavior. *Journal of Social Psychology*, 106(2), 227-237.

Lee, M. C. (2010). Explaining and Predicting User's Continuance Intention toward E-Learning: An Extension of the Expectation-Confirmation Model, *Computers & Education*, 54(2), 506-516.

Li, W., Grossman, T., & Fitzmaurice, G. (2012, October). GamiCAD: A gamified tutorial system for first time autocad users. In *Proceedings of the 25th annual ACM symposium on user interface software and technology* (pp. 103–112). Cambridge, MA: ACM.

Limayenm, M., Hirt, S. G., and Cheung, C. M. K. (2003). Habit in the Context of IS Continuance: Theory Extension and Scale Development. *European Conference on Information Systems*. Retrieved from <https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1087&context=ecis2003>

Ling, K., Beenen, G., Ludford, P., Wang, X., Chang, K., Li, X., et al. (2005). Using social psychology to motivate contributions to online communities. *Proceedings of the 2004 ACM conference on Computer supported cooperative work*, 212-221.

Lyytinen, K. & Yoo, Y. (2002). Research Commentary: The Next Wave of Nomadic Computing. *Information Systems Research*, 13(4), 377-388.

Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. *Cognitive Science*, 5(4), 333-369.

McGonigal, J. (2011). *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. London: Penguin.

Montalvo, F. T., & Torres, M.C. (2008). Self-regulated learning: Current and future directions. *Electronic Journal of Research in Educational Psychology*, 2(1), 1-34.

Moran, T. P., & Dourish, P. (2001). Introduction to this special issue on context aware computing. *Human-Computer Interaction*, 16(2), 87-95.

Morrison, A., Viller, S., & Mitchell, P. (2011). Building sensitising terms to understand free-play in open-ended interactive art environments. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM Press, 2335-2344.

Muntean, C. I. (2011). Raising engagement in e-learning through gamification. *Proceedings 6th International Conference on Virtual Learning ICVL*, Cluj-Napoca, Romania, Europe, 323-329.

Murphy, M. & Meeker, M. (2011). Top mobile internet trends. KPCB Relationship Capital. Retrieved from <http://www.techweb.com.cn/special/download/kpcb.pdf>

Nacke, L. E., Drachen, A. & Goebel, S., (2010). Methods for Evaluating Gameplay Experience in a Serious Gaming Context. *International Journal of Computer Science in Sport*, 9, 2.

Nah, F. F. H., Zeng, Q., Telaprolu, V. R., Ayyappa, A. P., & Eschenbrenner, B. (2014). Gamification of education: A review of literature. In F. H. H. Nah (Ed.), *Proceedings of 1st International Conference on Human-Computer Interaction in Business*, Crete, Greece: LNCS Springer, 401–409.

Ouellette, J. A., & Wood, W. (1998). Habit and Intention in Everyday Life: The Multiple Processes by Which Past Behavior Predicts Future Behavior. *Psychological Bulletin*, 124(1), 54-74.

Palazón-Herrera, J. (2015). Motivación del alumnado de educación secundaria a través del uso de insignias digitales. *Opción*, 31(1), 1059-1079.

Pea, R., & Maldonado, H. (2006). WILD for learning: Interacting through new computing devices anytime, anywhere. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences*. Cambridge: Cambridge University Press, 427-441.

Peraki, M. (2018). Παιχνιδοποίηση και αυτορρυθμιζόμενη μάθηση. *Πρακτικά: 5ο Πανελλήνιο Εκπαιδευτικό Συνέδριο Κεντρικής Μακεδονίας*, 205-213.

Peters, K. (2007). m-Learning: Positioning educators for a mobile, connected future. *International Journal of Research in Open and Distance Learning*, 8(2), 1-17.

Philpot, T. A., Hall, R. H., Hubing, N., & Flori, R. E. (2005). Using Games to Teach Statics Calculation Procedures: Application and Assessment. *Computer Applications in Engineering Education*, 13(3), 222-232.

Piaget, J. (1936). *Origins of Intelligence in the Child*. London: Routledge & Kegan Paul.

Prensky, M. (2001). *The digital game-based learning revolution*. USA: McGraw-Hill

Rao, B., and Minakakis, L. (2003). Evolution of mobile location-based services. *Communications of the ACM*, 46(12), 61-65.

- Randel, J. M., Morris, B. A., Wetzel, C. D., & Whitehill, B. V. (1992). The effectiveness of games for educational purposes: A review of recent research. *Simulation and Gaming*, 23(3), 261–276.
- Reeves, B. & Read, J. L. (2009). *Total Engagement: Using Games and Virtual Worlds to Change the Way People Work and Businesses Compete*. Boston, MA: Harvard Business School Press.
- Reiners, T., & Wood, L. C. (2015). *Gamification in Education and Business*. Cham: Springer.
- Richter, G., Raban, D. R., & Rafaeli, S. (2015). Studying Gamification The Effect of Rewards and Incentives on Motivation. In T. Reiners & L. C. Wood (Eds), *Gamification in Education and Business*. Cham: Springer, 21-46.
- Ritterfeld, U., Cody, M., & Vorderer, P. (2009). *Serious Games: Mechanisms and Effects*. London, Routledge.
- Rott, G., (2010). *Guidance and Counseling Services in the Learner - Centred Approach in HE, Bologna Handbook - Making Bologna Work Student Centered Learning - An Insight Into Theory And Practice*. T4SCL.
- Salen, K., & Zimmerman, E. (2004). *Rules of play: Game design fundamentals*. Cambridge, MA: MIT Press.
- Sangkyun, K., Kibong, S., Lockee, B. and Burton, J. (2018). *Gamification in Learning and Education. Enjoy Learning Like Gaming*. Cham, Switzerland: Springer.
- Schell, J. (2008). *The Art of Game Design: A Book of Lenses*. Burlington, MA: Morgan Kaufmann Publishers.
- Schunk, D. H., & Zimmerman, B. J. (Eds). (1994). *Self-regulation of learning and performance: Issues and educational applications*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Shuler, C. (2009). *Pockets of potential: Using mobile technologies to promote children's learning*. New York, NY: The Joan Ganz Cooney Center at Sesame Workshop.
- Simons R., J., Van der Linden, J., & Duffy, T., A. (2000). *New learning: three ways to learn in a new balance*. Retrieved from Utrecht University Repository, <http://dspace.library.uu.nl/handle/1874/6952>.
- Sitzmann, T. (2011). A meta-analytic examination of the instructional effectiveness of computer-based simulation games. *Personnel Psychology*, 64(2), 489–528.
- Smith, A. L., & Baker, L. (2011). Getting a clue: Creating student detectives and dragon slayers in your library. *Reference Services Review*, 39 (4), 628–642.
- Su, C., & Cheng, C. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268–286.

Sweetser, P., & Wyeth, P. (2005). GameFlow: A model for evaluating player enjoyment in games. *Computers in Entertainment (CIE)*, 3(3), 1-24.

Taylor, T. L., (2009). The Assemblage of Play. *Games and Culture*, 4(4), 331-339.

Triandis, H. C. (1980). Values, Attitudes and Interpersonal Behavior. In *Nebraska symposium on motivation, 1979: Beliefs, attitudes, and values*. Lincoln, NE: University of Nebraska Press, 195-259.

Valle, A., Cabanach, R., González-Pienda, J., Rodríguez, S., & Piñeiro, I. (2003). Multiple goals, motivation and academic learning. *The British Journal of Educational Psychology*, 73, 71-87.

Van der Heijden, H. (2003). Factors Influencing the Usage of Websites: The Case of a Generic Portal in the Netherlands, *Information & Management*, 40(6), 541-549.

Van't Hooft, M., Swan, K., Lin, Y-M., & Cook, D. (2007). What is ubiquitous computing? In M. van't Hooft, & K. Swan, K. (Eds), *Ubiquitous Computing in Education*. London: Routledge, 3-17.

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186--205.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Towards a Unified View. *MIS Quarterly*, 27(3), 425-478.

Villalustre, Lourdes; Del Moral, María Ester. (2015). Gamificación: estrategia para optimizar el proceso de aprendizaje y la adquisición de competencias en contextos universitarios. *Digital Education Review*, Barcelona, n. 27, 13-31.

Walker, K. (2006). Introduction: Mapping the landscape of mobile learning. In M. Sharples (Ed.), *Big issues in mobile learning: Report of a workshop by the kaleidoscope network of excellence mobile learning initiative*. Nottingham: University of Nottingham.

Wilshire, B., (1990). *The moral collapse of the university: Professionalism, purity, and alienation*. Albany, NY: State University of New York Press.

Yee, N. (2006a). The labor of fun: How video games blur the boundaries of work and play. *Games and Culture: A Journal of Interactive Media*, 1(1), 68-71.

Yee, N. (2006b). Motivations for play in online games. *Cyber Psychology & Behavior*, 9(6), 772-775.

Yildirim, I. (2017). The effects of gamification-based teaching practices on student achievement and students' attitudes toward lessons. *The Internet and Higher Education*, 33, 86-92.

Zicherman, G. (2011). *A Long Engagement and a Shotgun Wedding: Why Engagement is the Power Metric of the Decade*. Presentation, Gamification Summit, San Francisco, CA. Retrieved from <http://goo.gl/ila00>.

Zichermann, G. & Cunningham, C. (2011). *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol: O'Reilly.

Zimmermann, B. J. and Schunk, D.H. (2001). *Self-regulated learning and academic achievement: theoretical perspectives* (2nd ed.). NJ: Lawrence Erlbaum.

Ένωση Εταιρειών Κινητής τηλεφωνίας (2013). *20 χρόνια Κινητή Τηλεφωνία και Οικονομία*. Retrieved from http://www.eekt.gr/Portals/0/Analytic_findings_QED.pdf.

Κολλιάνης, Ε. (2002α). *Γνωστική Ψυχολογία, γνωστική Νευροεπιστήμη και Εκπαιδευτική Πράξη*. Αθήνα: Σύνοψη.

Κολλιάνης Ε., (2002β), *Θεωρίες Μάθησης και Εκπαιδευτική Πράξη, Τόμος Β'*. Αθήνα, Σύνοψη.

Ματσαγγούρας, Η., (2002). *Στρατηγικές Διδασκαλίας: Η Κριτική Σκέψη στη Διδακτική Πράξη*. Αθήνα: Gutenberg.

Bibliography on “Gamification Framework”

Alevizos, Chr. (2021). *Η παιχνιδοποίηση στην εκπαίδευση*. Ελληνικό Μεσογειακό Πανεπιστήμιο. Σχολή Επιστημών Διοίκησης και Οικονομίας. Τμήμα Διοικητικής Επιστήμης και Τεχνολογίας. Retrieved from <https://apothesis.lib.hmu.gr/handle/20.500.12688/9956>

Antin, J., & Churchill, E. F. (2011). *Badges in social media: A social psychological perspective*. In CHI 2011 Gamification Workshop Proceedings. New York, NY: ACM, 1-4.

Aonuma, E. (Producer), & Fujibayashi, H. (Director) (2011). *The Legend of Zelda*. Japan: Nintendo.

Bonaventura, L., Bryce, I., De Santo, T., Murphy, D. (Producers), & Bay, M. (Director) (2007). *Transformers*. United States: Di Bonaventura Pictures.

Bunchball (2007). *Bunchball Nitro: Enterprise-level gamification*. Bi Worldwide. Retrieved from <https://www.bunchball.com/products/nitro/>.

Bunchball (2016). *Gamification 101: An introduction to game dynamics [White paper]*. Bi Worldwide. Retrieved from Bunchball.com.

Christensen, C. M. (1992). *Exploring the limits of the technology s-curve. Part I: Component technologies*. *Production and Operations Management*, 1(4), 334-357. Retrieved from 10.1111/j.1937-5956.1992.tb00001.x.

Dawes, R. M., Van De Kragt, A. J., & Orbell, J. M. (1988). Not me or thee but we: The importance of group identity in eliciting cooperation in dilemma situations: Experimental manipulations. *Acta Psychologica*, 68(1), 83-97.

Duggan, K., & Shoup, K. (2013). *Business gamification for dummies*. Hoboken, NJ: Wiley.

Dunleavy, M. (2014). Design principles for augmented reality learning. *TechTrends*, 58(1), 28-34.

Electronic Arts Inc. (2013). *SimCity BuildIt*. Design Challenges. Retrieved from <https://www.ea.com/games/simcity/simcity-buildit>

Foster, R. N. (1986). *Innovation: The attacker's advantage*. New York, NY: Summit Books.

Hate, S. (2013). Enterprise gamification architecture strategy. *Gamification: Rediscover the Power of Engagement*, 11(3), 55.

Hayasaka, N. (Producer), & Matsumoto, K. (Director) (2003). *Transformers*. Japan: Winkysoft.

Herger, M. (2011, October 24). A checklist for evaluating gamification platforms. *Enterprise Gamification*. Retrieved from <http://www.enterprise-gamification.com/>.

Herzig, P., Ameling, M., & Schill, A. (2012, August 20-24). A generic platform for enterprise gamification. Paper presented at the Joint 10th Working IEEE/IFIP Conference on Software Architecture (WICSA) and 6th European Conference on Software Architecture (ECSA). Retrieved January 24, 2017, from IEEE Xplore. Retrieved from: 10.1109/WICSA-ECSA.2012.33.

Hunicke, R., LeBlanc, M., & Zubek, R. (2004). MDA: A formal approach to game design and game research. In *Proceedings of the AAAI Workshop on Challenges in Game AI*, Vol. 4, No. 1. Retrieved from <http://www.cs.northwestern.edu/~hunicke/MDA.pdf>.

Kapp, K. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. San Francisco, CA: Pfeiffer.

Kato, H. (1999). *ARToolKit*. Retrieved from <https://artoolkit.org>.

Kim, S. (2014). Decision support model for introduction of gamification solution using AHP. *The Scientific World Journal*, 2014, 1-7.

Kim, S., Song, K., Lockee, B., & Burton J. (2018). *Gamification in Learning and Education. Enjoy Learning Like Gaming*. Cham: Springer.

Korhonen, H., Montola, M., & Arrasvunori, J. (2009). Understanding playful user experience through digital games. In A. Guenand (Ed.), *Proceedings of the 4th International Conference on Designing Pleasurable Products and Interfaces, DPPI 2009*. Compiègne, France: ACM Press, 274-285.

Kumar, J., & Herger, M. (2013). *Gamification at work: Designing engaging business software*. Interaction Design Foundation. Retrieved from <https://www.interaction-design.org>

- Mayraz, E., & Lazo, D. (2012). *Sight systems*. Israel: Robot Genius.
- Mogo Mobile Inc. (2014). *Fresh Air*. Retrieved from <http://www.playfreshair.com>
- Mora, A., Riera, D., Gonzalez, C., & Arnedo-Moreno, J. (2017). Gamification: A systematic review of design frameworks. *Journal of Computing in Higher Education*. doi:10.1007/s12528-017-9150-4
- Overmars, M. (1999). *Game Maker*. Retrieved from <https://www.yoyogames.com>
- Radoff, J. (2011). *Game on: Energize your business with social media games*. Indianapolis, IN: Wiley Publishing Inc.
- Schell, J. (2014). *The art of game design: A book of lenses (2nd ed.)*. Boca Raton, FL: CRC Press.
- Schonfeld, E. (2010, August 25). *SCVNGR's secret game mechanics playdeck*. Retrieved from <https://techcrunch.com>
- Scillitoe, J. L. (2013). *Technology S-curve*. In E. H. Kessler (Ed.), *Encyclopedia of management theory Vol. 2*. Thousand Oaks, CA: SAGE Reference, 846-849. Retrieved from http://ezproxy.lib.vt.edu/login?url=http://go.galegroup.com.ezproxy.lib.vt.edu/ps/i.do?p=GVRL&sw=w&u=viva_vpi&v=2.1&it=r&id=GALE%7CCX3719100270&sid=summon&asid=67588320b3b844e91597dc092854603b.
- Supercell (2012). *Hay Day*. Finland: Supercell.
- Takahata, I. (Producer), & Miyazaki, H. (Director) (1986). *Castle in the Sky*. Japan: Studio Ghibli.
- Unity Technologies. (2004). *Unity*. Available from <https://unity3d.com>.
- Vogler, C., & Montez, M. (2007). *The writer's journey: Mythic structure for writers. (3rd ed.)*. Studio City, CA: Michael Wiese Productions.
- Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Philadelphia, PA: Wharton Digital Press.
- Zhu, Y., Pei, L., & Shang, J. (2017). Improving video engagement by gamification: A proposed design of MOOC videos. In S. Cheung, L. Kwok, W. Ma, L. K. Lee, & H. Yang (Eds), *Proceedings of the International Conference on Blended Learning (ICBL) 2017*. Hong Kong, China: Springer, 433-444.
- Zichermann, G. & Cunningham, C. (2011). *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol: O'Reilly.
- Zichermann, G., & Linder, J. (2013). *The gamification revolution: How leaders leverage game mechanics to crush the competition*. New York, NY: Mc Graw Hill Education.

Bibliography on Gamification and Cultural Heritage

Abdulqawi, Y. (2007). *Standard-Setting in UNESCO: Conventions, Recommendations, Declarations, and Charters Adopted by UNESCO (1948-2006)*. Leiden: UNESCO.

Amoroso, M. (2020). Videogame archeologici e storici: luci, ombre e lezioni imparate con Mi Rasna. In S. Pescarin, (Ed.), *Videogames, Ricerca, Patrimonio Culturale*. Milano: Franco Angeli, 55-59.

Anderson, E.F., et al. (2010). Developing Serious Games for Cultural Heritage: A State-of-the-Art Review. *Virtual Reality*, 14, 255-75. Retrieved from <https://doi.org/10.1007/s10055-010-0177-3>.

Andritsou, G., Katifori, A., Kourtis, V., & Ioannidis, Y. (2018). Momap, An Interactive Gamified App for the Museum of Mineralogy. In *Proceedings of the 10th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)*, Wurzburg, Germany, 5-7 September 2018, 1-4.

Antoniou, A., Lepouras, G., Bampatzia, S., & Almpnouidi, H. (2013). An approach for serious game development for cultural heritage: Case study for an archaeological site and museum. *Journal on Computing and Cultural Heritage (JOCCH)*, 6(4),17.

Backlund, P., & Hendrix, M. (2013). Educational games—Are they worth the effort? A literature survey of the effectiveness of serious games. In *Proceedings of the 5th International Conference on Games and Virtual Worlds for Serious Applications (VS-GAMES)*, Poole, UK, 11-13 September 2013, 1-8.

Baek, Y. K. (2010). *Gaming for Classroom-Based Learning: Digital Role Playing as a Motivator of Study*. Hershey, PA: IGI Global.

Beacham, R., Denard, H., & Niccolucci, F. (2006). An introduction to the London charter. In M. Ioannides et al., *The Evolution of Information Communication Technology in Cultural Heritage: Where Hi-tech Touches the Past: Risks and Challenges for the 21st Century (Short papers from the joint event CIPA/VAST/EG/EuroMed)*. Budapest: Archaeolingua.

Bellotti, F. et al. (2013). Assessment in and of Serious Games: An Overview. *Advances in Human-Computer Interaction*, 2013, 1-11. Retrieved from <https://doi.org/10.1155/2013/136864>.

Bellotti, F., Berta, R., & De Gloria, A. (2010). Designing Effective Serious Games: Opportunities and Challenges for Research. *International Journal of Emerging Technologies in Learning*, 5(3), 22-35.

Bentkowska-Kafel, A., Denard, H., & Baker, D. (2012). *Paradata and transparency in virtual heritage*. Farnham, Surrey, England: Ashgate.

Bollwerk, E. (2015). Co-Creation's Role in Digital Public Archaeology. *Advances in Archaeological Practice*, 3(3), 223-34. Retrieved from <https://doi.org/10.7183/2326-3768.3.3.223>.

Bonacchi, C. (2017). Digital Media in Public Archaeology. In Moshenska, G. (Ed.), *Key Concepts in Public Archaeology*. London: UCL Press, 60-72. Retrieved from <https://doi.org/10.2307/j.ctt1vxm8r7.9>.

Bonacini, E., & Giaccone, S. C. (2021). Gamification and Cultural Institutions in Cultural Heritage Promotion: A Successful Example from Italy. *Cultural Trends*, 1-20. Retrieved from <https://doi.org/10.1080/09548963.2021.1910490>.

Boom, K. H. J. et al. (2020). Teaching through Play: Using Video Games as a Platform to Teach about the Past. In Hageneuer, S. (Ed.), *Communicating the Past in the Digital Age = Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology (October 12-13, 2018)*. London: Ubiquity Press, 1-10. Retrieved from <https://doi.org/10.5334/bch.c>.

Boucenna, S., Narzisi, A., Tilmont, E., Muratori, F., Pioggia, G., Cohen, D., & Chetouani, M. (2014). Interactive technologies for autistic children: A review. *Cognitive Computation*, 6(4), 722-740.

Bounia, A., Katapoti, D. (Eds.) (2021). *Αναδυόμενες Τεχνολογίες και Πολιτισμική Κληρονομιά*. Αθήνα: Αλεξάνδρεια.

Boyan, A., & Sherry, J. (2011). The Challenge in Creating Games for Education: Aligning Mental Models With Game Models. *Child Development Perspectives*, 5(2), 82-7. Retrieved from <https://doi.org/10.1111/j.1750-8606.2011.00160.x>.

Bozanta, A., Kutlu, B., Nowlan, N., & Shirmohammadi, S. (2016) Effects of serious games on perceived team cohesiveness in a multi-user virtual environment. *Computers in Human Behavior*, 59, 380-388.

Bozkurt, A., Durak, G. (2018). A Systematic Review of Gamification Research: in Pursuit of Homo Ludens. *International Journal of Game-Based Learning*, 8(3), 15-33.

Brockmyer, J. et al. (2009). The Development of the Game Engagement Questionnaire: A Measure of Engagement in Video Game-playing. *Journal of Experimental Social Psychology*, 45(4), 624-34. Retrieved from <https://doi.org/10.1016/j.jesp.2009.02.016>.

Bruno, F., Lagudi, A., Ritacco, G., Agrafiotis, P., Skarlatos, D., Cejka, J., Kouril, P., Liarokapis, F., Philpin-Briscoe, O., Poullis, C., et al. (2017). Development and integration of digital technologies addressed to raise awareness and access to European underwater cultural heritage. An overview of the H2020 i-MARECULTURE project. In *Proceedings of the OCEANS 2017, Aberdeen, UK, 19-22 June 2017*, 1-10.

Buckingham, D., & Scanlon, M. (2005). Selling Learning: Towards a Political Economy of Edutainment Media. *Media, Culture and Society*, 27, 41-58. Retrieved from <https://doi.org/10.1177/0163443705049057>.

Capdevila Ibanez, B., Marne, B., & Labat, J.-M. (2011). Conceptual and Technical Frameworks for Serious Games. In D. Gouscos, & M. Meimaris, (Eds), *5th European Conference on*

Games Based Learning (Athens, Greece 20-21 October 2011). Reading: Academic Conferences Ltd, 81-7.

Capone, A. (2011). Turismo videoludico: in viaggio con Assassin's Creed II tra Monteriggioni e San Gimignano [PhD Dissertation]. Milano: University of Milano-Bicocca.

Catalano, C. E., Luccini, A. M., Mortara, M. (2014). Best Practices for an Effective Design and Evaluation of Serious Games. *International Journal of Serious Games*, 1(1), 1-13. Retrieved from <https://doi.org/10.17083/ijsg.v1i1.8>.

Ceipidor, U.B., Medaglia, C., Volpi, V., Moroni, A., Sposato, S., Carboni, M., Caridi, A. (2013). NFC technology applied to touristic-cultural field: A case study on an Italian museum. In *Proceedings of the 5th international workshop on near field communication (NFC)*, Zurich, Switzerland, 5 February 2013, 1-6.

Champion, E. (2011). *Playing with the Past*. London: Springer. Retrieved from <https://doi.org/10.1007/978-1-84996-501-9>.

Champion, E. (2017). Bringing Your A-Game to Digital Archaeology: Issues with Serious Games and Virtual Heritage and What We Can Do About It. *The SAA Archaeological Record*, 17(2), 24-7.

Christensen, P., & Machado, D. (2010). Video Games and Classical Antiquity. *The Classical World*, 104(1), 107-10.

Christopoulos, D., Mavridis, P., Andreadis, A., & Karigiannis, J. N. (2011). Using Virtual Environments to Tell the Story "The Battle of Thermopylae". In *Proceedings of the Third International Conference on Games and Virtual Worlds for Serious Applications*, Athens, Greece, 4-6 May 2011, 84-91.

Connolly, T. M., Boyle, E. A., MacArthur, E., Hailey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education*, 59(2), 661-686. <https://doi.org/10.1016/j.compedu.2012.03.004>

Copplestone, T.J. (2017). Designing and Developing a Playful Past in Video Games. In A. Mol, et al. (Eds), *The Interactive Past: Archaeology, Heritage, and Video Games*. Leiden: Sidestone Press, 85-97.

Cosovic, M., Ramic, B. (2020). Game-Based Learning in Museums — Cultural Heritage. *Information 2020*, 11, 22, 1-13. doi:10.3390/info11010022.

Council of Europe (2005). *Framework Convention on the Value of Cultural Heritage for Society*. Faro Convention. Retrieved from <https://rm.coe.int/1680083746>.

Council of the European Union (2014). *Council Conclusions on Participatory Governance of Cultural Heritage*. *Official Journal of the European Union*, C 463, 1-3.

Creative Keys (2020). Fruizione culturale in un click? Come il pubblico ha reagito alle proposte di fruizione culturale durante il lockdown e quali prospettive future. Retrieved from <https://bit.ly/3nma j 0a>.

Dell'Aquila, E., Marocco, D., Ponticorvo, M., Di Ferdinando, A., Schembri, M., & Miglino, O. (2016). *Educational Games for Soft-Skills Training in Digital Environments: New Perspectives*. Berlin, Germany: Springer.

Denard, H. (2013). Implementing best practice in cultural heritage visualisation: the London charter. In C. Corsi, B. Slapsak, F. Vermeulen (Eds), *Good Practice in Archaeological Diagnostics*. Springer, p.p 255-268.

Deterding, S. et al. (2011). From Game Design Elements to Gamefulness: De-fining "Gamification". In Lugmayr, A. et al. (Eds), *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*. New York: The Association of Computing Machinery, 9-15. Retrieved from <https://doi.org/10.1145/2181037.2181040>.

Dewey, J. (1938). *Experience and Education*. New York: MacMillan.

Di Blas, N., & Paolini, P. (2014). Multi-user virtual environments fostering collaboration in formal education. *Educational Technology & Society*, 17 (1), 54-69.

Ding, W., & Marchionini, G. (1998). *A Study on Video Browsing Strategies*. Technical Report. Retrieved from <https://drum.lib.umd.edu/handle/1903/897>.

Dorner, R., et al. (Eds). (2016). *Serious Games. Foundations, Concepts and Practice*. Switzerland: Springer. <https://doi.org/10.1007/978-3-319-40612-1>.

Dubois, L.-E., Gibbs, C. (2018). Video game-induced tourism: a new frontier for destination marketers. *Tourism Review*, 73(2), 186-98. Retrieved from <https://doi.org/10.1108/TR-07-2017-0115>.

Economou, M. (2015). Heritage in the Digital Age. In W. Logan, M. N. Craith, U. Kockel, (Eds), *A Companion to Heritage Studies*. Hoboken: Wiley-Blackwell, 215-228. Retrieved from <https://doi.org/10.1002/9781118486634.ch15>.

EDUCAUSE Learning Initiative (ELI). (2014). *7 Things You Should Know about Game Based Learning*. Retrieved from <https://library.educause.edu/-/media/files/library/2014/3/eli7106-pdf.pdf>.

Entertainment Software Association (2020). *2020 Essential Facts About the Video Game Industry*. Retrieved from <https://bit.ly/395VNVg>.

Euro Innovanet. *Beyond the Traditional Museum (2008)*. In *Character, Profile and Extent of European Virtual Museums*. Rome, Italy: FMU. S. EU. M. Project.

Ferdani, D. et al. (2020). *3D Reconstruction and Validation of Historical Back-ground for Immersive VR Applications and Games: The Case Study of the Forum of Augustus in Rome*.

Journal of Cultural Heritage, 43, 129-43. Retrieved from <https://doi.org/10.1016/j.culher.2019.12.004>

Froschauer, J. (2012). *Serious Heritage Games: Playful Approaches to Address Cultural Heritage* [PhD Dissertation]. Wien: Wien University of Technology.

Georgiou, R., & Hermon, S. (2011). A London charter's visualization: the ancient Hellenistic-Roman theatre in Paphos. In M. Dellepiane, F. Niccolucci, S. Pena Serna, H. Rushmeier, L. Van Gool (Eds), *The 12th International Symposium on Virtual Reality, Archaeology and Cultural Heritage. VAST, 1-4*.

Goldsmith, T.R., & LeBlanc, L.A. (2004). Use of Technology in Interventions for Children with Autism. *Journal of Early Intensive Behavior Intervention*, 1(2), 166-178.

Gould, P. (2018). Community-Xentred Supply Chains and Sustainable Archaeo-logical Tourism. *Archeostorie. Journal of Public Archaeology*, 2, 61-74. https://doi.org/10.23821/2018_3c.

Haddad, N. (2016). Multimedia and Cultural Heritage: A Discussion for the Community Involved in Children's Edutainment and Serious Games in the 21st Century. *Virtual Archaeology Review*, 7(14), 61-73. Retrieved from <https://doi.org/10.4995/var.2016.4191>.

Hageneuer, S. (Ed.). (2020). *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology, London, 12-13 October 2018*. London: Ubiquity Press.

Hageneuer, S., & Schmidt, S. C. (2020). Introduction. In Hageneuer, S. (Ed.), *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology. London, 12-13 October 2018*. London: Ubiquity Press, 1-10.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does Gamification Work?—A Literature Review of Empirical Studies on Gamification. In *Proceedings of the 47th Hawaii International Conference on System Sciences, Waikoloa, HI, USA, 6-9 January 2014*, 3025-3034.

Hanes, L., & Stone, R. (2017). A model of heritage content in serious and commercial games. In *Proceedings of the 9th International Conference on Virtual Worlds and Games For Serious Applications (VS-Games), Athens, Greece, 6-8 September 2017*, 137-140.

Hanes, L., & Stone, R. (2019). A model of heritage content to support the design and analysis of video games for history education. *Journal of Computers in Education* 6, 587-612. Retrieved from <http://doi:10.1007/s40692-018-0120-2>.

Hays, M. J., Lane, H.C., Auerbach, D. Must Feedback Disrupt Presence in Serious Games? In *Proceedings of the AIED Workshops, Memphis, TN, USA, 9-13 July 2013*.

Hermon, S., Sugimoto, G., Mara, H., Arnold, D., Chalmers, A., & Niccolucci, F. (2007). The London charter and its applicability. In *VAST 2007. The 8th International Symposium on*

Virtual Reality, Archaeology and Cultural Heritage, Brighton, November 26-30, 2007. *Archaeolingua*, 11-14.

Huggett, J. (2019). Resilient Scholarship in the Digital Age. *Journal of Computer Applications in Archaeology*, 2(1), 105-19. Retrieved from <https://doi.org/10.5334/jcaa.25>.

Husain, M., & Stein, J. (1988). Rezsó Balint and his most celebrated case. *Arch. Neurol.*, 45, 89-93.

Ibrahim, N., & Ali, N. M. (2018). A Conceptual Framework for Designing Virtual Heritage Environment for Cultural Learning. *Jurnal on Computing and Cultural Heritage* 11(2), 27.

Interactive Software Federation of Europe (2020). Key Facts 2020. Retrieved from <https://bit.ly/2L1DuZn>.

Inventum (2018). Retrieved from <https://www.inventumgame.com/>.

Irwin, D. E., & Andrews, R. V. (1996). Integration and accumulation of information across saccadic eye movements. In *Attention and performance XVI: Information Integration in Perception and Communication*, Volume 16. Cambridge, MA, USA: MIT Press 1996, 125-155.

Italian Interactive Digital Entertainment Association (2020). I videogiochi in Italia nel 2020. Dati sul mercato e sui consumatori. Retrieved from <https://bit.ly/3dGZFPN>.

Italian Videogame Program (2019). Videogiochi e luoghi reali: analisi del questionario IVIPRO. Retrieved from <https://bit.ly/38noqOv>.

Kelly, L., & Bowan, A. (2014). Gamifying the museum: Educational games for learning. In *Proceedings of the Museums and the Web Asia*, Daejeon & Seoul, Korea, 7-10 October 2014. Kersten, T.P., Tschirschwitz, F., & Deggim, S. (2017). Development of a Virtual Museum Including a 4d Presentation of Building History in Virtual Reality. *ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 361-367.

Kidd, J. (2015). Gaming for affect: Museum online games and the embrace of empathy. *Journal of Curatorial Studies*, 4(3), 414-432.

Kiourt, C., Koutsoudis, A., Markantonatou, S., & Pavlidis, G. (2016). THE 'SYNTHESIS' VIRTUAL MUSEUM. *Mediterranean Archaeology and Archaeometry*, 16(5), 1-9.

Klopfer, E. & Squire, K. (2008). Environmental Detectives—the development of an augmented reality platform for environmental simulations. *Educational technology research and development*, 56 (2), 203-228.

Klopfer, E., Perry, J., Squire, K., Jan, M. F., & Steinkuehler, C. (2005). Mystery at the museum: A collaborative game for museum education. In *Proceedings of the Conference on Computer Support for Collaborative Learning: Learning 2005: The Next 10 Years!* International Society of the Learning Sciences, Taipei, Taiwan, 30 May-4 June 2005, 316-320.

Kontogianni, G. & Georgopoulos, A. (2015). A realistic Gamification attempt for the Ancient Agora of Athens. *Digital Heritage* 2015, 377-380, doi: 10.1109/DigitalHeritage.2015.7413907.

Koutsabasis, P. (2017). Empirical Evaluations of Interactive Systems in Cul-tural Heritage: A Review. *International Journal of Computational Meth-ods in Heritage Science*, 1(1), 100-22. Retrieved from <https://doi.org/10.4018/IJC-MHS.2017010107>.

Kultima, A., & Paavilainen, J. (2007). Creativity techniques in game design. In *Proceedings of the Conference on Future Play*, Toronto, ON, Canada, 14-17 November 2007, 243-244.

Lercari, N., Onsurez, L., & Schultz, J. (2013). Multimodal reconstruction of landscape in serious games for heritage: An insight on the creation of Fort Ross Virtual Warehouse serious game. In *Proceedings of the 2013 Digital Heritage International Congress (DigitalHeritage)*, Marseille, France, 28 October-1 November 2013, Vol. 2, 231-238.

Liarokapis, F., Petridis, P., Andrews, D., & de Freitas, S. (2017). Multimodal serious games technologies for cultural heritage. In *Mixed Reality and Gamification for Cultural Heritage*. Springer: Berlin, Germany, 2017, 371-392.

Lopez-Menchero, V. M. (2011). Propuesta para profundizar en la Carta de Londres y mejorar su aplicabilidad en el campo del patrimonio arqueologico. *Virtual Archaeology Review*. 4, 65-69.

Lopez-Menchero, V. M. (2013). International guidelines for virtual archaeology: the seville principles. In C. Corsi, B. Slapssak, F. Vermeulen (Eds), *Good Practice in Archaeological Diagnostics*. Springer, 269-284.

Lopez-Menchero, V. M., & Grande, A. (2011). Hacia una carta internacional de arqueologia virtual. *El borrador SEAV*. *Virtual Archaeology Review*. 4, 71-75.

Lucey-Roper, M. (2006). Discover Babylon: Creating a vivid user experience by exploiting features of video games and uniting museum and library collections. In *Proceedings of the Museums and the Web*, Albuquerque, NW, USA, 22-25 March 2006.

Luck, S. J., Vogel, E. K. (1997). The capacity of visual working memory for features and conjunctions. *Nature* 1997, 390, 279.

Mariotti, S. (2020a). What if Lara Croft Becomes a Video Game Designer? When Archaeologists 'Dig' Serious Games. In I. Marfisi-Schottman, et al. (Eds), *Games and Learning Alliance = Proceedings of the 9th International Confer-ence, GALA2020* (Laval, France, December 9-10, 2020). Cham: Springer, 395--400. Retrieved from https://doi.org/10.1007/978-3-030-63464-3_37.

Mariotti, S. (2020b). Serious Games and Archaeology: Rough Notes on Craft-ing Archaeological Data for Heritage Enhancement. In A. De Carvalho Antunes, et al. (Eds), *Advances in Cultural Heritage Studies, Year2020. Contributions of the European Student's Association for Cultural Heritage*. Oeiras, Portugal: Mazu Press, 217-234.

Mariotti, S., Marotta, N. (2020). Gioco e storydoing: strumenti didattici per l'insegnamento della storia nella scuola primaria. *Didattica Della Storia - Journal of Research and Didactics of History*, 2(1S), 608-29. <https://doi.org/10.6092/issn.2704-8217/11224>

Mayer, I. et al. (2014). A Brief Methodology for Researching and Evaluating Serious Games and Game-Based Learning. In T. Connolly, et al. (Eds), *Psychology, Pedagogy, and Assessment in Serious Games*. Hershey (PA): IGI Global, 357-393) Retrieved from <https://doi.org/10.4018/978-1-4666-4773-2.ch017>.

Michael, D., & Chen, S. (2005). Proof of Learning: Assessment in Serious Games. Retrieved from Game Developer: https://www.gamasutra.com/view/feature/2433/proof_of_learning_assessment_in_.php.

Mol, A. et al. (Eds). (2017). *The Interactive Past: Archaeology, Heritage, and Video Games*. Leiden: Sidestone Press.

Morgan, C. (2019). Avatars, Monsters, and Machines: a Cyborg Archaeology. *European Journal of Archaeology*, 22(3), 324-37. Retrieved from <https://doi.org/10.1017/eea.2019.22>.

Mortara, M., Catalano, C. E., Bellotti, F., Fiucci, G., Houry-Panchetti, M., & Petridis, P. (2014). Learning cultural heritage by serious games. *Journal of Cultural Heritage*, 15 (3), 318-325. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S1296207413001349?via%3Dihub>.

Mortara, M.; Catalano, C.E.; Bellotti, F.; Fiucci, G.; Houry-Panchetti, M.; Petridis, P. (2014). Learning Cultural Heritage by Serious Games. *Journal of Cultural Heritage*, 15(3), 318-325.

O'Keefe, P. J., Prott, L. V., & Institute of Art and Law (Great Britain). (2011). *Cultural heritage conventions and other instruments: A compendium with commentaries*. Builth Wells, United Kingdom: Institute of Art and Law.

Pagoulatou, A. (2020). Τα μουσικά της Πάτρας: Ένα χώρο - ευαίσθητο παιχνίδι ως εργαλείο μάθησης και πολιτισμικής διαμεσολάβησης στην τάξη της γαλλικής ως ξένης γλώσσας. 1ο Πανελλήνιο Συνέδριο με θέμα «Το εκπαιδευτικό παιχνίδι στην τυπική και μη τυπική μάθηση» (National Centre of research and preservation of school material, 2020).

Pescarin, S. (Ed.) (2020). *Videogames, Ricerca, Patrimonio Culturale*. Milano: Franco Angeli.

Pescarin, S. et al (2020). Optimising Environmental Educational Narrative Videogames: The Case of 'A Night in the Forum'. *Journal on Computing and Cultural Heritage*, 13(4), 1-23. <https://doi.org/10.1145/3424952>.

Pescarin, S., et al (2020). Optimising Environmental Educational Narrative Videogames: The Case of "A Night in the Forum". *Journal on Computing and Cultural Heritage*, 13(4), 1-23. Retrieved from <https://doi.org/10.1145/3424952>.

Petzet, M., & Ziesemer J. (Ed.). (2004). International Charters for Conservation and Restoration. Chartes Internationales sur la Conservation et la Restauration. Cartas Internacionales sobre la Conservacion y la Restauracion. München: ICOMOS.

Piaget, J. (1962). *Play, Dreams, and Imitation in Childhood*. New York: Norton.

Politopoulos, A., et al. (2019). Romans and Rollercoasters: Scholarship in the Digital Playground. *Journal of Computer Applications in Archaeology*, 2(1), 163-75. <https://doi.org/10.5334/jcaa.35>.

Porter, J. (2018). Assassin's Creed Has a New Mission: Working in the Class-room. Retrieved from <https://nyti.ms/35kwPA7>.

Prensky, M. (2001). *Digital Game-Based Learning*. New York: McGraw-Hill.

Reinhard, A. (2018). *Archaeogaming: An Introduction to Archaeology in and of Video Games*. New York, Oxford: Berghahn Books.

Sailer, M. et al. (2017). How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satisfaction. *Computers in Human Behavior*, 69, 371-80. Retrieved from <https://doi.org/10.1016/j.chb.2016.12.033>.

Sajid, M. J., et al. (2018). Video Gaming a New Face of Inducement Tourism: Main Attractors for Juvenile Gamers. *International Journal for Social Studies*. 4(5), 52-6.

Shapiro, J. (2018). *The New Childhood: Raising Kids to Thrive in a Connected World*. New York: Little, Brown and Company.

Singh, M. (2021). Acquisition of 21st Century Skills Through STEAM Education. *Academia Letters*, Article 712. Retrieved from <https://doi.org/10.20935/AL712>.

Solima, L. (2018). Gaming for the Museums. The MANN Experience. *Economia della Cultura*, 28(3), 275-290.

Volpe, G. (2020). *Archeologia pubblica. Metodi, tecniche, esperienze*. Roma: Carocci editore.

Watrall, E. (2002). Digital Pharaoh: Archaeology, Public Education, and Interactive Entertainment. *Public Archaeology*, 2(3), 163-9. <https://doi.org/10.1179/pua.2002.2.3.163>.

Zichermann, G. & Cunningham, C. (2011). *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol: O'Reilly.

Nguyen, T. T. H., Ishmatova, D., Tapanainen, T., Liukkonen, T.N., Katajapuu, N., Makila, T., & Luimula, M. (2017). Impact of Serious Games on Health and Well-being of Elderly: A Systematic Review. In *Proceedings of the 50th Hawaii International Conference on System Sciences*, Hilton Waikoloa Village, HI, USA, 4-7 January 2017.

Oprins, E., Visschedijk, G., Roozeboom, M.B., Dankbaar, M., Trooster, W., & Schuit, S. C. E. (2015). The Game-based Learning Evaluation Model GEM: Measuring the Effectiveness of

Serious Games Using a Standardised Method. *International Journal of Technology Enhanced Learning*, 7(4), 326-345.

Pagano, A., Armone, G., & De Sanctis, E. (2015). Virtual Museums and audience studies: The case of "Keys to Rome" exhibition. In *Proceedings of the Digital Heritage, Granada, Spain, 28 September - 2 October 2015, Volume 1*, 373-376.

Paliokas, I., & Sylaiou, S. (2016). The use of serious games in museum visits and exhibitions: A systematic mapping study. In *Proceedings of the 8th International Conference on Games and Virtual Worlds For Serious Applications (VS-GAMES)*, Barcelona, Spain, 7-9 September 2016, 1-8.

Parette, H. P., Quesenberry, A.C., & Blum, C. (2010). Missing the boat with technology usage in early childhood settings: A 21st century view of developmentally appropriate practice. *Early Childhood Education Journal* 37(5), 335-343.

Pescarin, S., Rizvic, S., & Selimovic, D. (2019). V-MUST NET- The Virtual Museum Transnational Network. 2011. Retrieved from http://www.v-must.net/sites/default/files/SEEDI2011_pescarin-rizvic-selimovic- NCD21047.pdf.

Pistoljevic, N., & Hulusic, V. (2018). Educational E-book For Children With and Without Developmental Disorders. *Journal of Computers in Education*, 2018, 6, 117-141.

Plass, J., Homer, B., & Kinzer, C. (2015). Foundations of Game-Based Learning. *Educ. Psychol.* 50(4), 258-283. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1090277.pdf>

Posner, M. I., & Petersen, S. E. (1990). The attention system of the human brain. *Annual Review of Neuroscience*, 13(1), 25-42.

Prensky, M. (2001). *Digital Game-Based Learning*. New York, NY: McGraw-Hill Pub. Co.

Rahaman, H. (2018). Digital heritage interpretation: a conceptual framework. *Digital Creativity*, 29 (2), 1-27.

Ramic-Brkic, B. (2012). *The Influence of Olfaction on the Perception of High-Fidelity Computer Graphics*. Ph.D. Thesis, Coventry, UK: University of Warwick.

Ramic-Brkic, B., Cosovic, M., Rizvic, S. (2019). Cultural Heritage Digitalization in BiH: State-of-the-Art Review and Future Trends. In *Proceedings of the 1st International Workshop on Visual Pattern Extraction and Recognition for Cultural Heritage Understanding Co-Located with 15th Italian Research Conference on Digital Libraries (IRCDL 2019)*, Pisa, Italy, 30 January 2019, 39-49.

Rizvic, S., Djapo, N., Alispahic, F., Hadzihalilovic, B., Cengic, F. F., Imamovic, A., Okanovic, V., Boskovic, D. (2017). Guidelines for interactive digital storytelling presentations of cultural heritage. In *Proceedings of the 2017 9th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)* Athens, Greece, 6-8 September 2017, 253-259.

- Rizvic, S., Okanovic, V., Prazina, I., Sadzak, A. (2016). 4D virtual reconstruction of white bastion fortress. In Proceedings of the 14th Eurographics Workshop on Graphics and Cultural Heritage. Eurographics Association, Genova, Italy, 5-7 October 2016, 79-82.
- Salen, K., Tekinbas, K. S., & Zimmerman, E. (2004). Rules of Play: Game Design Fundamentals. Cambridge, MA: MIT Press, 2004.
- Sanford, K., Starr, L.J., Merkel, L., & Kurki, S. B. (2015). Serious games: Video games for good? *E-Learning and Digital Media*, 12, 90-106.
- Schaller, D. (2014). Game mechanics and the museum: Designing simple gameplay around complex content. In Proceedings of the MW2014: Museums and the Web 2014, Baltimore, MD, USA, 2-5 April 2014.
- Simons, D. J., & Chabris, C. F. (1999). Gorillas in our midst: Sustained inattention blindness for dynamic events. *Perception*, 28, 1059-1074.
- Skamantzari, M., Kontogianni, G., Georgopoulos, A., & Kazanis, S. (2017). Developing a virtual museum for the Stoa of Attalos. In Proceedings of the 2017 9th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games), Athens, Greece, 6-8 September 2017, 260-263.
- Soltani, P., & Vilas-Boas, J. P. (2019). Multi-user virtual environments for physical education and sport training. In *Cases on Immersive Virtual Reality Techniques*. Hershey, PA: IGI Global, 20-41.
- Tisserand, Y., Magnenat-Thalmann, N., Unzueta, L., Linaza, M.T., Ahmadi, A., O'Connor, N. E., Zioulis, N., Zarpalas, D., Daras, P. (2017). Preservation and gamification of traditional sports. In *Mixed Reality and Gamification for Cultural Heritage*. Berlin, Germany: Springer, 421-446.
- Van der Vegt, W., Westera, W., Nyamsuren, E., Georgiev, A., & Ortiz, I.M. (2016). RAGE architecture for reusable serious gaming technology components. *International Journal of Computer Games Technology*, 2016, 3.
- Vasquez, S., Penafiel, M., Cevallos, A., Zaldumbide, J., & Vasquez, D. (2017). Impact of Game-Based Learning on Students in Higher Education. In Proceedings of the 9th Annual International Conference on Education and New Learning Technologies (EDULEARN), Barcelona, Spain, 3-5 July 2017, 43-56.
- Vayanou, M., & Ioannidis, Y. (2017). Storytelling games with art collections: Generic game-play design and preliminary evaluation through game testing sessions. In Proceedings of the 9th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games), Athens, Greece, 6-8 September 2017, 264-271.
- Vayanou, M., Ioannidis, Y., Loumos, G., & Kargas, (2019). A. How to play storytelling games with masterpieces: From art galleries to hybrid board games. *Journal of Computers in Education*, 6(1), 79-116

Vayanou, M., Loumos, G., Kargas, A., Sidiropoulou, O., Apostolopoulos, K., Ioannidis, E., Kakaletis, G., & Ioannidis, Y. (2019). Cultural Mobile Games: Designing for 'Many'. In Proceedings of the 11th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games), Vienna, Austria, 4-6 September 2019, 1-4.

Yim, J., & Graham, T. C. N. (2007). Using Games to Increase Exercise Motivation. In Proceedings of the Conference on Future Play, Toronto, ON, Canada, 15-17 November 2007. New York, NY: ACM, 166-173.