

# Role Playing Games as Hybrid Museum Kits

Promoting Historical Understanding and Meaning Making

Dimitra Petousi<sup>1</sup>, Akrivi Katifori<sup>1</sup>, Angeliki Chyrsanthi<sup>2</sup>, Katerina Servi<sup>3</sup>,  
Pantelis Sakellariadis<sup>3</sup> and Yannis Ioannidis<sup>1</sup>

<sup>1</sup>*ATHENA Research Center, Athens, Greece*

<sup>2</sup>*Department of Cultural Technology and Communication, University of the Aegean, Mytilene, Greece*

<sup>3</sup>*Department of Informatics and Telecommunications, National Kapodistrian University of Athens, Athens, Greece*

## Abstract

“Role-playing games” refer to “the multiple styles of play activities revolving around the rule-structured creation and enactment of characters in a fictional world”. Role-play, combined with storytelling is a natural part of human development and RPGs have the potential to expand the affective, cognitive, and behavioral skills of players. In this work we discuss tabletop RPGs as museum kits to promote historical understanding, meaning making and empathy in the informal learning context of cultural heritage.

## Keywords

role playing games, storytelling, cultural heritage, museum kit

## 1. Introduction

Role-playing games (RPGs), starting with Dungeons and Dragons in the 1970s, have turned the human practice of role-play into a contemporary leisure genre enjoyed by millions [1]. “Role-playing games” refer to “the multiple styles of play activities revolving around the rule-structured creation and enactment of characters in a fictional world” [1]. Role-play, combined with storytelling, is a natural part of human development. This includes both pretend play by children and identity experimentation by adolescents [2]. Rotter and Wickens [3] defined role-playing from the perspective of psychology as a method in which the subject plays out a role as naturally as possible, with minimal instructions and freedom in selecting responses or interpreting the role.

The term “RPGs” today refers to a variety of games revolving around role-playing and storytelling, with the most prominent forms being tabletop RPGs (TRPG), live action RPGs (LARP) and single-player or multi-player online computer RPGs [1]. They allow the players to create their own identity in the game and experience the game story world through the eyes and character traits of this identity. In cultural heritage and historical settings the most prominent forms are TRPG, LARP and historical reenactment [4].

Pujol et al. [5] provide a thorough account of the importance of storytelling for cultural heritage (CH) and its effectiveness to provoke curiosity, foster engagement and promote learning.

---

*AVI-CH 2022 Workshop on Advanced Visual Interfaces and Interactions in Cultural Heritage. June 06, 2022. Rome, Italy*

✉ dpetousi@athenarc.gr (D. Petousi); vivi@di.uoa.gr (A. Katifori); a.chyrsanthi@aegean.gr (A. Chyrsanthi); katservi@gmail.com (K. Servi); spreetae@gmail.com (P. Sakellariadis); yannis@di.uoa.gr (Y. Ioannidis)



© 2022 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).



CEUR Workshop Proceedings (CEUR-WS.org)

Adrahamson mentions that it “contributes to re-experiencing one’s own heritage” [6], described it as an essential form of human learning, promoting meaning-making through the “imaginative state” it establishes [5]. At the same time social interaction and social processes have been recognized as an important factor to learning, in general, and collaborative learning in particular [7], with these benefits also explored for CH [8, 9]. Interactive storytelling and sociality are both integral elements of TRPGs. Although different forms of digital storytelling have been widely explored for CH, there is significantly less research on the potential of the more interactive and emergent narrative genres, especially when they are delivered as social experiences.

In this work we discuss the social, storytelling and role-playing aspects of TRPGs as means to promote historical understanding, meaning making and empathy in the informal learning CH context. Informed by existing literature, we attempt to identify opportunities and challenges of a TRPG-based approach for heritage, and we make an effort to conceptualize a TRPG-based hybrid (digital and physical) museum kit that addresses these challenges through meaningful integration of digital elements.

Sections 2-4 discuss TRPGs as storytelling, learning and heritage related practice. Section 5 focuses on the challenges of a TRPG approach for heritage whereas Section 6 proposes a hybrid museum kit concept to address these challenges. Section 7 concludes the paper.

## **2. TRPGs as a storytelling practice**

RPGs fall under the interactive storytelling genre, where the player/reader is offered at specific points key choices as to how to advance the plot. TRPGs are games for groups of 2-8 players. One of the players assumes the role of the game master (GM), who is at the same time the storyteller and facilitator of the game. The game consists of specific elements: 1) the game system, a set of rules (game mechanics) which determine the gameplay and the level of success of a character’s actions, 2) character creation: building or selecting a character type and customizing its characteristics which define how successful a character is likely to be at a task, 3) open-world interaction, 4) adventure story: The GM is responsible for creating or selecting the adventure story that the players will follow as their selected characters. A GM narrates the story and plays the roles of all non-playing characters (NPC) that appear and interact with the players. The players are guided by the GM to collectively influence the storyworld and plot. The players are most often collocated around a table or playing remotely using teleconferencing tools. Apart from the jointly created story, constituted by talk between GMs and players, often supporting props are used like character sheets, miniatures, rule books, or maps.

One of the key features of TRPGs is immersing players in interactive story worlds and involving them in collective decision making for non-trivial challenges [10]. Crawford [11] suggests that an interactive plot should concern choices that characters make, either dramatically salient ones or less obvious ones that establish character. Katifori et al. [12] highlight the importance of interactive digital storytelling to promote engagement in a CH context.

Having examined the spectrum of RPGs as a form of emergent interactive storytelling, researchers confirm their potential to expand the affective, cognitive, and behavioral skills of players [13, 14]. According to O’Brien et al. [15] Taxonomy of educational games, RPG seems more likely to support a wide range of educational objectives than many other games.

### **3. TRPGs as learning practice**

Daniau [16] discusses the potential of RPGs for learning and personal transformation. Playing a role gives the chance to live different lives and have experiences unlike the ones one might have on their own. Participants will remember their experiences as if they have happened to them, in a form of personal storytelling [17]. This activity promotes understanding of others' unique points of view, and allows players to practice social-emotional learning (SEL) [2], including creativity, collaboration and team building [16] and better understand their reality [13, 18].

Daniau [16] proposes a learning framework for RPGs based on the different levels of reality experienced by participants, namely: the character, the player, the person, and the human. The "Character" aspect refers to learning themes related both to the story, atmosphere, and shared experience as well as the proposed storyworld, including, geography, history, population, and cultures. "Player" focuses on essential or basic skills relevant to communication, planning and decision making, whereas "Person" refers to soft skills related to small-group dynamics, role taking, desire to discover, critical thinking, collaborative creation, distancing, and empathizing. Finally, she defines the "Human" dimension, which includes skills emerging from transformative learning, such as the evolution of meaning and maturation through awareness, emancipation, empowerment, and community [16].

### **4. TRPGs as heritage practice**

Approached from the angle of heritage studies, RPGs can elicit meaningful heritage experiences through: (1) representation of historical environments populated by historical characters. (2) first-person audience, which makes the player/reenactor look through the eyes of the enacted role and feel as though experiences in a role-playing game happened to them (experience taking) [2] (3) affordances for meaningful engagement with tangible and/or intangible heritage [4] and (4) instilling in the players particular values, beliefs, mindsets, and behaviors that promote empathy - including for people of other historical contexts.

Endacott and Brooks [19] describe a model for historical empathy, which is composed of three main elements: historical contextualization, perspective taking and affective connection. Historical contextualization refers to learning and understanding historical facts in their wider historical context. The perspective-taking concept refers to aspects related to critical reflection, especially in relation to developing an understanding of different views and perspectives in relation to the specific historical topic. Lastly, the model of historical empathy aims to facilitate a cognitive process that leads to an affective connection with historical facts and figures in order to better understand and contextualize past events, social issues, experiences, and actions.

Applying an RPG approach in CH by using a historical setting as a basis for the storyworld and adventures may harness the transformative power of RPGs to promote historical empathy. Revisiting Danau's framework [16] (Section 3), the "Character" dimension of the game directly addresses the objective of historical contextualization, whereas the "Player" and "Person" contribute to perspective taking. Finally, the "Human" dimension may promote a deeper affective connection with heritage, transforming the player's beliefs and values and contributing to a deeper understanding of human nature, grounded on the history of our culture.

## 5. Challenges of TRPGs for heritage

TRPGs may have potential for CH, however there are several significant challenges in their application, related to, both at a cultural institution premises and as a virtual experience for remote visitors.

**Complexity and duration of the game.** Creating and playing a TRPG adventure requires time and effort from both the GMs and the player group. The GM needs to conceptualize and prepare the adventure, including story, setting, NPCs, etc. It may require long preparation and research, even world-building, understanding or adjusting the rule system, and also adjusting the story to the characters the players selected. The GM needs to have pre-existing experience with the game for these processes to complete quickly and smoothly. For players, it takes time to understand the setting and the rules and create and adjust their character. Adventures regularly span across several game sessions of many hours each. This long term play is one of the main elements that make the game so immersive and realize its strong learning and transformative potential. In this sense, it is challenging to adjust this type of game as an educational activity in the museum. Perhaps building such games around Jenkins' notion of "evocative spaces" [20], which refers to storyworlds or narrative genres that most people are to an extent already familiar with, is a possible route to overcome such obstacles.

**Considering historical accuracy.** The application of a TRPG approach in CH should be informed by the crucial need to leverage historical accuracy with player engagement. When GMs are preparing a new adventure they need to be knowledgeable and aware of the historical setting in order to create an imaginary story and characters which are consistent with the specific setting.

**Managing difficult themes.** GMs are often faced with the challenge of tackling difficult issues within the narrative and finding the right balance between creating a challenging setting and overwhelming or shocking their players with the strong representation of dark or difficult themes. Similarly when it comes to dark or difficult heritage, an equilibrium between presenting historical evidence, interpreting, understanding, and disseminating unbiased and multivocal aspects of the past in a considerate and respectful way to the individual players is important to avoid possible negative psychological effects. Thus, awareness and careful planning is required both during the overall game design and on the part of the GM while preparing an adventure.

## 6. A TRPG-based hybrid museum kit

For the implementation of a TRPG approach in CH, not everyone is going to be familiar with the concept of TRPG, and, more importantly, be able to assume the demanding role of the GM. An important part of the approach should be to support new and inexperienced GMs to manage the game session. The GM should be supported to understand the elements of the world, the mechanics, how to resolve challenges, etc. and to create and manage their own story. This can be done by providing easy how-to guides, pre-made settings and adventures, templates for the NPC characters, pre-made props etc.

This material may be organized and offered as a hybrid (digital and physical) museum kit. Museum kits include multifaceted materials that can be provided to schools and readily support

the teaching / curriculum on a specific subject [21]. A digital museum kit could provide specialized materials and resources, both physical and digital, including booklets and other printed material, digital multimedia like images and videos, simple physical or digital games, copies of museum artifacts, etc. A TRPG-based museum kit could combine material to support the game preparation and play, including the game rulebook, the setting, adventure stories, character kits for player and NPC characters, etc.

Typically, TRPG game adventures are designed with varying degrees of difficulty, based on the player experience and their character level in the game. Following the same principle, the kit could offer adventure scenarios in different difficulty levels, so that the educator can select, along with the GM, the most appropriate ones. For example, a historical subject (i.e. WWI) could be divided into an x number of scenarios of increased complexity and difficulty, requiring the combination of skills and cooperation of players to complete the mission or task.

The use of innovative technologies could be instrumental in complementing the physical material offered through the kit with a variety of digital tools.

Computer-based RPGs offer two main advantages in comparison with TRPGs as they offer (1) a vivid visual representation of the historical setting that promotes immersion and engagement and (2) the possibility for automated resolution of fight scenes based on the game rules and character statistics. To this end, computer-based RPGs could be repurposed to support TRPG gameplay. The GMs could be offered the possibility to create their own settings within a computer-based RPG, by customizing the space itself and the NPC appearance, characteristics and behavior. In this way, parts of the adventure could take place in a VE, promoting immersion, engagement and also alleviating the need to resolve conflicts by applying the rules, as the computer game system could handle this resolution. The user of immersive VR equipment may further promote engagement by allowing the players to immerse themselves in the game world. A VR-based approach can support the need for more direct and immersive tabletop RPG gaming in the case of remote playing, a need that became all the more pronounced during the COVID-19 pandemic.

Augmented reality can also be used to support engagement, by bringing to life “virtual scenery, creature, character and prop models”, as in the example of the Ardent Roleplay app [22]. Chatbot-based tools could be used to support the GM in organizing and running the game session or lead a post-game debriefing session. A very common interaction between players and GMs is the clarification of rules such as “what is the rule on X?”, “can I dodge this attack?”, “can I use this type of weapon?”. This role could be filled by a chatbot or a straightforward question answering system, implemented on a smart device or computer. Another common interaction is the explanation of the world, its background and settings. A chatbot could again be used to provide in-game information, such as the economy of the world, the political system etc. The bot could assume the personality of an NPC to provide this information in a more immersive way. Multiparty bots as dialogue facilitators have been applied in an educational context [23, 24] and they could also be offered as part of the kit. Such a bot could lead the players in post-game conversation, discreetly guiding joint reflection and meaning making through dialogue, to consolidate the learning outcomes.

## 7. Conclusions and future work

In this work we present our vision for a TRPG-based museum kit with the objective to harness the potential of RPG to promote historical understanding, meaning making and empathy in cultural heritage. TRPGs are a complex type of game, and its adaptation to the specific context is not straightforward, requiring multidisciplinary cooperation in terms of design and implementation.

We aim to explore further the needs of a hybrid TRPG-based museum kit working closely with museum professionals, educators and other heritage experts as well as experienced GMs, towards prototypes to be iteratively co-designed and tested. However, going a step back, there is a need for targeted studies with TRPG GMs and players, to identify the function of specific TRPG game mechanics. This understanding may lead to the creation of guidelines and best practices on the application of the game for heritage. Although the application of a TRPG based approach in a cultural heritage context in the form of a hybrid museum kit may pose significant challenges, we believe that these may be addressed through a multidisciplinary approach grounded on co-design principles

## Acknowledgments

This research has been held in the framework of the project "Aria –Augmenting the Reception of music through Innovative solutions and Archives" with the code T2EDK-02084 supported by EU and National Greek funds under the General Secretariat for Research and Innovation funding programs.

## References

- [1] S. Deterding, J. P. Zagal, The many faces of role-playing game studies, in: *Role-Playing Game Studies*, Routledge, 2018, pp. 1–16.
- [2] J. Hammer, A. To, K. Schrier, S. L. Bowman, G. Kaufman, Learning and role-playing games, in: *Role-Playing Game Studies*, Routledge, 2018, pp. 283–299.
- [3] J. B. Rotter, D. D. Wickens, The consistency and generality of ratings of "social aggressiveness" made from observations of role playing situations., *Journal of Consulting Psychology* 12 (1948) 234. doi:10.1037/h0054313.
- [4] M. Mochocki, *Role-play as a heritage practice: Historical LARP, tabletop RPG and reenactment*, Routledge, 2021.
- [5] L. Pujol, M. Roussou, S. Poulou, O. Balet, M. Vayanou, Y. Ioannidis, Personalizing interactive digital storytelling in archaeological museums: the chess project, in: *40th annual conference of computer applications and quantitative methods in archaeology*. Amsterdam University Press, 2012, pp. 93–100.
- [6] C. E. Abrahamson, Storytelling as a pedagogical tool in higher education, *Education* 118 (1998) 440–452.
- [7] J. v. d. Linden, G. Erkens, H. Schmidt, P. Renshaw, Collaborative learning, in: *New learning*, Springer, 2000, pp. 37–54. doi:10.1007/0-306-47614-2\_3.

- [8] A. Katifori, S. Perry, M. Vayanou, A. Antoniou, I.-P. Ioannidis, S. McKinney, A. Chrysanthi, Y. Ioannidis, “let them talk!”: Exploring guided group interaction in digital storytelling experiences, *J. Comput. Cult. Herit.* 13 (2020). URL: <https://doi.org/10.1145/3382773>. doi:10.1145/3382773.
- [9] C. Callaway, O. Stock, E. Dekoven, Experiments with mobile drama in an instrumented museum for inducing conversation in small groups, *ACM Trans. Interact. Intell. Syst.* 4 (2014). URL: <https://doi.org/10.1145/2584250>. doi:10.1145/2584250.
- [10] J. Juul, *Half-real: Video games between real rules and fictional worlds*, MIT press, 2011.
- [11] C. Crawford, *Interactive storytelling*, in: *The video game theory reader*, Routledge, 2013, pp. 259–273.
- [12] A. Katifori, M. Karvounis, V. Kourtis, S. Perry, M. Roussou, Y. Ioanidis, Applying interactive storytelling in cultural heritage: opportunities, challenges and lessons learned, in: *International conference on interactive digital storytelling*, Springer, 2018, pp. 603–612. doi:10.1007/978-3-030-04028-4\_70.
- [13] S. L. Bowman, *The functions of role-playing games: How participants create community, solve problems and explore identity*, McFarland, 2010.
- [14] M. E. Andresen, *Playing the learning game: A practical introduction to educational roleplaying*, Oslo, Norway: Fantasiforbundet (2012).
- [15] D. O’Brien, K. A. Lawless, P. Schrader, A taxonomy of educational games, in: *Gaming for classroom-based learning: Digital role playing as a motivator of study*, IGI Global, 2010, pp. 1–23. doi:10.4018/978-1-61520-713-8.ch001.
- [16] S. Daniau, The transformative potential of role-playing games—: From play skills to human skills, *Simulation & Gaming* 47 (2016) 423–444. doi:10.1177/1046878116650765.
- [17] S. L. Bowman, Active imagination, individuation, and role-playing narratives, *Tríade: Revista de Comunicação, Cultura e Midia* 5 (2017) 158–173.
- [18] C. V. Zalka, *Adventures in the classroom creating role-playing games based on traditional stories for the high school curriculum* (2012).
- [19] J. Endacott, S. Brooks, An updated theoretical and practical model for promoting historical empathy, *Social Studies Research and Practice* (2013). doi:10.1108/SSRP-01-2013-B0003.
- [20] H. Jenkins, Game design as narrative architecture, *Computer* 44 (2004) 118–130.
- [21] A. N. Spiegel, T. M. Dethlefs, J. Diamond, *Museum kits in the classroom: Lessons learned from the wonderwise project*, Manuscript submitted for publication (2001).
- [22] Ardent roleplay, <https://ardentroleplay.com>, ????. Accessed: 2022-05-04.
- [23] D. Petousi, A. Katifori, S. McKinney, S. Perry, M. Roussou, Y. Ioannidis, Social bots of conviction as dialogue facilitators for history education: Promoting historical empathy in teens through dialogue, in: *Interaction Design and Children, IDC ’21*, Association for Computing Machinery, New York, NY, USA, 2021, p. 326–337. URL: <https://doi.org/10.1145/3459990.3460710>. doi:10.1145/3459990.3460710.
- [24] S. McKinney, *Generating pre-historical empathy in classrooms*, Unpublished MSc dissertation, University of York (2018).