

# Learning Cultural Heritage through Emergent In-game Dialogues

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## INTRODUCTION

Serious games, commonly known as games with the primary purpose of education or problem-solving, are a unique interactive media approach that contributes to the digitalization and preservation of cultural heritage, such as artworks, historical sites, traditions, and rituals (Mortara et al. 2014). Ideally, serious games can provide both fun and interactive experiences to engage players in acquiring knowledge of cultural heritage. However, many of these serious games focus on the presentation of core cultural concepts while overlooking the design of the gameplay. As a result, a common problem in existing serious games, especially those themed on cultural heritage, is that they are too didactic and thus limit players' engagement (Yu 2015). As a result, these serious games may not have the full capacity to attract potential players and are not effective in delivering their cultural concepts.

## METHODOLOGY

Under this circumstance, this paper delves into the design strategies for serious games that have an overarching goal of promoting cultural heritage. This paper is split into two parts. In the first part, this paper includes a case study of two Chinese serious games, *Nishan Shaman* (Tencent Games 2018) and *Ziyueshiyun* (Tencent Games 2018). *Nishan Shaman* is a game featuring Northern Chinese religions, while *Ziyueshiyun* is a game about classical Chinese poetry. By analyzing their gameplay and educational components from both ludology and narratology perspectives, this paper reveals the common gap between game mechanics and narratives in these serious games. While both games have interactive gameplay and intriguing contexts, the connection between the two, described by Janet Murray as the "dramatic agency," is largely missing (Murray 2017). Since narrative is the most prevalent form to convey historical and cultural messages, a dynamic narrative system is needed in serious game design to rebuild the connection between gameplay and contexts. To rebuild this connection, this paper reviews relevant literature as well as the gameplay-context model in commercial games and suggests emergent narrative as a method to create a non-linear and diverse game narrative system.

The second part of this paper takes a project-based endeavor by implementing a game prototype to substantiate the proposed method. This prototype, as developed by the

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author, incorporates knowledge of cultural heritage into emergent dialogues between non-playable characters (NPCs) and the protagonist. The game introduces a simple gameplay of collecting items representative of cultural heritage and learning about their historical origins and backgrounds through dialogue with NPCs. In the design process, a dialogue framework of three layers is established: (1) gameplay logic, (2) player agency, and (3) narrative supplement. The gameplay logic layer generally includes quest-related dialogues and greetings to engage players in immersive game scenarios. The player agency layer then focuses on connecting the player agency, also known as the player's satisfaction with influencing the game world, to the cultural heritage contents. Dialogues in this layer are given three tags according to the topic of conversation: navigation, choice, and property. The last layer, the narrative supplement, is formed by interesting anecdotes or other relevant conversations to streamline the gameplay or reinforce the cultural context.

## **CONCLUSION**

Prototyping this game sheds light on the potential of adding depth to narrative through emergent dialogues in existing serious games, thus helping educate players about cultural heritage. As feedback from playtests is collected and the game narrative is continuously improved, this paper identifies common relationships between dialogue types situated in the proposed dialogue design framework. Incorporating the dialogue design framework in future serious game design can synergize game mechanics with their intended contexts, eventually improving the players' engagement and promoting the core values of serious games.

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