Experiencing the Journey of Confucius and Learning in a Virtual Reality-based Game

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Abstract: To enhance students' interest and motivation in learning Confucian analects, in this paper, we describe a participatory storytelling framework to guide the development of a virtual reality-based game environment, in which students might have an engaging learning experience and a macro perspective on the holistic learning context through sequencing the significant events in the life of Confucius. According to this framework, a digital game system is implemented and described. In the near future, the influence of the system on student performance, perception, and attitude would be examined.

Keywords: Virtual reality, Confucius, Digital Game, Storytelling

1. Introduction

Chinese philosopher Confucius has great impacts on Asian cultures, and is regarded as a significant role model for teachers in numerous Asian countries. Because of his significance and the pervasive influences, how to understand the Confucianism has also become a critical issue. Among related books and materials, Confucian analects are a valuable resource to understand the ways how Confucius thinks, behave, and interact with his students. In other words, if students could comprehend the text of Confucian analects, they would have a deep understanding on Confucius himself and Confucianism, a system of social and ethical philosophy in traditional Chinese society. However, it seems that nowadays most students have no sufficient interest in learning Confucian analects or related materials. The reasons might be due to two dimensions: text and pedagogy.

On the one hand, Confucian analects are a collection of sayings and ideas attributed to the Chinese philosopher Confucius and his contemporaries. Thus, it is written by classical Chinese, which is somehow different from the normal usage today, and more explanations or articulations are required. In addition, Confucian analects is not organized by time, resulting in the difficulty of understanding the whole context, especial the relationships between what the Confucius and students discuss, and its background and context in the Zhou Dynasty. On the other hand, the pedagogy adopted by most students focuses on the micro perspective (i.e., comprehension of each article) rather than the macro perspective (i.e., the holistic description and linkage among articles). Therefore, student learning and understanding is fragmented into a piece of facts or events, instead of deep understanding. These difficulties might confuse students why they should cram up these materials, which further decrease the interest in learning and understanding Confucian analects.

Digital games with virtual reality could offer students immersive and participatory learning experience, which is different from the traditional teacher-centered approach. Teaching methods. When students play the role of Confucius to travel around the world, they might not only have enhanced motivation and deeper understanding on the text of Confucian analects, their self-identity on Chinese culture and Confucianism might be also shaped. Thus, this study aims to develop a virtual reality-based digital game to facilitate student learning in Confucian analects.

2. System Development

To guide the development of virtual reality-based games, a participatory storytelling framework is proposed in this paper, as shown in Figure 1. The framework emphasizes interactive storytelling which organizes learning content as storylines and present to students through interactive designs.

This is because stories are one of the major motivators for game-based learning (Ke, 2016; Qian & Clark, 2016; Novak, 2015), and the purpose of storyline design is to engage students in the virtual context based on a well-designed structure. More specifically, the learning content in this study is the articles of the Confucian analects and the articles are designed as a set of learning tasks that help students comprehend the meanings. The aim of the storyline is to offer an engaging experience in understanding learning content. To this end, the storyline focuses on a sustained structure through sequencing significant events in the life of Confucius. In this way, the storyline could not only play as a hook to engage students, but also as a bridge to link the significant events with learning tasks. For example, it is a significant event that Confucius leaves his country (i.e., Lu) and goes to another country (i.e., Wei) for his aspiration. This event is linked to the learning content in the Confucian analects, which denotes that Confucius replies to these students: "Enrich them, educate them" when Confucius is asked: "what more should be done when a country has numerous people?" Finally, for each event, the learning content is presented to students by interactive characters and dialogues.



Figure 1. The participatory storytelling framework

According to the framework, a virtual reality-based system is implemented, in which a student plays as the role of Confucius who travel around the countries with his students to realize his aspiration. The student is offered by a map and a list of the learning tasks so that the students could experience the journey with guidelines. For instance, the screenshot of the implemented system illustrates the students is leaving the country of Lu, and is approaching the country of Wei (see Figure 2). When the student goes to the destination, his student (i.e., a computer-simulated virtual character) will ask his opinion on "what more should be done when a country has numerous people?" In this way, the student could have a deep experience in the text of the Confucian analects.



Figure 2. A screenshot of the implemented system

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