Integration's Learning Outcome Through Game-Based Learning and Cultural Practices Among Learners: Edutainment Platform

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Abstract

The integration of Game-based learning (GBL) with cultural learning is feasible and advantageous. GBL facilitates the comprehension of cultural education embedded within the gaming context. Numerous contemporary pedagogical and instructional approaches have transcended the conventional confines of classroom-based learning, extending their purview to encompass the integration of technology-enhanced educational paradigms. Among these approaches, GBL stands out as an unequivocal exemplar, seamlessly amalgamating technological tools into its framework. This pedagogical modality possesses the inherent capacity to invigorate learners' motivation to acquire knowledge while concurrently fostering moments of intellectual revelation. The edutainment platform offers opportunities for GBL and cultural practice. "The Confucius Roll Call" game is an exemplar of the games found within such edutainment platforms. A narrative dataset obtained through the observational method and open ended interview questions will be analyzed, focusing on the participation of 8 learners engaged in the study of Confucius' culture using the "Confucius Roll Call" game. The 8 learners were aged between 20 and 23. They were participants in cultural leisure class. This analysis aims to uncover insights into the positive and negative learning outcomes achieved through the integration of GBL and cultural practices within the context of Confucius' culture education. This research has the potential to offer educators and learners valuable insights into enhancing the effectiveness of learning and education through the integration of Game-Based Learning and cultural practices.

Keywords: Game-Based Learning (GBL), Learning Outcome; Cultural Leisure Class, Cultural Practices, Edutainment Platform

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Introduction

Definitions of game-based learning predominantly emphasize that it constitutes a form of gameplay designed to achieve specific learning outcomes (Shaffer, Halverson, Squire, & Gee, 2005). Game-based learning (GBL) broadly refers to the utilization of video games to facilitate and enhance teaching and learning. Various studies articulate and interpret this comprehensive definition in diverse ways. (Perrotta, 2013). GBL is the game itself serves as the primary instructional tool, in contrast to gamification, which entails the integration of game elements into conventional learning activities. (Buckley & Doyle, 2014). At the same time, the design process for educational games entails a delicate balance between covering the subject matter and prioritizing gameplay (Plass et al., 2015).

In the context of cultural learning, utilizing GBL can yield substantial educational benefits. In the realm of cultural learning, GBL can yield both positive and negative educational outcomes. So, GBL serves as an effective method for cultural education. Cultural knowledge is integrated into the content of GBL game design, facilitating a mutual enhancement between culture and GBL design. Through GBL, learners not only gain access to often mundane cultural information but also derive enjoyment from the learning process (Jossan et al., 2021).

At present, the edutainment platform hosts a myriad of games, some of which encompass cultural content. Hence, acquiring cultural knowledge via cultural games on the edutainment platform constitutes a method of learning within the framework of GBL. In contemporary times, numerous educational and entertainment platforms feature cultural games centred around Chinese culture or Confucian culture. These games serve as a conduit for acquiring knowledge about both Chinese culture and Confucian values. "The Confucius Roll Call" is a cultural game embedded with Confucian values and knowledge, available on an edutainment platform. This research will employ the aforementioned game as a means to investigate the learning outcomes resulting from the integration of GBL and cultural education.

Literature Review

Game-based learning can be applied to the acquisition of knowledge in various subjects and fields. Whether it is science, literature, language, or any other subject, all can be learned through the GBL approach. Consequently, numerous scholars have analyzed the learning scenarios associated with the implementation of game-based learning. G,S. (2008) study elucidates the effectiveness of Video Game-Based Learning in English Grammar at the sixth-grade level Noroozi et al. (2020) explore a systematic review provides an overview of the current state of the art concerning the utilization of Game-Based Learning (GBL) for enhancing argumentation skills in digital learning. Hsin-Yi Liang & Tien-Yu Hsu (2020) explore a game-based learning service for science museums that can offer a lifelong edutainment environment with flexible options for the public and serve as a valuable interdisciplinary learning resource to support competency-based education.

The design models for game-based learning are also a subject of considerable scholarly interest, as an effective game design model is known to yield positive learning outcomes. Shi & Shih (2015) presents macro design concepts that elucidates 11 crucial game-design factors to construct a game-based learning design model. Besides that, the study proposed the GBL design model to assist in designing educational games. Zuiker et al. (2012) develops a cultural analysis of learning to comprehend the intersections between conceptual change and

game-based learning in Singapore. Additionally, they illustrate how the technologies and methodologies of video games inform the design of learning environments, analysing these designs within the framework of a sociocultural theory of conceptual change. Abdul Jabbar & Felicia (2015) investigated game design features that enhance engagement and learning in game-based learning (GBL) settings. Furthermore, the study illustrates the impact of key gaming features in GBL at both cognitive and emotional levels. Plass et al. (2015) asserted that in game-based learning, a synthesis of cognitive, motivational, affective, and sociocultural perspectives is essential for both game design and game research to comprehensively grasp the educational potential that games offer. The findings of Liu et al. (2014) demonstrate that the design of an engaging, interactive environment through a game-based approach can assist students in enjoying the learning process.

Methodology and Findings

A. Participant

The study focuses on eight participants (5 males, 3 females) between the ages of 20 and 23. (Refer to Table 1). This eight participants (named as learner) actively participated in cultural learning during leisure classes employing the GBL method. This research will employ observations and interviews to analyse the learning outcome of learners in cultural practice through GBL.

Learner's Profile	Age	Gender
Learner A	20	Male
Learner B	20	Male
Learner C	21	Male
Learner D	23	Female
Learner E	22	Male
Learner F	21	Female
Learner G	23	Male
Learner H	21	Female

Table 1: Learner's Profile

B. Results and Discussion

Through interviews with some questions, this research can gain insights into learners' acquisition of cultural knowledge through GBL. Learners typically opt for GBL as a means of cultural practice, primarily for several reasons: (1) Enjoyable & Fun, (2) Current trend (3) Acquire cultural content quickly, (4) Curious, (5) Stimulate interest of learner, (6) refreshing, (7) Impressive graphics, (8) Dynamic learning (Refer to table 2).

Learner's Profile	Reasons
Learner A	*I believe it can be enjoyable; after all, a significant portion of the learning content related to Confucian culture or Chinese culture is often conveyed through words. Games make it easier for me to engage with the material.*
Learner B	*I'm just interested in knowing about the latest games, what cultural content they include, and staying with the current trends.*

Learner C	It's fun. I can learn and practice cultural knowledge while playing games at the same time.
Learner D	I aim to learn through games to acquire cultural knowledge more rapidly.
Learner E	I opted to engage with Confucian culture through GBL because it doesn't feel as dull, but I acknowledge the need for patience due to the inherent challenges in the game.
Learner F	I'm just curious, and the game can stimulate my interest in learning about this culture.
Learner G	It feels very refreshing, so I want to give it a try. At the same time, I like learning in a dynamic way.
Learner H	The game has impressive graphics. I appreciate the learning method involving sound and graphics, as it makes the process less tedious.

Table 2: Reason for Choosing the GBL for Cultural Practice

In this study, by acquiring insights into learners' experiences, we can discern the positive and negative learning outcomes of cultural exercises through GBL methods (Refer to table 3).

Learner's Profile	Answers
Learner A	Because games are engaging, it help me absorb cultural knowledge and practice cultural activities more easily compared to traditional textbook learning. It's a positive learning effect. However, the challenge lies in getting distracted by the goal of advancing to the next level. I find myself sometimes neglecting the learning of pertinent cultural knowledge in pursuit of scores or progressing in the game. Often, my primary focus is just on obtaining the correct answers to pass a level.
Learner B	Sometimes, I find myself forgetting the content after playing a game. It takes repeated plays of related games before I can recall the relevant cultural knowledge. Usually, I don't go through the game repeatedly, but in leisure classes where everyone is playing together, it's okay to repeat it a few times.
Learner C	I tend to focus on learning relevant knowledge to score or pass a level. After a few attempts, I eventually memorize the pertinent cultural information. For instance, in "Confucius Roll Call" game, I learned the names of Confucius' students and their preferences.
Learner D	I believe games can immerse me in the cultural world more quickly, and I become more engaged in the learning process. Dynamic and visually appealing elements make the learning experience more energetic for me.
Learner E	Games are beneficial for learning about culture, but patience is key. After all, games often have challenging levels. If you provide an incorrect answer, it can hinder your progress, and you won't be able to continue playing. This aspect sometimes leaves me pondering the learning process.
Learner F	Games can ignite my enthusiasm and interest in learning, leading to positive learning outcomes.

Learner G	*Dynamic learning has always been my favourite. I play related games multiple times until I successfully reach the last level.*
Learner H	*Learning through games is more captivating than studying textbooks, helping me grasp that Confucian culture in Chinese society places significant emphasis on etiquette.*

Table 3: The learning experience about the cultural practice through GBL

In Table 3, the positive and negative learning outcomes of cultural practice through Game-Based Learning (GBL) are illustrated. There have three positive learning outcomes, (1) Easily to Absorb Content, (2) Dynamic and Visually Learning Effective, (3) Ignite Enthusiasm and Interest in Learning. Besides that, there have 3 negative learning outcomes, (1) Challenge Level & Score, (2) Memorize Challenging, (3) Patient Challenging. In light of these outcomes, it is advisable for educators and learners intending to employ GBL for cultural education to take note of the following issues and proposal given. The proposal emphasizes the preservation of a predominantly positive discourse surrounding learning outcomes, while also addressing and rectifying any negativity associated with such outcomes. Consequently, the recommendation is structured around five key points, (1) Motivational & Rewarding, (2) Game Selecting (Straightforward Game Level), (3) Play in Group, (4) Teach & learn Keywords of Content, (5) Dynamic &Visually Learning (Refer to Figure 1).
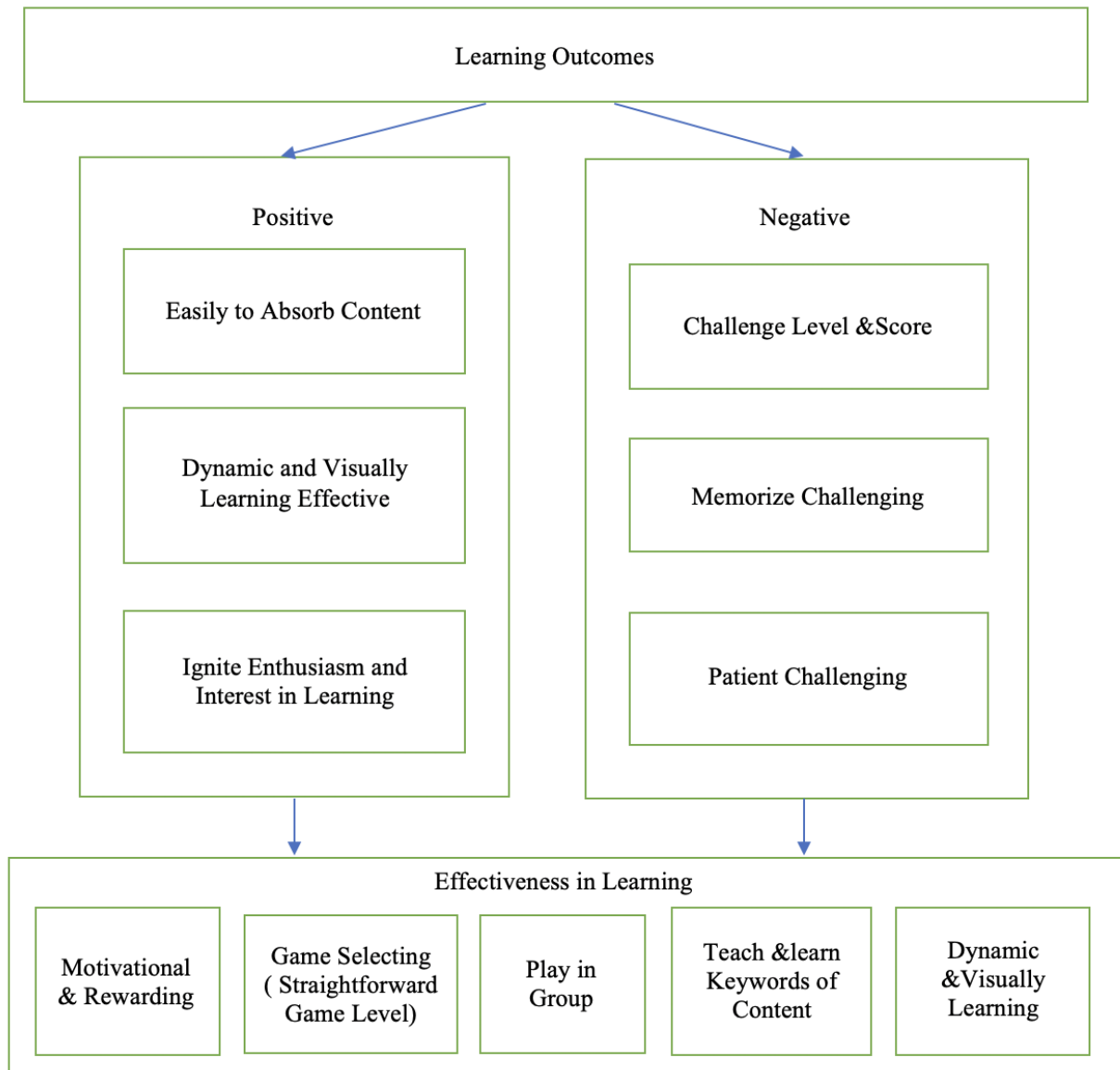
Figure 1: Proposal of the Effectiveness in Learning through the GBL

Conclusion

From this, this research can conclude that the integration of Game-Based Learning (GBL) yields both positive and negative learning outcomes in cultural learning. As an educator, addressing the negative learning outcomes caused by GBL can enhance teaching results in cultural course instruction. Simultaneously, from the learner's perspective, the acquisition of keywords in cultural knowledge can be enhanced, potentially alleviating issues related to unlearning. Additionally, teachers should prioritize students' emotional and psychological states when utilizing GBL for cultural learning, emphasizing these aspects over strict adherence to game rules and elements. While learners using GBL for cultural practice may absorb knowledge more rapidly and find the experience enjoyable, the design elements of the game could potentially impede learning speed and outcomes. This poses a question that necessitates reflection from educators and even game developers. The dynamic and graphic learning method in Game-Based Learning (GBL) indeed facilitates greater learner engagement. Consequently, this strength can be preserved and augmented in GBL instruction.

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