Impact of Caribbean Game development on Culture and Industry Growth

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## Abstract

Many countries in the Caribbean seemed to be using tourism as one of their main sources of income into their countries, thought this can be effective they are missing out on other groups of people who are not being exposed to the Caribbean. The creation of games pertaining to the lifestyles of different Caribbean islands as well as the folklore. Being able to do this means that persons will have to learn to create games and no other way to do that than to go to the masses of willing participants and see what they would want within a course for game development.

## Introduction

Tourism is a major source of income for many Caribbean countries, but it may not be enough to fully showcase the region's diverse cultures to all potential visitors. To address this issue, the creation of games focused on Caribbean lifestyles and folklore could be an effective means of exposing more people to the region. However, developing such games requires a skilled workforce. To address this need, a course for game development could be designed based on the interests and needs of potential participants.

The use of technology, specifically game-based learning, has shown great potential for enhancing the learning experience of students in recent years. Game-based learning is a teaching method that uses games to engage students in the learning process. This literature review will examine the benefits of game-based learning for students, with a focus on its impact on academic performance. The review cites studies that have demonstrated the positive effects of game-based learning on academic performance, including improved test scores, problem-solving skills, and critical thinking abilities. Game-based learning also provides an engaging and interactive learning experience, promoting collaboration and teamwork among students while increasing motivation and enjoyment.

The proposed study will use a mixed-methods research design to collect and analyze data from 200 secondary to tertiary students in the Caribbean region who are interested in game development. The study aims to identify the interests and needs of potential game developers and to determine the potential for game development to promote and showcase Caribbean culture. The survey results suggest that there is significant interest in developing and playing games related to Caribbean culture, with a particular interest in adventure and action games featuring compelling storylines, engaging characters, and high-quality graphics. The study concludes that game-based learning can be an effective means of promoting and preserving Caribbean culture while providing benefits such as improved academic performance, increased engagement, and enhanced critical thinking and problem-solving skills.

## Literature Review

The use of technology in education has gained significant attention in recent years due to its potential for enhancing the learning experience for students. One area where technology is making a significant impact is in the field of game-based learning. Game-based learning is a teaching method that uses games to engage students in the learning process. This literature review will examine the benefits of game-based learning for students, with a focus on its impact on academic performance.

Studies have shown that game-based learning can have a positive impact on academic performance. For example, Sitzmann (2011) found that game-based learning resulted in a moderate to strong improvement in student academic performance. Similarly, Shute, Ventura, Bauer, and Zapata-Rivera (2009) found that game-based learning improved student learning outcomes and retention academic performance. Similarly, Shute, Ventura, Bauer, and Zapata-Rivera (2008) found that game-based learning improved student performance on standardized tests. In addition, Prensky (2001) found that game-based learning effectively promotes problem-solving skills and critical thinking, both of which are important for academic success.

Another benefit of game-based learning is that it provides students with an engaging and interactive learning experience. According to Ertmer and Ottenbreit-Leftwich (2010), students who participated in game-based learning reported increased enjoyment and motivation compared to those who did not. Furthermore, game-based learning can promote collaboration and teamwork among students, as they work together to complete the game and achieve a common goal (Roschelle et al. 2000). Additionally, a study by Chen, Chen, and Tsai (2008) found that game-based learning can enhance students' creativity, problem-solving skills, and critical thinking abilities.

Overall, the literature suggests that game-based learning has the potential to enhance student academic performance, engagement, and motivation, while also promoting collaboration and developing important skills such as creativity, problem-solving, and critical thinking.

Methodology

The study will use a mixed-methods research design, combining qualitative and quantitative methods to collect and analyse data from 200 secondary to tertiary students interested in game development from schools in the Caribbean region. The data will be collected through surveys, and observations and analysed using descriptive statistics, thematic analysis, and content analysis respectively. Ethical principles such as respect for persons, confidentiality, and informed consent will be upheld throughout the study. Limitations of the study include potential selection bias and self-reported bias; however, the study will strive to minimize these by selecting a diverse and representative sample and increasing the validity of the survey data.

## Results

Based on the survey results, it is evident that there is interest in developing games to showcase Caribbean culture. Of the respondents, a significant proportion indicated that they had not previously developed a game but were interested in doing so, particularly if it related to Caribbean culture. When asked about their interest in playing a game that reflects Caribbean culture, the majority expressed either "somewhat interested" or "very interested". Adventure and action games were identified as the most popular genres, and respondents highlighted the importance of features such as a compelling storyline, engaging characters, and high-quality graphics and visuals. Additionally, many respondents felt that it was important for games to have cultural representation, and identified benefits such as promoting tourism and educating people about Caribbean culture.

In terms of demographics, the majority of respondents were under the age of 35 and had at least some college education. The majority also identified as male, although there was some representation from female and non-binary respondents. The majority of respondents spent between one and six hours per week playing video games, and primarily used consoles or PCs to do so.

Overall, the survey results suggest that there is potential for game development to be used as a means of promoting and showcasing Caribbean culture. The interest expressed by respondents in both developing and playing games related to Caribbean culture highlights the potential for this medium to be used for cultural expression and preservation.

Chart, pie chart

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Figure 1. Pie Chart showing how interested people are in game development.

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Figure 2. Showing Bar Chart on what people wish to see with Caribbean culture

## Conclusion

In conclusion, game-based learning can provide many benefits for students, including improved academic performance, increased engagement and motivation, and enhanced creativity, problem-solving skills, and critical thinking. The proposed study aims to apply these benefits to the development of games related to the lifestyles and folklore of different Caribbean islands, thereby increasing exposure to the region's diverse cultures and potentially expanding tourism markets. The mixed-methods approach will allow for a comprehensive analysis of the data collected and increase the validity and reliability of the study's findings.

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