Cheung, S. Y., & Ng, K. Y. (2021, March). Application of the educational game to enhance student learning. In Frontiers in Education (Vol. 6, p. 623793). Frontiers Media SA.

Study Overview:

- The study focuses on the effectiveness of an educational game called "PaGamO" in enhancing student learning in higher education.

- It combines gamification elements with traditional learning methods and explores its impact on student motivation and academic performance.

- The study involved 56 college students majoring in physical education and recreation management.

Intrinsic Motivation:

- The study discusses the role of curiosity in enhancing intrinsic motivation. Curiosity is stimulated when there's a gap between perceived discrepancies or conflicts in one's knowledge.

- The complexity of information can influence an individual's motivation to learn. Information that is too easy or too difficult may affect motivation.

- Educational games aim to enhance students' intrinsic motivation for learning by providing challenges that are attainable yet stimulating.

Objective:

- The study's objective is to assess whether the use of the educational game "PaGamO" could enhance students' learning ability and understand students' perceptions of educational games.

Materials and Methods:

- Participants included 56 college students majoring in physical education and recreation management.

- The "PaGamO" game was introduced as a supplementary tool for learning.

- Students played the game in four sections related to the course material.

- A combination of quantitative and qualitative methods, including questionnaires and focus-group interviews, were used for data collection and analysis.

Data Collection and Analysis:

- The study used a mixed-method approach to assess the effectiveness of "PaGamO."

- Quantitative data was collected through questionnaires immediately after the final examination.

- Qualitative data was collected through focus-group interviews to gain in-depth insights into students' perceptions.

- The analysis included factors such as students' "PaGamO" scores, examination scores, motives for playing, and perceptions of the game's effectiveness.

Results and Discussion:

- The study found a significant relationship between "PaGamO" scores and multiple-choice (MC) exam scores.

- Students' motives for playing "PaGamO" were primarily intrinsic, with factors like fun, self-learning, and wanting to perform well in the final examination being prominent.

- Social interaction and competitiveness also played a role in motivating students to participate.

- Some students preferred traditional learning methods over educational games.

- The choice of devices for playing "PaGamO" varied, with mobile phones being the most popular due to their convenience.

- The study showed that even short sessions of using "PaGamO" were effective in helping students prepare for exams.

Recommendations for Further Research:

- The study suggests exploring the long-term effects of gamification on knowledge retention and application in different contexts.

- Future research could investigate the use of various question formats in educational games.

- Standardized procedures for using educational games in different subjects and with larger sample sizes are recommended.

Conclusion:

- The study concludes that the combination of gamification and traditional learning methods can enhance students' motivation and learning outcomes.

- The convenience of playing educational games on mobile devices was highlighted.

- Further research in the field of educational games is encouraged.

Funding and Ethics:

- The research was funded by the University Grants Committee of Hong Kong Baptist University.

- Ethical review and informed consent were not required for the study due to local legislation and institutional requirements.

This detailed summary encompasses all the key information and findings provided in response to your queries.