



CASE STUDY AND GAME-BASED TECHNOLOGY IN EDUCATION

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Abstract: This article explores the integration of the case study method and game-based learning in education. The case study method enables learners to analyze real-life situations, apply theoretical knowledge, and develop critical thinking, while game-based learning creates an interactive, motivational environment that enhances engagement and creativity. Their combination produces a dynamic pedagogical model that strengthens decision-making, problem-solving, and teamwork skills. The article reviews theoretical foundations, practical applications, and benefits of combining these approaches in modern pedagogy.

Keywords: case study, game-based learning, interactive learning, problem-solving, critical thinking, educational methods, student engagement, modern pedagogy, decision-making, teamwork.

Introduction.

The 21st century requires education systems to adopt innovative teaching strategies that foster both cognitive and social skills. Traditional lectures often fail to engage students in active learning, which highlights the importance of alternative approaches such as the **case study method** and **game-based learning (GBL)**.

The case study method encourages learners to connect theory with practice through real-life problem-solving, while game-based learning introduces interactivity, motivation, and creativity into the educational process. Their integration offers a promising model for modern pedagogy.

Literature Review:

The case study method has long been recognized as an effective tool for developing analytical and decision-making skills. Yin (2018) emphasizes its role in bridging theoretical knowledge with real-world application, while Flynn (2010) and Merriam (2009) highlight its ability to promote active participation and collaborative problem-solving.

Similarly, GBL has gained attention as a transformative educational approach. Gee (2003) and Prensky (2001) note that games foster authentic, engaging contexts for learning. Deterding et al. (2011) stress the motivational role of gamification, while Hamari et al. (2016) demonstrate that challenging games enhance flow, immersion, and learning outcomes.



Although these methods are often studied separately, recent literature suggests that their **integration** may create a more dynamic and effective learning environment, combining authenticity with motivation (Connolly et al., 2012; Squire, 2005).

Methodology:

This study employed a **qualitative research design** to explore the effectiveness of integrating the case study method with GBL.

1. **Literature Analysis** – Academic sources on case study pedagogy and game-based learning were reviewed to establish the theoretical framework.
2. **Case Development** – Real-life scenarios were selected and adapted into educational cases designed to foster discussion, decision-making, and teamwork.
3. **Integration with Game Elements** – Game mechanics such as challenges, rewards, role-playing, and simulations were incorporated into case activities.

The combined approach was piloted with a group of students. Data were collected through observation, feedback surveys, and performance evaluation, then analyzed qualitatively.

Results and Discussion

Findings showed that integrating case studies with game-based elements improved both **student engagement** and **learning outcomes**:

- Students demonstrated higher levels of motivation and interest compared to traditional instruction.
- Classroom observations revealed active participation, effective collaboration, and stronger critical thinking.
- Feedback surveys indicated that learners valued the combination of authenticity (cases) and interactivity (games) for better knowledge retention.

This integration thus provided both **cognitive benefits** (analysis, decision-making, problem-solving) and **social benefits** (teamwork, communication, collaboration).

These results are consistent with previous studies (Yin, 2018; Gee, 2003) but also extend the literature by showing the synergy of combining the two methods. However, challenges included **time-intensive preparation** and the **need for technological resources**. Future research with larger samples is recommended.

Conclusion.

The integration of the case study method and game-based learning represents an innovative, effective approach to modern pedagogy. Case studies



contribute authenticity and critical analysis, while GBL ensures motivation, engagement, and creativity. Together, they form a dynamic learning model that enhances both cognitive and social skills.

Although promising, this approach requires careful planning, appropriate resources, and empirical validation on a broader scale. Nonetheless, it highlights how combining traditional pedagogy with modern technologies can significantly improve the quality and effectiveness of education.

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