

GAMIFIED PROJECT-BASED LEARNING

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ENGAGEMENT THROUGH GAMIFICATION

Gamification in education leverages game design elements to foster motivation and enhance performance in academic activities (Sailer et al., 2017). This approach taps into the natural human desire for competition and achievement. Introducing elements like points, leaderboards, and badges into educational settings can significantly increase student engagement and motivation. However, it's important to consider individual differences, as gamification may not be equally effective or enjoyable for all students.



THE DOUBLE-EDGED SWORD OF GAMIFICATION



While gamification can increase engagement, it also has potential drawbacks. Kwon and Özpolat (2021) highlight that overly competitive gamification strategies can negatively impact students' satisfaction and understanding of content, especially when used in assessments. This underscores the necessity of balanced gamification approaches that encourage engagement without creating undue stress or competitive anxiety among students.

PROJECT-BASED LEARNING AS A CENTRAL VEHICLE FOR INSTRUCTION

Project-Based Learning (PBL) positions students as active participants in their learning journey, emphasizing real-world relevance and application of knowledge (Condliffe et al., 2017). This approach enhances engagement and fosters the development of critical thinking and problem-solving skills as students tackle complex projects that require them to synthesize and apply knowledge across various disciplines.



INTEGRATION OF GAMIFICATION AND PROJECT-BASED LEARNING (GPBL)



Integrating gamification and PBL can magnify their benefits, creating an immersive learning environment where students engage deeply with content through the motivational boost provided by gamification elements (Huang et al., 2023). This combination encourages cognitive engagement and emotional and social involvement, enhancing the educational experience and outcomes.

ADAPTING TO REAL-WORLD APPLICATIONS

Both gamification and PBL promote skills that are crucial in real-world contexts, such as collaboration, communication, and adaptive thinking. These methodologies prepare students for the challenges of the modern workplace, where such skills are often more valuable than the rote memorization of facts. The real-world application inherent in PBL, combined with the engaging aspects of gamification, creates a robust educational framework that supports lifelong learning and adaptability.



RESOURCES

- Condliffe, B., Quint, J., Visher, M. G., Bangser, M. R., Drohojowska, S., Saco, L., & Nelson, E. (2017). *Project-based learning: A literature review*.
- Huang, W., Li, X., & Shang, J. (2023). Gamified project-based learning: A systematic review of the research landscape. *Sustainability*, 15(2), 940. <https://doi.org/10.3390/su15020940>
- Kwon, H. Y., & Özpolat, K. (2021). The dark side of narrow gamification: Negative impact of assessment gamification on student perceptions and content knowledge. *INFORMS Transactions on Education*, 21(2), 67–81. <https://doi.org/10.1287/ited.2019.0227>
- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371–380. <https://doi.org/10.1016/j.chb.2016.12.033>