Chapter 2
Enhancing Student Authenticity and Engagement Through Gamification and Problem–Based Learning in Higher Education

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ABSTRACT

This chapter explores the integration of Gamification and Problem-Based Learning (PBL) as innovative approaches to enhance student authenticity and engagement in educational settings, particularly for postgraduate students. The study is grounded in the increasing academic challenges that post-graduate students face, such as information and critical literacy, language barriers, and the need for efficient research skills. The paper discusses the convergence of Gamification and PBL, aiming to address the lack of student engagement and motivation in contemporary higher educational institutions. It presents a theoretical background, drawing from Vygotsky's social development theory and Self-determination theory, to support the fusion of these approaches. Furthermore, the chapter proposes and evaluates several interventions, including Online Game-Based Learning Platforms and Discussion Forums, to enhance student engagement and authenticity.

1. INTRODUCTION

Educators play a pivotal role in this evolving learning landscape. They are expected to possess a multifaceted ability to inspire, encourage, and guide students through a transformative learning journey. In today's knowledge-driven economy, the role of teachers transcends the traditional function of simply imparting information. Teachers are now seen as key facilitators who empower students by fostering intellectual curiosity and promoting their growth. This evolving role requires educators to deliver content and engage students in ways that stimulate their desire to learn and develop critical thinking skills. Szpunar et al. (2013) found that the average adult attention span typically ranges between 10 to 20 minutes. This limitation presents a significant challenge, especially for working postgraduate students facing numerous academic and personal obstacles. These challenges include developing information literacy, acquiring content knowledge, honing critical literacy, mastering appropriate language styles, and achieving statistical literacy. Moreover, postgraduate students must make early decisions in their academic journey while managing heavier workloads, which can be overwhelming (Becker, 2019). Beyond academic challenges, these students often struggle with self-management, conducting independent research, and navigating complex supervisory relationships (McClure, 2001). For international postgraduate students, additional hurdles such as language barriers and a lack of critical analysis skills further complicate their educational experience (Brown, 2007). Moreover, many postgraduate students struggle with research skills, particularly in efficiently locating, evaluating, and synthesizing relevant literature, which is crucial for academic success (Daniel, 2022). These challenges demand a high degree of resilience, adaptability, and support. This chapter emphasizes the integration of Gamification with Problem-Based Learning (PBL) in educational settings. This approach is driven by the need to enhance student engagement, authenticity, and motivation, offering a dynamic solution to the myriad challenges postgraduate students face.

1.1 Gamification

Gamification, applying game-design elements in non-game contexts (Deterding et al., 2011), offers a compelling framework to make learning more engaging. It taps into students' intrinsic motivations through points, badges, and leaderboards (Hamari et al., 2014). This initiative is inspired by the growing recognition that traditional teaching methods may not fully resonate with the evolving needs and preferences of the modern student cohort. The digital era has prepared a generation of learners who are more responsive to interactive and engaging educational experiences (Dichev & Dicheva, 2017). Gamification in higher education has emerged as

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