

The Transition to Active Learning: Students' Adaptation to a Flipped Classroom, Just-in-Time Teaching, and Gamification Experience in a First-Year Psychology Course

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Abstract

The combination of Flipped Classroom (FC) and Just-in-Time Teaching (JiTT) represents a promising approach to promoting more active and self-directed learning. The aim of this study was to examine student participation, the use of artificial intelligence (AI), and students' perceptions of an educational experience based on FC, JiTT, and gamification in an undergraduate Personality Psychology course. The intervention was implemented with 89 enrolled students. Evaluation was conducted through a voluntary questionnaire completed by 47 students (81% female; mean age = 20.7 years, SD = 6.3), assessing participation, AI use, satisfaction, and qualitative feedback. Overall, 94% of students reported having no previous experience with innovative teaching methodologies. Average attendance at face-to-face sessions was 72%, while completion of the pre-class study materials and readiness assurance quizzes reached 77%. Instructional resources (M = 4.19/5), Kahoot! (M = 3.89/5), and educational technology (M = 3.88/5) received the highest ratings. AI was primarily used to facilitate conceptual understanding, resolve questions, and expand information. Qualitative analysis identified pre-class preparation, autonomous learning, in-class activities, and gamification as the main strengths of the experience, although some students expressed a preference for more traditional teaching approaches. The findings suggest that the combination of FC, JiTT, and gamification is well accepted by first-year university students. However, students limited prior exposure to innovative teaching methods highlights the importance of introducing these approaches progressively. Future research should explore the quality of student engagement beyond traditional indicators such as attendance and completion of learning activities.

Keywords: active learning; flipped classroom; gamification; just-in-time teaching; undergraduate psychology education