International Conference on
TEACHING, LEARNING and EDUCATION

28 - 30 November 2025 Vienna , Austria

Exploring Pupil Voice in Game-based Learning: how Do Students Perceive Teacher - Designed Board, Review and Card Games in Science Education?

Prince Sunil Thomas

Ashton On Mersey School, United Kingdom

Abstract

The current study investigates the use of teacher-designed board and card games in secondary classrooms through pupil voice in game-based learning (GBL). The author had designed the games that were closely aligned with the learning outcomes of each lesson for the Year 8 cohort to enhance their understanding and participation in science lessons. A mixed-methods approach was employed which combined questionnaire data and statistical analysis to research the self-efficacy, engagement, and perception of the students about GBL in science education. The findings of this study underline a strong proclivity of the students towards the use of board games in the lessons, highlighting their interactive nature and clear connection with the curriculum content. It is also revealed as an effective way to employ the dual-coding technique, where each game space in the board or card game forms a visual and a verbal pathway to learning and retaining the concepts. Quantitative results show a statistically significant correlation between the understanding of the students and their level of confidence ($p < 0.01$) after the lesson delivered with the aid of the board game. The qualitative responses obtained for the study further reveal the fact that GBL enhances inclusion, motivation and collaboration – particularly benefiting the students who felt excluded before in the traditional approaches. The research also explores the step-by-step process to design the board game to align closely with the learning outcomes. By amplifying pupil voice, this study reinforces the importance of shifting classroom lesson delivery methodologies from the traditional approaches in order to align enjoyment with learning outcomes.

Keywords: Collaborative Learning, Concept Retention, Dual-Coding, Self-Efficacy, Student-Centered Pedagogy