THE USE OF KAHOOT! AS A GAMIFICATION TOOL TO ENHANCE STUDENT ENGAGEMENT, LEARNING, FEEDBACK AND ASSESSMENT: A CASE STUDY

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Abstract

Many lecturers in higher education are familiar with the dispiriting view of a sea of blank faces, bored or distracted students, covertly surfing on smartphones - or worse still, empty seats in lecture theatres. Keeping students engaged is widely recognised as an ongoing challenge. Teaching staff are thus exploring innovative strategies for motivating students to attend, helping them to engage with the course content, the lecturer and their classmates, thereby facilitating deeper learning and understanding.

Gamification has gained significant acceptance in recent years as a tool for increasing student engagement, as a growing body of research evidence indicates enhanced motivation and improved learning outcomes. Primary and secondary schools commonly utilise digital games in the classroom, but there is some wariness among third-level instructors about introducing games for older students.

This ongoing study explores the potential of gamification as a teaching tool in undergraduate creative digital media (CDM) web development classes. Many CDM students find technical subjects challenging and struggle to remain engaged in lectures. Gamification was introduced through the use of Kahoot, a free online quiz game. Kahoot allows the instructor to create a custom quiz, and launch it in the classroom; students use their own digital device to interact with the quiz. Game options include music, timers, results and leaderboards.

The study was designed to investigate the following research questions:
~ Can Kahoot enhance engagement and motivation among third-level students?
~ Is Kahoot an effective tool for formative assessment?
~ Is Kahoot an appropriate tool for summative assessment?
~ Can Kahoot be used constructively as a revision tool (for example, in exam preparation)?
~ Can Kahoot be used to encourage deeper learning and reflection, beyond a classroom quiz?
~ What are the optimal strategies for the use of Kahoot in lectures?

A total of 106 first and second year CDM students were involved in this two-year study. Kahoot quizzes were used in lectures for teaching, revision, assessment and engagement; questions were based on course content, and designed around the higher levels of Bloom’s taxonomy. In one set of trials students competed anonymously; in a second, records were kept to assess progress. One assignment was set for students to create their own Kahoot revision quiz.

At the end of each module, quantitative and qualitative data were collected via a detailed survey and focus groups on student attitudes to Kahoot, their perceived learning and engagement, preferences for Kahoot features, reflections on uses of Kahoot for assignments, and opinions on potential applications of the tool in the classroom. The optimal frequency and modes of delivery were also explored through a comparative study between modules.

The results to date are encouraging, with an overwhelmingly positive response (91.2%) to gamification in these classes, and the evidence indicates that Kahoot can be a valuable teaching device. In particular, Kahoot excels as a tool for formative assessment, offering valuable opportunities to correct misconceptions: 82.5% of students state that it improves understanding. When asked to create their own quiz, 81.3% of students report enhanced comprehension of the material. Analysis is ongoing to evaluate summative assessments and determine optimal Kahoot frequency, but overall this gamification approach appears very effective.

Keywords: Gamification, game-based learning, kahoot, web development, higher education, engagement, learning, formative assessment, summative assessment, feedback.