The use of mid-lecture interactive quizzes to promote engagement, enjoyment & consolidate learning in Sport Science degrees

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Background & Rationale

- Student passivity has been highlighted as a weakness of the 'traditional' didactic lecture approach (Ikpeze, 2016)

- Contemporary methods to combat this (i.e. flipped learning, SCALE-UP) are not always possible due to lecture theatre infrastructure/group size.

- Lecture group sizes on this module are ~200 students, with lecture theatres not well adapted for such contemporary activities.

- A potential compromise to promote better engagement and learning consolidation is through interactive, gamified quizzes (Licorish, Owen & George, 2018; Yang, Razo & Persky, 2019).

- Testing of such nature has been shown to improve and consolidate learning (Yang et al., 2019).

- Previous research has shown the benefit of such quizzes, but only *after* the lecture has taken place (Plump & LaRosa, 2017).

Aims & Hypotheses

The aims of this study are threefold:

i. Explore students' perceptions of mid-lecture interactive quizzes.
ii. Examine student engagement and performance on these quizzes throughout the academic year.
iii. Investigate the association between quiz engagement and performance with summative exam performance.

It is hypothesised that the quizzes will receive a positive reception by the students. I expect engagement to remain stable throughout the year . I also hypothesise that a higher engagement and performance on the quizzes will be associated with a greater score on the summative exam.

Methods

Design and Procedures

~ 400 Sport Science students (level 4)

Mid-lecture quiz in every lecture. Consists of 3-5 multiple choice and short answer questions.

Vevox (NTU endorsed) will be used to create and administer the quizzes. 1) Easily integrated into PowerPoint. 2) Can track student engagement (anonymously). 3) Has built-in Q&A feature.
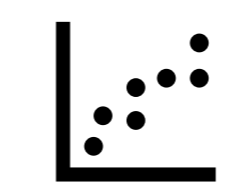
Analysis

Student perceptions will be evaluated by survey (MS forms). Agreement with statements will be rated on a 5-point likert scale.

Student engagement and performance on the quizzes will be tracked in Vevox. Only the lead lecturer will have access to this information.

Engagement and performance on the quizzes will be associated with performance on the summative end of year exam. This will be done via rank correlation.

Expected Results & Implications

- If the hypotheses are met, then such activities could be used across all modules within the department to maximise student performance across their profile.

- If the hypotheses are not met, then an evaluation of the quizzes and consideration of student perceptions can be used to tweak the quizzes for future success.

- Future research may want to consider a stratified evaluation of such interventions, for example priority target groups within Success for All.

References

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