

Game-based assessment: can games themselves act as assessment mechanisms ? A case study.

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Assessment is an important component of modern teaching and learning processes; it provides valuable feedback to teachers and students which allows the revision and adaptation of teaching and learning activities. However, assessment induces a high degree of stress/anxiety, which may have debilitating health, emotional and educational effects. The stress of examinations can produce poor performance and is unlikely to provide a positive motivation for many students. To overcome these issues game approaches may be used. Games are interactive, motivating and challenging. Furthermore, they provide an opportunity to integrate and demonstrate knowledge and skills, and they give direct feedback. To date, researchers tend to concentrate on the use of games to enhance student learning and to enhance delivery of courses. The positive effects of formative assessment have been proven. However, little research exists on the use of games as an assessment tool for summative evaluation.

This paper aims to contribute to the understanding of whether games can be considered suitable and effective tools for summative assessment. A boardgame format was experimentally compared with a traditional test format to assess students' competences at the end of a first aid course in a pre-service teacher training programme. Twenty-nine master students were randomly assigned to the game or traditional test condition. In the traditional test condition, participants completed a paper-and-pencil test, consisting of true/false, short answer and essay questions, assessing their knowledge and attitudes. During the test, each student was individually and in private assessed by the lecturer (evaluator) on his/her first aid skills. In the game condition, students were randomly divided into groups of four players. The focal point of this condition was competitive assessment in which peers were placed in the role of judge over other students' efforts. Each player answered questions (the same ones presented in the traditional test condition) that were evaluated by the three competitors. The outcome of the answer determined the availability of benefits in the game. Regarding summative assessment, a player received the question card when answered correctly. As a result, an individual score at the end of the game could easily be obtained by counting the amount of question cards each player had collected.

This paper examines whether differences exist between assessing student learning outcomes in a game format compared with a traditional format. Students' assessment preferences (pre-questionnaire) and perceptions (post-questionnaire) were measured using an adapted Assessment Preferences Inventory. The relationships between preferences and performances on the test were investigated. In addition to the post-questionnaire, the participants were enquired about the perceived accuracy of the two approaches (game versus traditional test).

Keywords: assessment, games-based, preferences, summative evaluation, health education

Why is your paper of interest to the conference participants ?

To date, most research has been focused on the use of games to enhance learning and assist teaching. The effects of formative assessment on learning have been explored. However, little research exists on the use of games as an assessment tool for summative evaluation.