Exploring Self-Regulation in Learner-Generated Digital Media (LGDM) Assignments in First Year Science Students

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Presentation type: Individual
Special Interest Group (SIG): Technology and Learning
Intention to nominate for an award: Yes

Abstract

Learner-Generated Digital Media (LGDM), if used effectively, may promote deep learning (Hoban et al., 2015), foster motivation and ownership (Kearney & Schuck, 2005), and provide opportunities to improve digital literacy (Buckingham, 2007). LGDM has been studied across a range of disciplines including, teacher education (Kearney et al., 2012), accounting (Frawley et al., 2015), computer programming (Powell & Robson, 2014), pharmacology (Reyna et al., 2016), geology (Reyna et al., 2017), and mathematics (McLoughlin & Loch, 2012). Despite the recent proliferation of research on LGDM, there is a need for research to examine relationships between self-related motivational processes and the use of LGDM. In this study, we adopted a longitudinal design to explore students' self-regulatory processes as they developed digitial media artefacts as part of their assigned course work.

The Learner-Generated Digital Media Framework (Reyna et al., 2017) is the guiding theoretical framework for the study. Elements of the framework include (1) pedagogies; (2) student training; (3) video hosting; (4) marking scheme; (5) group collaboration; (6) feedback; (7) student reflection, and; (8) evaluation. Self-regulation subscales were mapped against the elements of the framework. These subscales captured, task strategies (Zimmerman, 2002), goal setting (Pintrich, 1991), environmental structuring (Zimmerman, 1995), time management (Chen, 2002), help seeking (Lynch & Dembo, 2004) and self-evaluation (Winne & Hadwin, 1998). The sample comprised 320 undergraduate students studying health science. The research design is mixed-methods wherein the data were collected using surveys, focus groups and interviews. Survey data was collected at three time points, weeks 1-2, weeks 6-7, and weeks 11-12. Analysis of the survey data will be through the use of multivariate techniques including exploratory factor analysis, confirmatory factor analysis, and structural equation modelling. Thematic analysis will be used for the focus groups and interview data. The results of the study will have implications for future implementation of LGDM.

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