Public Abstract

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Title:The integrating of teaching and learning through technology in high school: Learning Management Systems (LMS) and alternatives

This dissertation is a case study about how teachers use Learning Management Systems (LMS) and teaching technologies in their classes. Research was conducted through interviews, observations, and document analysis. Data analysis yielded fourteen themes and thirty-two codes about teachers' beliefs and experiences. Codes were validated using triangulation, rich, thick description, and member checking.

This research builds on Fishbein and Ajzen's Theory of Reasoned Action (TRA) and the theory of Diffusion of Innovation (DOI). Data was collected in two high schools and a career center situated within a school district that provided and supported, but did not require the use of, a commercial LMS. All participants use the LMS and other technologies. They were motivated by their positive attitude, subject expertise, longevity in the field, and previous experiences. They also believed that regular use of technology prepares students for the future. Participants self-identified as minorities in their early adoption of technology confirming the theory of DOI.

This study found differences between the LMS use of the extensive and limited users of technology, with the extensive users incorporating a wide variety of tools in unsupported Open Source LMSs. The most extensive users of technology were in science, humanities and IT; limited users, who rely mostly on the district-supported LMS, were in business and health, suggesting different needs in an LMS across the curriculum.

This research found that new technologies require time to learn and to use effectively, suggesting that teachers need more time to prepare during school hours as well as more peer mentoring to use the LMS to its fullest extent.