Effective Technology Application in the Classroom: Pedagogy to Practice

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This presentation will highlight pre-service teachers learning to use technology games as teaching tools and a subsequent investigation of the effectiveness of gaming in teaching educational Theory and Application. The study shows that pre-service teachers can effectively use web-based game sites to produce games reflective of the course curriculum as assessed by pre- and post-course testing. The group of students that utilized games dramatically improved in their performance on both Theory and Application post-tests compared to non-gaming students. There was a two-fold increase in the number of gaming group students achieving ≥70% correct answers on both the Theory and the Application post-tests. Statistical analyses revealed that there was a 91% and 88% probability, respectively, that the improvements in the learning of Theory and Application were associated with the use of gaming methodology. This result helps support the case for incorporation of gaming methods into the teaching of educational Theory and Application. The use of game development provided teacher candidates with hands-on experience in applying technology based games as a teaching strategy in the classroom.