Impact of E-Learning Strategies to Design E-Portfolio on Achievement Motivation and Product Quality

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ABSTRACT

This article focuses on comparing two e-learning strategies (cooperative versus collaborative) in terms of developing preservice teachers’ skills in designing one of the modern Web 2.0 assessment tools (i.e., e-portfolio) and their effects on product quality and achievement motivation towards designing e-portfolio. After the experiment involving 80 students from the third level at the faculty of education, King Faisal University in Saudi Arabia, during the first semester of the school year 2017/2018, a questionnaire on achievement motivation and a product quality assessment card were used. The results show no significant difference between the two e-learning strategies regarding students’ achievement motivation. On the other hand, there is a significant difference in product quality in favor of cooperative e-learning. The study highlights social-network based e-learning strategies of developing preservice teachers’ teaching and evaluating skills that they need to apply in the new digital era.

KEYWORDS
Achievement Motivation, Assessment Tools, Collaborative E-Learning, Cooperative E-Learning, E-Portfolio, Preservice Teachers, Product Quality, Web 2.0

INTRODUCTION

The emergence of e-learning requires new strategies and methods of teaching and learning that are more learner centered, which in turn leads to changes in the roles of the instructor and the learner. Learners have become more active and responsible for their learning, where they are at the core of the learning process. Meanwhile, the instructor has shifted from solid yet boring lectures, with the occasional short-answer question, to more active group-work strategies, such as cooperative, collaborative, and problem-based learning (Davidson, Major, & Michaelson, 2014), that actively engage the learners in their learning process. The instructor has become a coach and a facilitator of the learning process. The emergence of Web 2.0 tools has led to the development of the concept of e-learning to become more interactive and productive. This development depends on the extent of the learner’s involvement in e-learning environments. This situation has led to a shift from constructive to connective learning. Consequently, the assessment methods have been improved to focus on processes

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and products that develop multiple skills through projects based on social networks. As a result of the information revolution in the 21st century, which has positively affected the entire field of education, it has become crucial to train teachers in designing, producing, and employing such new assessment tools based on Web 2.0. One of these tools is the e-portfolio.

E-portfolios document all work for reflection, self-assessment, and personal satisfaction with learning, as well as encourage peer-to-peer expertise exchange. E-portfolios can support a student-centered learning and teaching approach, as well as measure student performance and monitor institutional quality (Coffey & Ashford-Rowe, 2014). As an e-portfolio is developed better in groups (Elliott, 2008), cooperative and collaborative e-learning could be suitable strategies for teaching such a skill. There are many free online platforms that do not require any coding to create e-portfolios, such as Blogger, Google Sites, and WordPress. Google Sites is a free website publishing platform that is easy to use. Moreover, it is a powerful platform for teamwork that allows Google users to participate in the website creation process and keeps a digital record of team-member contributions over time (Denton, 2012). Therefore, Google Sites has been selected in this study because it is believed to improve student interest and collaboration (Davies, Pantzopoulos, & Gray, 2011; Terrell, Richardson, & Hamilton, 2011). This paper aims to determine whether cooperative or collaborative e-learning is the better strategy for developing preservice teachers’ skills in designing e-portfolios, as well as these skills’ effects on product quality and achievement motivation to design e-portfolios.

LITERATURE REVIEW

Assessment E-Portfolio

Assessment electronic portfolio (e-portfolio) is a Web 2.0 technology (Alexiou & Paraskeva, 2010) that is believed to be an effective, valuable learning and evaluating tool (McDonald, 2011) for digitally documenting learners’ work. It keeps the evidence of learners’ learning. It contains a digital collection of artifacts that may include demonstrations, resources, reflections, and accomplishments (Gülbahar & Tinmaz, 2006). The artifacts are stored in an electronic format, such as audiovisual, graphical, text based, or multimedia, and on a website or on any other electronic media (Lorenzo & Ittelson, 2005). Challis (2005, para. 10) defines e-portfolio more comprehensively, as follows:

- Selective and structured collections of information;
- Gathered for specific purposes and showing/evidencing one’s accomplishments and growth;
- Stored digitally and managed by appropriate software;
- Developed by using appropriate multimedia and customarily within a web environment;
- Retrieved from a website or delivered by CD-ROM or by DVD.

Employing e-portfolios as assessment tools is a meaningful process that provides students with the opportunity to show their creativity and focus on the quality and the competence of the material presented (Allan, Zylinski, Temple, Hislop, & Gray, 2003). Furthermore, e-portfolio shows teachers various dimensions of students’ learning improvement and development that are not available from standardized test scores (Baturay & Daloğlu, 2010).

Generally, Web 2.0 applications are featured via user–machine and user–user collaborations (Llorens Cerdà & Capdeferro Planas, 2011). Using Web 2.0-based e-assessment is believed to be one of the basic skills that a student teacher should acquire while in preservice training, to be used meaningfully in their future profession. Allan and colleagues (2003) believe that due to the increasing strategic role played by e-portfolios in academic programs, the teaching staff will be required to improve their relevant professional skills and seek advice on redesigning curricula and learning experiences.
Information Technology Certification: A Student Perspective
[www.igi-global.com/article/information-technology-certification/2252?camid=4v1a](http://www.igi-global.com/article/information-technology-certification/2252?camid=4v1a)