Learning Experiences in Developing Electronic Portfolios

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ABSTRACT

This case study investigates the learning experiences and learning processes that occur during students’ development of culminating electronic portfolios for a Master of Education in Computer Education and Technology. Data were collected through in-depth interviews, participant observations, and document analyses from seven M.Ed. students before, during, and after developing electronic portfolios. Findings indicate that creating electronic portfolios supports students’ mastery of technology-related knowledge and promotes critical thinking and problem-solving skills. Developing electronic portfolios created active, independent, and motivated learners. Students reported that they “learned by doing,” as they viewed samples, collaborated with peers, and reflected on final products.

Keywords: assessment; collaborative learning; electronic portfolio; learning experiences; teacher education; technology

INTRODUCTION

Electronic portfolios have become one of the most effective forms of assessment to evaluate student learning (Barrett, 2001). According to Barrett, electronic portfolios offer several advantages compared to their paper-based analogs, including reduced storage demands, ease of back-up, portability, ability to create links, and development of students’ technology skills. Porter and Cleland (1995) further indicated that creating electronic portfolios provides students with the responsibility of reflecting on their learning and structuring their knowledge and skills. According to Porter and Cleland, the power of reflection is that it helps students and teachers move beyond seeing the portfolio as a mere alternative to traditional assessment to appreciating its value as a learning strategy.

In this technology age, teachers are expected to integrate technologies into their teaching. According to McKinney (1998), teachers who demonstrate their competence in technology through the development of an electronic portfolio are more likely to incorporate technology into their own classrooms. Thus, if teacher
candidates recognize the advantages of developing electronic portfolios, experience the problems encountered in the process, and understand their implications and possible solutions, it is expected that they will be more confident in using electronic portfolios in their future classrooms.

**Purpose of the Study**

The purpose of this case study was to investigate and understand the learning experiences and learning processes that occurred in graduate students’ development of electronic portfolios. The meaning that students gave to these experiences was also investigated in order to understand how students learn in a technology-enriched learning environment. The following research questions were addressed:

1. What are the learning experiences of students in developing their electronic portfolios?
2. What meaning do students give to these experiences?
3. What are the learning processes encountered by students when developing electronic portfolios?

**Significance of the Study**

As educational multimedia, hypermedia, and telecommunications become more and more accessible, and as the use of electronic portfolios as a means of authentic assessment becomes increasingly popular in undergraduate as well as graduate programs in teacher education, some educators might question the meaning and value of electronic portfolios versus other forms of assessment in constructing knowledge. With the in-depth interviews, observations, and document analyses, this research provided first-hand detailed data to address those questions.

This study provided detailed descriptions of the learning strategies that students used in creating electronic portfolios. This research is beneficial for instructors who are using electronic portfolios as an assessment tool to improve instruction. The information provided in this research allows potential users of electronic portfolios to understand the learning processes and experiences in the development of electronic portfolios and understand the potential problems and possible solutions.

**METHODOLOGY**

A qualitative case study formed the methodological framework of this study. This method was appropriate because the researcher studied a particular phenomenon in its natural setting (Punch, 2000), and attempted to make sense of or interpret the phenomenon in terms of the meanings people brought to it (Guba & Lincoln, 1994). This research studied a group of unique students, who were professionally trained in design and in advanced technology skills, to investigate their learning experiences during the development of electronic portfolios. Therefore, a case study is appropriate for understanding and interpreting their uniqueness.

**Research Setting and Participants**

The research setting was a large university in a small Midwestern college town. Students in the college of education were offered the latest instructional technology tools through the Curriculum and Technology Center. They had access to productivity software, educational software, digital cameras, camcorders, scanners, and other technology-related equipment.

Beginning in the spring of 2002, Master of Education students majoring in Computer Education and Technology in
Identification of a Distance Education Expert
www.igi-global.com/chapter/identification-of-a-distance-education-expert/125405?camid=4v1a