

Chapter XIX

How Students Learned in Creating Electronic Portfolios

Shuyan Wang

University of Southern Mississippi, USA

Sandra Turner

Ohio University, USA

ABSTRACT

This case study investigated the learning experiences that occurred during students' development of culminating electronic portfolios for a master of education in computer education and technology program. The meaning that students gave to their learning experiences and the problems they encountered were also investigated in order to understand how students learn in a technology-enriched learning environment. 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. Students reported that they learned not only "by doing," but also from peers through collaboration, from reflection on their artifacts, and from synthesizing their electronic portfolios.

INTRODUCTION

Electronic portfolios have been widely adopted as an assessment method in American education, especially as an effective means for representing and developing teacher knowledge (Barrett, 2005; Strudler & Wetzel, 2005; Wetzel & Strudler, 2005).

In addition to the advantages of the reduced storage demands, ease of back-up, portability, ability to create links, and development of students' technology skills, creating electronic portfolios provides students with the responsibility of reflecting on their learning and structuring their knowledge and skills (Porter & Cleland, 1995).

As emerging technologies rapidly become commonplace in education, are teachers ready to prepare their students for full participation in a technology rich society? 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. As teacher education programs move toward promoting greater integration of technology in the curriculum, electronic portfolios are a means of not only demonstrating content but pedagogical knowledge and technology expertise as well (Franklin, 2005). 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 technologies in their future classrooms.

PURPOSE OF THE STUDY

The purpose of this case study was to investigate and understand the learning experiences that occurred in the development of electronic portfolios by graduate students. The meaning that students gave to their learning experiences and the problems they encountered were 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 meanings do students give to these experiences?
3. What are the problems encountered by students when developing electronic portfolios?

Significance of the Study

As educational multimedia, hypermedia, and telecommunications become more easily accessible, the use of electronic portfolios as a means of authentic assessment has become 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. Unfortunately, empirical evidence to document the effects of portfolios is limited (Barrett, 2005). With in-depth interviews, observations, and document analysis, this research intended to provide first-hand, detailed data to analyze what and how students learned in the process of creating electronic portfolios.

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, master of education students majoring in computer education and technology, 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 provided with the latest instructional technology tools through the cur-

10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/students-learned-creating-electronic-portfolios/4210

Related Content

A Project-Based Learning Approach: Online Group Collaborative Learning

Jianxia Du, Byron Havard, James Adams and Heng Li (2005). *International Journal of Information and Communication Technology Education* (pp. 13-24).

www.irma-international.org/article/project-based-learning-approach/2272

EIIS: An Educational Information Intelligent Search Engine Supported by Semantic Services

Chang-Qin Huang, Ru-Lin Duan, Yong Tang, Zhi-Ting Zhu, Yong-Jian Yan and Yu-Qing Guo (2011). *International Journal of Distance Education Technologies* (pp. 21-43).

www.irma-international.org/article/eiis-educational-information-intelligent-search/49715

Education, the Internet, and the World Wide Web

John F. Clayton (2008). *Online and Distance Learning: Concepts, Methodologies, Tools, and Applications* (pp. 1417-1421).

www.irma-international.org/chapter/education-internet-world-wide-web/27477

Design of a Learning Path Recommendation System Based on a Knowledge Graph

Chunhong Liu, Haoyang Zhang, Jieyu Zhang, Zhengling Zhang and Peiyan Yuan (2023). *International Journal of Information and Communication Technology Education* (pp. 1-18).

www.irma-international.org/article/design-of-a-learning-path-recommendation-system-based-on-a-knowledge-graph/319962

Technology's Role in Distance Education

Murray Turoff, Caroline Howard and Richard Discenza (2008). *Online and Distance Learning: Concepts, Methodologies, Tools, and Applications* (pp. 8-17).

www.irma-international.org/chapter/technology-role-distance-education/27367