

Chapter 12

Electronic Portfolios in Teacher Education: Practical Reflections and Insights from a Systemic Implementation

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ABSTRACT

Electronic portfolios serve a variety of needs within the field of education as the information technology age collides with the age of educational accountability. This chapter discusses the successes and challenges of an electronic portfolio integration process over five years in a large teacher education program. Specific details for selecting an electronic portfolio system are explained at length. Issues concerning student products, teacher standards, evaluation and accreditation are addressed through the lens of reflective experiences and practice.

INTRODUCTION

Electronic Portfolios in the Age of Educational Accountability

National and international educational standards have made both teacher and student assessment a priority for the field of education (US Department of Education, 2009). Legislative mandates such as

the 2001 No Child Left Behind Act (NCLB) have increased the demands for accountability in our nation's schools and made documenting and ensuring teacher competencies an even higher priority for institutions of higher education. Portfolios have been a common process to attain more meaningful and holistic perspectives of teacher and student performance standards for many years. Advancements in information technology have made electronic portfolio systems popular because of the improved economic feasibility, web ubiquity and increased

DOI: 10.4018/978-1-61520-899-9.ch012

efficiency they provide. Electronic (E) portfolios consist of work that the learner has collected, selected, reflected on and desires to present in order to demonstrate growth and capabilities (Barrett, 2007). E-portfolios are flexible, digital tools for teaching, learning, assessment and evaluation which provide organizations and students with innovative ways to understand experiences and achievements (Chambers and Wickersham, 2007; Goldsmith, 2007). E-portfolios have been successfully used in universities to track student progress and to document learning (Wilhelm et al. 2006; Cambridge, 2008) in many diverse areas of academics, including medicine (Dornan, Carroll and Parboosingh, 2002), physical education (Hastie and Sinelnikov, 2007) and athletic training and therapy (Delmont, 2003). E-portfolios can be important components of student evaluation and assessment in online courses in higher education due to their ability to enhance reflection using advanced technologies (Bauer and Anderson, 2000). E-portfolios have been used to teach college students how to assess and evaluate their work (Heath, 2002) as well as the work of their peers in structured, technology-rich environments (Brandes and Boskic, 2008). Beishuizen, Van Boxel, Banyard, Twiner, Vermeij and Underwood (2006) state that the structure of e-portfolios assists in archiving work for reflection, analysis and presentation for college students. Beck, Livine and Bear (2005) suggest that formative electronic portfolios support the development and evaluation of professional teaching standards and outcomes.

The International Society for Technology in Education (ISTE, 2009) has established technology standards that teachers should meet as they design, implement, and assess educational experiences to engage students and improve learning. ISTE's National Educational Technology Standards (NETS) have served as guidelines for improving teaching and learning through the use of technology in the areas of students, teachers and administrators (NETS-S, NETS-T, and NETS-A). The NETS were designed to guide

educators as they increase and improve their knowledge, skills, and attitudes with technology. The National Council for Accreditation of Teacher Education (NCATE) incorporated the ISTE NETS technology standards for colleges of education to ensure that all teacher candidates would be able to use educational technology to help students learn (2009). NCATE's commitment to technology standards has prompted colleges of teacher education to provide opportunities to develop knowledge, skills and dispositions related to education and information technology. These standards encourage teacher candidates to learn how technology is integrated throughout planning, curriculum, instruction, field experiences, clinical practice, assessments, and evaluations. This effort of aligning teacher preparation with technology standards has been used to prepare pre-service teachers to work in the digital age. E-portfolios have advanced in capacity, function and form during the last five years and have now become a means for reflection and assessment. E-portfolios play a major role in the integration of technology in education today.

E-portfolios are becoming more common in various educational settings due to their range of uses and because of the increased amount of technology on many campuses (Capraro, 2003; Chambers and Wickersham, 2007). The use of e-portfolios allows pre-service teachers to use technology to support effective instructional practices in K-12 schools after graduation. Advanced, high-quality e-portfolio systems provide a means for teachers and students to digitally display what they have learned and to connect their work products to standards. Bartlett (2002) states that teacher preparation programs are increasingly using electronic portfolio assessment tools to document students' development of instructional dispositions and standards. In addition, portfolios provide a comprehensive collection of materials and work products to document students' accomplishments and give them the opportunity to reflect on their instructional dispositions. Ring and

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