E-Portfolio System: Implementation, Maintenance, & Support

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Abstract

The focus on accountability in the field of education has redefined the role of student portfolios. Portfolios are now expected to include the evaluation of student performance and competency. This new role as an assessment tool assists the evaluation process prior to a recommendation for licensure to work in the teaching profession. The profession is looking for teaching candidates "who can assess situations and develop appropriate solutions or strategies" for those situations (Weiner, 2000). Problem-solving skills may be acquired through the use of realistic, situational problem-solving experiences along with the authentic assessment of outcomes from learning experiences (Young, 1995).

Portfolios have gained favor "as a means of authentic assessment because of their ability to represent knowledge and growth over time in an instructionally relevant way" (Reckase, 1995). The portfolio system can serve as a benchmark for the student's work, comparing current projects to earlier projects. Work sample evaluation over time demonstrates a student's progression toward a standard of performance consistent with a particular curriculum and appropriate developmental expectations. In addition, portfolio assessment "provides evidence of the pre-service teacher's performance as a thinking, problem-solving, and self-evaluating professional" (Mokhartri, Yellin, Bull, and Montgomery, 1996). The evaluator can relate a student's performance to professional standards, showing the maturity of academic decisions made by the educator-in-training.

Educators' interest has increased in the development and use of performance assessments as authentic assessment (Arter & Spandel, 1992; Gifford & O'Connor, 1992). Grace (1992) promoted the portfolio system as a realistic, instructionally and developmentally appropriate assessment tool. Many teacher educators are implementing portfolio assessment into their courses, and many teacher education programs are implementing portfolios as a program-wide assessment tool (McLaughlin & Vogt, 1996; Mokhatari, Yellin, Bull & Montgomery, 1996; Barton & Collins, 1993; Darling, 2001; Klenowski, 2000; Snyder, Lippincott, & Bower, 1998).

Technology has become pervasive in learning and teaching. The use of portfolios and the demand for technology integration has resulted in the creation of the electronic portfolio, or e-portfolio. The primary effect of incorporating technology into the portfolio process is students gaining knowledge of computers and technical

skill with software and hardware, particularly in graphics and multimedia (Lockledge & Weinmann, 2001). According to students, the primary strength of the electronic portfolio was the ability to include multimedia artifacts in the form of graphics, audio, video, and animation, as well as text, to provide a more comprehensive picture of their achievement. Students also regarded the aesthetic qualities and the possibilities for personal creativity as strengths of the e-portfolio.

Studies showing the limitations of electronic portfolios focused on lack of storage space associated with the computer hardware and software. Researchers indicated that there was a need for more longitudinal research to determine the effectiveness of electronic portfolios, but it appeared there was "value in scaffolding the development of portfolios over time" (Kilbane & McNergeny, 2001). Students have indicated that they needed more computer time and greater access to the digital media such as scanners, recorders, and cameras. Problems included the demands on students' already busy schedules, the lack of previous experience with computers, the lack of time to learn the technology required for multimedia, and the need to work within the school computer lab setting. Other weaknesses included the lack of time to work on the technology, difficulty with computer lab availability, broken computer equipment, cross-platform compatibility issues with home computers, technical difficulties with hardware and software, and the need for considerable technical support (Lockledge & Weinmann, 2001).

Institutions will have different requirements for digital portfolios as final assessment pieces for student teachers or interns. Our research within a three university partnership investigates how the universities are implementing digital portfolios in their teacher education programs. The research questions we have posed are the following: 1) What resources are needed to implement an electronic portfolio system?; 2) What problems arose during the implementation stage?; 3) What type of support is required to help maintain an e-portfolio system?

The College of Education and Human Development at the University of Louisiana Monroe switched to a new E-Portfolio system in the Fall of 2006. The new system, TaskStream, was completely different from the previous portfolio system, which allowed the administration and faculty to design and create the E-Portfolio system to their specifications.

The first step in the process was the design and implementation stage. Several factors needed to be considered in this process. The assessment committee, working hand in hand with the technology coordinator, drafted the initial design for the E-Portfolio shell. The technology coordinator created the shell digitally on TaskStream while the assessment committee worked on the content for the shell. Faculty members were directed to create assessment rubrics for later integration into the system. The design process allowed all parties involved to work to their strengths. Once the shell was created and content added to the shell, the next step was to involve the faculty members with the technology aspect of the E-Portfolio system.

Since the implementation was to take place during that current semester, all parties involved thought that faculty use should be kept to the basics. Faculty members were trained on how to electronically grade the assignments that the students submitted on TaskStream. A one-hour training session was conducted to help the faculty get familiar with the system, and a one-page tutorial was created. The following semester the faculty would be trained on more aspects of the E-Portfolio system.

Once the faculty was trained on the new E-Portfolio system, our attention turned to the students who would be using the system. The first step in student training was creating a student work environment in which they could work on their portfolio and get assistance with portfolio creation and maintenance. Therefore, the Digital Media Studio was created to help students create their requirements for the E-Portfolio. The studio was open from 8 a.m. until 7 p.m. (taking evening classes into consideration) and was operated by student workers trained on TaskStream.

The next step in student training was starting a program called TechMentors. Within this program, technology efficient students were selected from each cohort group and extensively trained on TaskStream. Each cohort

group had at least one or two students who were experts in using TaskStream for the purpose of providing fellow students with easy access to help from a fellow student. The last step in student training was creating a sandbox program on TaskStream. In the sandbox, the students were able to try out the features of the system without worrying about ramifications of messing up. Training was held for each cohort group either in a computer lab or using laptops. All parties involved thought hands-on training was essential to help with the new portfolio system transition.

The main issue that arose during the implementation stage was the lack of time in the implementation and training process. Trying to design, create, and train both faculty and students in one semester was a huge task. In hindsight, implementing in the Spring semester instead of the Fall would have been ideal. Given the short amount of time to implement the new E-Portfolio system, the process was considered successful by all parties involved. Keeping the faculty involvement to a minimum was greatly appreciated by the faculty. The faculty also found the new system to be user-friendly, which made the transition easier for them. Faculty and students appreciated the TechMentor program. Faculty members could rely on the TechMentor students to provide help and answer questions from fellow classmates, which overall reduced questions during class time. Students commented on the higher comfort level of asking their fellow classmates for help rather than a faculty member.

The Digital Media Studio also helped the students by providing a work area with computer access to their TaskStream account and technical support. The Studio provides all resources for students to create their E-Portfolio. The computers have all the software needed for text writing, document scanning, audio recording, video editing, and anything else needed to create projects. Students can use the digital equipment either in the Studio or they can check out the equipment as needed. The digital equipment includes scanners, digital cameras, digital camcorders, microphones, and many other items. The student workers can help students using TaskStream with any part of the process, from creating projects to maintaining items in their E-Portfolio.

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