TITLE

Electronic Portfolios: Effective Assessment Tools in Teacher Education Programs

ABSTRACT

The School of Education at Northern State University in Aberdeen, South Dakota, USA has implemented the electronic portfolio as an assessment tool and as a means of integrating technology throughout teacher education programs. The electronic portfolio offers a unique opportunity to build preservice teachers' proficiency with technology as well as showcase their expertise in teaching.

Electronic portfolio components are assessed to determine whether appropriate opportunities have been provided for students to meet the ISTE National Technology Standards (NETS) and performance indicators for teachers as well as the required program outcomes for teacher education graduates.

This presentation will focus on current efforts to develop a web-based assessment platform allowing for asynchronous, electronic assessment and record keeping by faculty. Specific components of original student-created electronic portfolios will be shared along with accompanying assessment tools, including a newly-developed holistic rubric.

PRESENTERS

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PAPER

The School of Education at Northern State University in Aberdeen, South Dakota, USA has implemented the electronic portfolio as an assessment tool and as a means of integrating technology throughout teacher education. The electronic portfolio offers a unique opportunity to build preservice teachers' proficiency with technology as well as showcase their expertise in teaching.

The portfolio concept is very popular in education today -- and for good reason. First, today's educators have embraced constructivism -- the belief that teaching is an active and learner-centered process. This philosophy recognizes that students build their own understanding of the world by using what they already know to interpret new ideas and experiences. Constructivists emphasize not only what students know, but also what they do.

Secondly, the growing interest among colleges of education in performance assessment makes a transcript of grades and a score on the National Teachers' Exam (NTE) seem inadequate indicators of competence. A wise person once said: "There is a lot of difference between naming the tools and building the house."

And thirdly, there is still competition for teaching jobs in most areas of the country. It is imperative that prospective teachers be able to demonstrate their teaching competence in concrete ways B to university faculty, to prospective employers, to policy makers at the state and national levels, to parents, the media and the general public.

Why electronic portfolios rather than the paper versions? Electronic portfolios emphasize process as well as product and are multi-sensory in nature, including images, sound, video, text, and multimedia products. It's more fun to see a great bulletin board than to read about it, and it's more effective to hear a university supervisor talking about a preservice teacher's strengths than to read a letter of recommendation. In addition, electronic portfolios facilitate the integration of technology throughout the teacher education program; they provide students with exposure to a wide variety of technology experiences -- all in the context of teaching and learning.

The critical phases of portfolio development are collecting, selecting, and reflecting – although the process actually has many phases. Burke, Fogarty, and Belgrad (1994) proposed ten: projecting, collecting, selecting, interjecting, reflecting, inspecting, perfecting, connecting, injecting (and ejecting), and respecting.

As students think about what entries they will collect, how to select those that best convey their abilities, and how to present what they have learned, they are constantly reflecting. Reflective thinking (as defined by Dewey, 1933) is the ability to give serious and persistent consideration to a subject in order to act deliberately and intentionally rather than routinely and impulsively. If teacher educators want preservice teachers to move beyond non-reflective reliance on impulse, tradition, and authority, opportunities for reflection must be provided throughout the teacher education program.

The ability to think about what one does and why is vital to intelligent practice, practice that is reflective rather than routine. Reflection "influences how one grows as a professional by influencing how successfully one is able to learn from one's experiences" (Richert, 1990, p. 525). Reflection is most effective when related to actual practice (Roth, 1989). Because of its focus on integrating theory and practice, the electronic portfolio process offers significant opportunities for promoting reflective thinking. And, as Dewey has argued, "we do not actually learn from experience as much as we learn from reflecting on experience" (Posner, 1996, p. 21).

Information gathered through the process of reflection provides a unique opportunity to learn

through experience. Research (e.g., Gipe & Richards, 1992; Grant & Zeichner, 1984) has established that teacher reflection is an ongoing process enabling teachers to continually learn from their experiences. As Dewey (1933) stated: "To reflect is to look back on what has been done to extract the meanings which are the capital stock for dealing with further experience" (p. 87). Consequently, teacher education programs are more valuable if deliberate efforts are made to encourage reflection throughout the experience.

Despite the emphasis on reflection in teacher education, empirical work on reflective teaching is in its infancy (Roth, 1989). Early studies indicate that preservice teachers can be helped to develop their reflective capabilities (e.g., Richert, 1990; Roth, 1989; Ross, 1989). Through reflection, students take more control of and accept more responsibility for their learning about teaching. It is imperative that teacher educators "instill the norm of reflective teaching" and "introduce the requisite knowledge and skills to approach teaching in a reflective way" (Richert, 1990, p. 525). Our students must never be content to focus only on what <u>is</u> but must always consider what <u>could be</u>.

After piloting the use of electronic portfolios with twelve teacher education students during the 1998-1999 academic year, the School of Education at Northern State University began implementing electronic portfolio components into teacher education methods courses. The model used for electronic portfolio implementation solicited proposals from faculty members interested in integrating electronic portfolio components into their methods classes. Faculty received monetary compensation for the creation and integration of electronic portfolio components into their courses.

Each student-created electronic portfolio is original; portfolio components are designed to address one or more of the ISTE National Educational Technology Standards (NETS) and performance indicators for teachers. In addition, students must address each of the five categories of the knowledge base for teacher education at Northern State University: Knowledge of Self as an Individual, Knowledge of Content, Knowledge of the Learner, Knowledge of Pedagogy, and Knowledge of Self as a Teacher and Member of a Learning Community.

Knowledge of Self as an Individual recognizes the teacher's influence in the lives of students and emphasizes the importance of communicating effectively, building trust relationships, and setting positive examples. Knowledge of Content implies a broad understanding of the centrality of content knowledge for teaching, an ability to organize central concepts and principles of a subject matter, and a responsibility for acquiring new knowledge. Knowledge of the Learner focuses on an understanding of the growth and development of learners in the contexts in which development takes place and an understanding of how student diversity interacts with the learning process. Pedagogical Knowledge includes those principles and strategies necessary for effective teaching, including the planning, implementation, and assessment of instruction, classroom management and organization, knowledge of curriculum and instructional materials, and integration of technology. Knowledge of Self as a Teacher and Member of a Learning Community calls for a collaboration among teachers, students, and their families and communities that embraces diversity, promotes a positive sense of personal identity, and enhances the possibilities for academic success.

Electronic portfolios have been a part of the teacher education programs at Northern State

University for four years; current efforts have focused on assessment of the electronic portfolio process and product. Teacher education graduates are asked to complete a self-assessment survey of their technology expertise and their comfort level with technology integration. During their professional semester, preservice teachers showcase their electronic portfolios and receive feedback from university faculty members. Electronic portfolio components are then assessed to determine whether appropriate opportunities have been provided for students to meet the ISTE National Technology Standards (NETS) and performance indicators for teachers as well as the required program outcomes for teacher education graduates of Northern State University.

Johnson and Johnson (2002) believe that assessments must be meaningful and manageable. They define meaningful assessments as 1) being perceived by major stakeholders as having a significant purpose, 2) consisting of procedures that are clearly understood, and 3) providing a clear direction for increasing the quality of learning and instruction (p. 3). Manageable assessments "provide useful information with the expenditure of minimal resources" (p. 3).

Working as a team, selected teacher education faculty members began developing a rubric. Johnson and Johnson (2002) suggest that developing rubrics in teams "increases teachers' coorientation and ability to apply the same rubric in the same way" (p. 228). Creating a rubric is difficult and time-consuming; it often involves significant refinement and revision.

Following the parameters set by Kline (2002), faculty members began describing preservice teachers' performance along a scale of quality, with descriptors for each level of performance. Performance was seen as developmental, requiring the scoring of multiple performances and different tasks over time.

This presentation will focus on the data collected from the self-assessment surveys as well as the results of the electronic portfolio assessment. Specific components of original student-created electronic portfolios addressing one or more of the ISTE standards and meeting one or more program outcomes will be shared along with accompanying assessment tools, including the newly-developed holistic rubric.

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