

TITLE: Using e-portfolios to assess preservice teachers' achievement

PRESENTER: Dr. Constance Geier, Associate Professor of Education, Northern State University, Aberdeen SD

Preservice teachers at Northern State University have been creating electronic portfolios since 1999. The emphasis on technology integration in education in South Dakota prompted the implementation of an electronic portfolio requirement for all teacher education majors at NSU. The student-created electronic portfolios reflect the philosophy of NSU's teacher education program that technology should not be learned in isolation but should be experienced in the context of teacher education course work and applied throughout teacher education students' educational experiences. Research indicates that when technology is an "add-on" there is little or no transfer to the classroom environment. Teachers who feel comfortable with technology are better able to facilitate its use in the context of their curricula. Thus, the initial goal of the electronic portfolio was to serve as a tool for providing evidence of teacher education students' mastery of the ISTE National Educational Technology Standards (NETS) and performance indicators for teachers.

After viewing hundreds of electronic portfolios, teacher education faculty members recognized the tremendous reflective value of the electronic portfolio process as well as the unique capability of the electronic portfolio to showcase teacher education students' mastery of the program outcomes for teacher education graduates at NSU. During the summer of 2002, teacher education faculty members developed an assessment rubric that tied the fifteen program outcomes for teacher education at NSU with the ISTE National Educational Technology Standards (NETS) for teachers. Subsequent efforts focused on the refinement of the assessment rubric to ensure that it is a reliable and valid measurement tool with high inter-rater reliability. In addition, an intensive review of students' electronic portfolios provided insight into the areas where student mastery is strong as well as areas where students are falling below expectations.

Faculty members are responsible for guiding students' electronic portfolios. Students save their electronic portfolio components on a server dedicated to the electronic portfolio project; faculty are able to view and evaluate students' electronic portfolios on-line at three phases of their teacher education program: prior to admission to teacher education (Phase I), at the conclusion of the junior field experience (Phase II), and upon completion of the student teaching experience during the professional semester (Phase III). During the past year, the assessment rubric has been placed on-line, allowing faculty to assess teacher education students' electronic portfolios and provide feedback in an electronic format.

This on-line assessment data is collected and stored in a database, making it relatively easy to aggregate data for different purposes. The assessment data is currently used to track preservice teachers' progress throughout their teacher education program and to document their achievement at each of the three phases of their teacher education program.

Students' electronic portfolio ratings in each of six categories are tabulated; an analysis of the data reveals areas of strength as well as areas needing improvement. In addition, teacher

education students are asked to complete a survey instrument during each phase of their teacher education program. This three-phase survey reflects students' comfort levels in achieving the ISTE National Educational Technology Standards (NETS) for teachers. And, upon completion of their student teaching experience, teacher education students are asked to rate their proficiency with technology and their comfort level with the integration of technology into their lessons. An examination of proficiency survey data from the last three years suggests numerous areas of strength as well as several areas where students lack confidence in their skills and abilities.

There is currently a lack of research validating the electronic portfolio process and product. Data from the electronic portfolio assessment rubric, the three-phase survey, and the proficiency survey indicate that the electronic portfolio can, indeed, serve as a valid indicator of preservice teachers' mastery of the ISTE National Educational Technology Standards (NETS) for teachers. In addition, it appears that the electronic portfolio process and product have the potential to provide authentic assessments of teacher education students' mastery of program outcomes, as well.