

# Developing a Research Framework for Investigating the Transparency of ePortfolios

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**Abstract**—This paper describes the evolution of strategies to evaluate ePortfolios in an online Master’s of Education (M.Ed.) degree in Instructional Technology. The ePortfolios are required as a culminating activity for students in the program. By using Web 2.0 tools to develop the ePortfolios, students are able to showcase their technical skills, integrate national standards, demonstrate their professional understandings, and reflect on their individual learning. Faculty have created assessment strategies to evaluate student achievement of these skills. To further develop ePortfolios as a tool promoting authentic learning, faculty are moving toward integrating transparency as part of the evaluation process.

**Keywords**—e-learning evaluation, ePortfolios, transparency, Web 2.0

## I. INTRODUCTION

**P**ORTFOLIOS have been used for assessment in teacher education since the 1980’s. Research supports the use of portfolios for integrating theory and practice, as well as promoting self-assessment and reflection [5]. Portfolios provide quality strategies for authentic assessment that guide student reflection on their professional growth. Lorenzo and Ittelson [7] define an electronic portfolio as “a digitized collection of artifacts, resources, and accomplishments that represent an individual, group, community, organization, or institution.” Electronic portfolios provide a strategy to utilize the portfolio in a format that meets the changing needs of 21<sup>st</sup> century students. The Instructional Technology Master’s of Education (M.Ed.) degree at Georgia Southern University is offered completely online. As a culminating activity in the program, students are required to develop and present an ePortfolio. Chatham-Carpenter [2] identifies four major purposes to use ePortfolios: “to facilitate reflection on learning in a course/s, to showcase career skills, to aid in program review and assessment, and to showcase professional standards.” The ePortfolio assignment in the Instructional Technology program is an authentic learning outcome that demonstrates students’ mastery of program curriculum and technology skills. Eportfolios provide opportunities for reflection of professional growth, and demonstration of mastery of professional standards. Over time, the faculty in the Instructional Technology program have developed strategies that require students to utilize Web 2.0 tools for the construction of the ePortfolio and its associated artifacts.

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Currently, faculty are designing strategies to extend the evaluation of the ePortfolio to include transparency. Dalsgaard and Paulsen [3] define transparency as “students’ and teachers’ insight into each other’s activities and resources.” Dalsgaard and Paulsen [3] state “transparency means that you and your doings are visible to fellow students and teachers within a learning environment.” Because of the transparency of Web 2.0 tools, students have the opportunity to reflect on their own work in comparison with their peers. Poellhuber and Anderson [10] state that transparency allows “individuals to observe, compare themselves with, and emulate others.” Transparency seems to be particularly critical in the field of teacher education, where student artifacts can then be examined, adapted, and modified for use by other educators [6].

## II. CASE DESCRIPTION

The Instructional Technology Program at Georgia Southern University is designed with two separate professional tracks; one track focuses on skills required for leading schools as a technology coordinator and the other track leads to certification as a school library media specialist in the state of Georgia. The program of study in both tracks culminates with a field-based practicum experience course. The faculty in the Instructional Technology program have designed evaluation rubrics that assess student reflections, alignment of student artifacts with national professional standards, student use of Web 2.0 tools, and student presentation of portfolios. Faculty are invested in continuous development of student ePortfolios and as a result of current literature, are looking to use transparency to improve student outcomes. Students synthesize all of the technology skills gained throughout the program and demonstrate their ability to evaluate and reflect on their achievement of professional standards. In addition, many students use their professional portfolios as part of their job application process. Student feedback following the synchronous presentation sessions always identifies how powerful the students find the experience of both sharing their reflective portfolios as well as being able to participate in the public viewing of their classmates’ portfolios

## III. CHALLENGES

The Instructional Technology M.Ed. program at Georgia Southern University is offered in a 100% online format. Students in the program are seeking various technology-centered jobs including school library media specialist, K-12 technology coordinator, school district-level technology specialist, and technology specialists in higher education settings. The design and development of the culminating project, the ePortfolio, helps to extend students’ technology skills.

As faculty moved the program from face-to-face to online delivery of courses, various obstacles needed to be addressed. The ePortfolios were an especially challenging component in

the transition. Although the program utilizes a commercial learning management system, faculty wanted to insure that selected platforms provided flexibility for student projects. Criteria faculty used in the selection process included: the delivery system must be free, provide creative options for students, and give students ownership of their ePortfolios. As a result, faculty decided to utilize Web 2.0 tools for the ePortfolio activity. Houston [4] notes the critical importance of Web 2.0 technologies and skills in school library media practice in the 21<sup>st</sup> century, suggesting that preparation programs must implement and integrate these technologies into student learning activities.

#### IV. PHASE I-INITIAL ePORTFOLIO PREPARATION

Portfolios provide a valid approach to assessment of authentic performance [5], [9], [11]. The students collect artifacts throughout their program of study. In the past, the actual construction of the portfolio had been completed during the final field experience course. It became apparent that the initial design of the ePortfolio should begin prior to the field practicum experience. Subsequently, the ePortfolio initial design was assigned to another required course. This allows students the opportunity to reflect on the artifacts to include and develop their own skills in the development of the portfolio. Students are given examples of previous students' portfolios to gain an understanding of the "big picture." According to Bollinger and Shepherd [1], examining other students' portfolios also provides strategies for improving their own portfolios. Faculty continue to experiment with tools and strategies to improve the ePortfolio experience. Currently, students use Web 2.0 tools (wikis, personal websites, etc.) to create their portfolios. The presentations are synchronous and all observers are provided with live links that allow everyone to observe the ePortfolio components as they are discussed.

#### V. PHASE II – PRACTICUM

The practicum field experience is the last course in the Instructional Technology program of study. Students spend 16 weeks completing various assignments in authentic settings including school libraries, computer labs, and technology centers. As students complete various practicum requirements, they add the projects to their existing ePortfolios. Students are also required to add a blog of their practicum field experiences to their ePortfolios.

#### VI. PHASE III – REFLECTION

The National Council for Accreditation of Teacher Education (NCATE) serves as the national accrediting body for Colleges of Education in the United States. As such, NCATE provides standards specific to each area of initial certification. The Instructional Technology program at Georgia Southern University utilizes two sets of NCATE standards, AASL (American Association of School Librarians) and AECT (Association for Educational Communications and Technology), to guide the course content and program outcomes. The AASL standards guide the practice of school library media specialists and the AECT standards guide the

instructional technology track. During their practicum field-experience, students use the national standards to guide the organization of their ePortfolios. Artifacts are organized to demonstrate achievement of each standard. Students then prepare a written reflection describing how each artifact meets the matching standard. The reflective component of the ePortfolio is a key expectation for all graduates of the Instructional Technology program.

#### VII. PHASE IV – PRESENTATION

Lowenthal and Thomas [8] suggest that public performance is the cornerstone of "real world" learning. Students use Web 2.0 tools (wikis, personal websites, etc.) to create their portfolios. During the final week of the field-experience practicum course, students present their e-Portfolios to classmates and a team of program faculty. The presentations of ePortfolios are synchronous and all observers are provided with live links to follow along as students demonstrate their projects. This "public performance" requires students to identify the artifacts chosen for each standard, demonstrate the artifacts that indicate the greatest professional growth, and reflect on how they are meeting the required national standards. The ePortfolios become visible evidence of each student's skills in design of a reflective portfolio and their abilities to select and utilize a wide range of Web 2.0 technologies to communicate this to faculty and classmates. Research by Houston [4] has identified a significant disconnect between use of Web 2.0 tools in real media centers and the use of the same tools as part of formal, academic preparation programs.

#### VIII. FRAMING FUTURE RESEARCH

To determine the effectiveness of the next phase of the ePortfolio development process, faculty will survey students to identify how the peer review of ePortfolios contributes to student learning. Students will be asked to identify their original ePortfolio format and content. They will utilize the "history" function of their Web 2.0 tools to identify the original version of their ePortfolio. Students will evaluate various components (artifacts, national standards, key assessments, reflections, format, layout, navigation, and visual design) of the original version of their completed ePortfolio. Students will then complete a peer evaluation of three other students' ePortfolios. After completing the peer evaluations, students will have an opportunity to revise their own ePortfolios. The night of the final ePortfolio presentations, students will evaluate the final version of their own ePortfolio using the same criteria.

The ePortfolio design, development, and delivery process currently implemented at Georgia Southern University has produced high quality compilations of student learning. With attention to continuous improvement of student learning outcomes, the faculty have integrated an additional evaluation component to the ePortfolio assessment. During the spring 2012 semester, students are required to complete peer evaluation on classmates' ePortfolios, provide feedback to their classmates, and use the information to revise their own work. This strategy is intended to utilize transparency to

promote student outcomes. It is anticipated that incorporating an emphasis on transparency will result in increased level of performance among students. By observing their peer's ePortfolios, students will have the opportunity to compare their work to others in the practicum.

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