Learning and Assessment: The Application of ePortfolios

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The higher education community constantly seeks effective methods to evaluate student academic achievement and program learning outcomes. Many institutions in the new millennium have been embracing ePortfolios in various areas of higher education with multiple purposes of accountability, assessment, and support for learning. This paper examines the application of ePortfolios at Franklin University in enhancing transparency in learning and assessment in healthcare education. At Franklin University, four aspects of transparency in learning and assessment are identified for adult learners: relevance, visibility, accessibility, and scalability.

INTRODUCTION

How do we measure progress with the required competencies and knowledge necessary for students to be successful in healthcare education? How do we periodically assess the nature and levels of deficiencies to provide the needed scaffolding for the students? As educators, we are responsible for ensuring students are prepared for the complexities of managing in healthcare organizations. Furthermore, to become a recognized accredited program, the Commission on Accreditation Healthcare Management Education (CAHME) specifies, in its accreditation criteria, programs will monitor, document, and measure student competencies and knowledge, using "a range of assessment methods…" (CAHME, 2011).

Specifically for these and other reasons discussed in this article, learning tools such as electronic portfolios are gaining acceptance by healthcare educators. Electronic portfolios, or ePortfolios, "digitized collection[s] of artifacts including demonstration[s], resources, and accomplishment[s]," are used as administrative tools, a source of individual reflections, a platform for exchange of ideas, and a channel for feedback (Lorenzo and Ittelson, 2005). In addition to reinforcing student learning, ePortfolios promote transparency in the learning process by facilitating visibility of learning and formative assessment. Students can electronically present various artifacts reflective of their learning experience to a variety of stakeholders (Hassell, 2008).

This paper will address the role ePortfolios play in the learning and assessment process, and how one educational institution proposes to use ePortfolios to promote student learning and measure competencies and knowledge for students in healthcare management.

TRANSPARENCY IN LEARNING AND ASSESSMENT

The concept of transparency in learning and assessment is a newly introduced concept in academia. Historically, transparency has been a term used in human-computer interaction. Working on a socially guided machine learning project, dePalma (2010) described transparency as a "mechanism[sic] that allows the user to peer into the internal working state of the machine and provides the ability to modify that state," or make the learning process visible and accessible for modification.

Transparency in Learning

Transparency in learning is not a given, especially in distance education. With distance education, students work mostly online and in most cases, asynchronously. Thus, the quality of their interaction with the material, the level of learning engagement, and their on-going learning activities are not easily monitored and assessed by professors and peers. As a result, a growing body of research supports a purposeful, transparent approach to learning (Gillespie, 2002). Our understanding of transparency in learning is characterized by:

- *Relevance*: Learners are provided information on the relevance of the content knowledge and the teaching methods. In other words, learners are informed how and why they are learning certain knowledge in particular ways.
- *Visibility*: Learning is visible to learners and educators. We interpret learning as an extended growth in acquisition, comprehension, application and creation where both the process and the products, are perceivable to learners and educators.

Transparency in Assessment

After reviewing 20 years of quality assurance in higher education in the U.S., Peter Ewell (2010) concluded that accreditors had previously been "ineffective precisely because their operations were deemed 'secretive' and provided little information…" He refers to transparency in assessment as the full disclosure of the results of quality reviews. Our understanding of transparency in assessment goes beyond the disclosure of results to include evaluation. To be effective, transparency must be:

- *Accessible*: Learners must have access to the review results and access to the assessment process. Internal and external evaluators must have access to products (various aspects of student learning achievements) and to the learning process (extended view of growth in acquiring, comprehension, application and creation).
- *Scalable*: The assessment model must scale to the demands of the current education environment to conduct evaluations at different levels: individual, programmatic and institutional.

ePORTFOLIOS

Evolved from traditional portfolios, many institutions in the new millennium have been embracing electronic portfolio systems in various areas of higher education with multiple purposes of accountability, assessment, and support for learning. Thus far, there have been no statistics collected to record the number of higher education institutions using ePortfolios; however, a glimpse into the usage of several ePortfolio platforms gives us a general idea of the popularity of ePortfolio in teaching and learning.

Up to 2010, over 500 colleges, universities, and higher education organizations used LiveText (a closed source ePortfolio system) to measure and evaluate student learning (www.livetext.com). Launched as an open source effort in 2006, Mahara, a free and open ePortofolio system, has been adapted by a similar number of institutions (www.mahara.org). These institutions, as Strudler and Wetzel (2005) predicted, implemented portfolios for three main reasons: (a) to identify areas that need improvement, (b) to demonstrate the alignment of curriculum and student outcomes with state and national standards, and (c) to make learning visible. The latter two purposes, making learning visible and aligning it with

assessment efforts, tie closely to the notion of transparency in learning and assessment. These concepts will be elaborated on in the sections that follow.

ePortfolio as a Tool to Support Transparency in Learning and Assessment

Various efforts have been carried out to promote transparency in learning and/or assessment. The Illinois Initiative on Transparency in Learning and Teaching constructed a five-year plan (2009 to 2014) to engage a broad range of community colleges and universities in different modes of transparent learning and teaching. These modes included: shared class planning and agenda construction; assignment learning goals and design rationale; real-time, in-class assessment of student understanding; explicitly connected learning data with course activities; and defined grading practices and criteria (IITLT, 2009).

Electronic portfolios offer features for nurturing individual learning, implementing formative assessment and holding the student accountable. In addition, we believe it is a powerful instrument for embracing transparency in learning and assessment through:

- *Relevance*: ePortfolio allows learners to connect their own learning journey and learning achievements to certain learning outcomes for assessment. This purposeful action makes learning and assessment meaningful and relevant to learners.
- *Visibility*: ePortfolios document the on-going learning activities as digital trails. These trails include learning products/achievements and learner self-reflections, all of which can serve as the basis for assessment and tracking learner behavior.
- *Accessibility*: ePortfolios provide access to members of the learning and assessment community: learners, educators, and internal and external evaluators. The portfolios have the ability not only to provide access to the end-products (learning achievements and evaluation results), but also to provide access to the learning and assessment process.
- *Scalability*: ePortfolios offer the functionality to conduct assessment at different levels. They can diagnose the progress of an individual learner, target a particular group focusing on one or more learning outcomes, and identify, at the program level, the qualities of learning and gaps in outcomes.

FRANKLIN UNIVERSITY

To understand the need for transparency, the way ePortfolios will be used, and how they will inform learning and assessment practices, it is important to understand the institution and programs where they will be implemented. Located in Columbus, Ohio, Franklin University has served the higher educational needs of central Ohio for over 100 years. Accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, and the International Assembly for Collegiate Business Education (IACBE), Franklin University is a not-for-profit leader in adult education ascribing to the following principles:

- ensuring academic quality;
- providing student access to educational opportunities;
- adapting to the needs of students; and
- responding to changes in society, professions, and the business community (www.franklin.edu)

Annually over 11,000 students attend Franklin University. The University's student body is diverse in culture, background, and experience. The average age of the undergraduate student is 32 years, and the average age of a graduate student is 36 years. Students participate in classes from across the United States and around the world via face-to-face and online courses.

Franklin continually seeks new ways to provide educational opportunities to busy, working adults and it would only seem appropriate that an ePortfolio tool would meet the needs of the students, the University, and the MHA Program.

Healthcare Majors at Franklin University

The Health Department at Franklin University is part of the College of Health and Public Administration. Currently there are over 600 students enrolled in three on-line undergraduate healthcare majors:

- Allied Healthcare Management-a degree completion program.
- Healthcare Management-a traditional degree program.
- Healthcare Information Systems Management-a traditional degree program.

The Healthcare Management major is an Associate member of the Association of University Programs in Healthcare Administration and a member of the Higher Education Network of the American College of Healthcare Executives. An RN-BSN program is scheduled to start in the winter of 2012 and a Master of Healthcare Administration program in the summer of 2012. A Master of Science in Nursing is slated to start in 2013, and a Master of Public Health in 2014. All of the above programs are, or will be, totally on-line with the capability for offering face-to-face classes.

The Master of Healthcare Administration Program

During the recent economic downturn the healthcare industry has been one of the few bright spots in terms of employment. Regionally in central Ohio, major healthcare employers have announced significant expansion programs which will create thousands of healthcare positions. As this planned expansion continues, there will be the need for more healthcare managers to lead both expanded existing and new programs. The Department of Labor indicates healthcare management positions will grow faster than the average management position in the future (www.dol.gov). As a result of this growth, the undergraduate healthcare management programs have experienced a sixty (60%) growth in enrollment over the past three years.

Program Description

The Master of Healthcare Administration (MHA) at Franklin is intended to provide the student who wants to excel as a leader in the delivery of healthcare services with a broad conceptual understanding of the healthcare industry and who recognizes the importance of life-long learning and career development.

The Program will focus on working managers and professionals from a variety of disciplines who have 3-5 years of managerial experience in the workplace. As such, it is designed to provide students with a learning environment that integrates individual student perspectives from a variety of healthcare settings and other sources. The Program is also intended to prepare these individuals to lead and manage by bringing together healthcare management theory and practices in a business model.

Curriculum Design

All courses are designed to be applicable to diverse environments and healthcare settings. Learning methodologies include case studies, lectures, team projects, and culminate in a portfolio capstone project. The curriculum will be delivered using a blended system, with two one-and-a-half day on-site sessions during the course of the program. Forty credit hours in an eighteen (18) month cohort environment are required for graduation.

Program Learning Outcomes and Competencies

The MHA Program has adopted a competency based model which reflects the competencies and skill sets established by the National Center for Healthcare Leadership (NCHL) (www.nchl.org). The MHA model comprises three (3) areas and twenty-six (26) competencies relevant for graduate study: leadership, management, and problem-solving (see Appendix A).

The Leadership area includes those competencies required to help students make decisions, motivate others, and manage change. The Management area includes those competencies necessary for optimizing the management of healthcare organizations, while Problem-Solving competencies provide students with those skills necessary to achieve tangible and long-lasting organizational results.

The MHA learning outcomes incorporate Bloom's Taxonomy of Education to reflect different aspects of cognitive learning:

- At the knowledge level-recognize and articulate facts, concepts, and procedures related to healthcare administration theories and practices.
- At the comprehension and synthesis levels-integrate healthcare administration theories, principles, and practices for future application.
- At the application level-systematically apply communication, technical, analytical knowledge, and critical thinking skills to administrative and clinical healthcare related problem-solving.
- At the analysis and evaluation levels-evaluate the effectiveness of plans, development, and implementation of healthcare administrative solutions.
- At the creative level-design and create solutions to address and solve societal, cultural, and environmental healthcare issues.

THE ePORTFOLIO INITIATIVE AT FRANKLIN UNIVERSITY

As stated previously, the majority of Franklin University students are adult learners. Cercone (2008) identified one of the prominent characteristics of adult learners as having the "need to be active in the learning process." The practice of transparency in learning and assessment makes the cognitive learning process visible to both evaluators and students. More importantly, it makes the associated assessment visible enabling students to identify successes and deficiencies and make adjustments accordingly. Another characteristic identified adults' "need to self-reflect on the process of learning for transformational learning" (Cercone, 2008 p. 23). Self-reflection is a way to make the inner cognitive process visible. ePortfolios have been recognized for their ability to support the learner's self-reflection. The adult learner also "requires a climate that is collaborative, respectful, mutual, and informal" (Hassall, 2008). Such an environment can be created using ePortfolios to promote periodical and formative evaluation.

Assessment at Franklin University is an ongoing, faculty-driven process aimed at helping Franklin understand and improve student learning. Efforts are directed toward the improvement of institutional effectiveness and have evolved to be not only thorough and comprehensive, but also manageable and effective. Guided by conceptual discussions on transparency in learning and assessment, ePortfolio will be used in the MHA program to review, understand, facilitate, and evaluate the learning of a student over a period of time. The use of ePortfolio will also include program outcome evaluations by internal and external reviewers. The use of the ePortfolio will serve three purposes:

- *Learning*: To facilitate transparency in learning by providing visibility of an individual's learning and supporting relevant learning.
- *Assessment*: To facilitate transparency in assessment to support internal and external reviews. For internal review, it allows for an extended view of growth in learning, understanding, and application. It also allows for an extended view and assessment of the process as well as the product. For external review, it allows for external assessors, evaluation panels, employers, and accrediting bodies, to have access to the students' product. For accreditation, the culmination of the students' portfolios can provide strong evidence they have met the competencies established by the program.
- *Curriculum*: To use portfolios to enable program faculty to broaden their curriculum to include areas they traditionally could not assess such as leadership and communication and to base their design/re-design of courses on the evidence ePortfolios collect.

The ePortfolio assessment will assess six aspects of the MHA program including communication skills, managerial skills, leadership skills, etc. Each assessment area and evaluation effort will be tied to each course to facilitate and collect evidence. The portfolio assessment structure is illustrated in Table 1:

TABLE 1
ePORTFOLIO COMPONENTS: ASSESSMENT AREA AND COURSES

Assessment Area	Courses
Communication Skills	MBA 713-Human Resources
Managerial Skills	MHA 735-Healthcare Delivery Systems MHA 762-Global Health MHA 735-Healthcare Delivery Systems
Leadership Skills	PSYC 603-Managerial Psychology MHA 742-Health Law and Ethics
Business Planning & Management	MHA 772-Healthcare Strategic Management MHA 752-Health Policy
Quantitative Knowledge	MBA 733-Financial and Managerial Accounting MHA 745-Healthcare Financial Management
Assessment of Healthcare Education Experience	MHA 772-Healthcare Strategic Management

The portfolio will be built, facilitated, and evaluated throughout the program. The students will meet on-site twice during their study in the MHA program. Part of these face-to-face meetings will be used for portfolio building and evaluation purposes.

CONCLUSION

Along with students, there are many stakeholders expecting healthcare management programs to provide graduates with the necessary knowledge and competencies to be successful in their careers. Franklin University proposes to use ePortfolios for both learning and assessment its Master of Healthcare Administration Program. The Program plans to gather data and results over a period of time to assess the efficacy of such portfolios as a truly effective learning and assessment tool in healthcare administration. Results will be shared periodically through professional associations and professional social media reporting.

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APPENDIX: A

TABLE A1
ePORTFOLIO: STRUCTURE AND EVALUATION CRITERIA

Areas	Outcomes/Competencies	Actions Related to Outcomes/Competencies	Sample Artifacts
Learning Outcomes	Outcome 1. At knowledge level, recognize and articulate facts, concepts, and procedures related to healthcare administration theories and practices.	Take all MHA program required courses and receive a grade of B or above for each course.	A diagram that illustrates the MHA courses student has taken and the grades received.
	Outcome 2. At comprehension and synthesis levels, integrate healthcare administration theories, principles, and practices for future application.	Categorize different healthcare management theories, principles, and practices.	An assignment to compare and contrast different healthcare management theories, principles, and practices. A learning activity to identify trends and patterns of certain healthcare management practices.
		Prioritize healthcare management practices in terms of the healthcare organization's needs.	
		Compare and contrast different healthcare management theories, principles, and practices.	
		Summarize different healthcare management theories, principles, and practices.	

	Outcome 3. At application level, systematically apply communication, technical, and analytical knowledge, and critical thinking skills to administrative and clinical healthcare related problem-solving.	Interpret administrative and clinical healthcare problems or situations.	An interview with a healthcare professional designed to help students translate healthcare management theories, principles, and practices into reality. A real life case study to identify an administrative or clinical healthcare problem or situation and to provide possible solutions.
		Practice communication, and technical and analytical knowledge and skills in simulated or real administrative and clinical healthcare situations.	
		Modify healthcare systems to meet the organization's needs.	
	Outcome 4. At analysis and evaluation levels, evaluate the effectiveness of plans, development, and implementation of healthcare administrative solutions.	Break down the components of a plan, the development of processes, or the implementation procedures of health admin. system solutions.	A case study to breakdown and examine the different components of a plan, develop processes or implementation procedures for healthcare solutions. A learning activity to critique/justify the effectiveness of the plans, develop processes or implementation procedures for healthcare solutions, and predict the impact or problems a new system will bring to a healthcare organization.
		Examine the different components of a plan, development process or the implementation procedures of health information admin. solutions.	
		Critique/justify the effectiveness of plans, development, and implementation of health admin. system solutions.	
		Predict the impact or problems a new system will bring to a healthcare organization.	
	Outcome 5. At creation level, design and create solutions to address and solve societal, cultural, and environmental healthcare issues.	Plan the work process to identify and address healthcare issues.	A learning activity or real life project to identify societal, cultural, and environmental healthcare issues, and provide solutions to address these issues; to evaluate the efficiency of the solutions and their impact on the organization and the community; and to justify the solutions based on the results of the evaluation.
		Conduct needs analysis to identify stakeholders and their interests, policy/ requirements etc. regarding societal, cultural, and environmental healthcare issues.	
		Develop a solution or solutions to address societal, cultural, and environmental healthcare issues.	
		Evaluate developed solutions on their efficiency and their impact on the organization and the community.	
		Justify the solutions based on the results of the evaluation.	
Areas of Competencies	The Leadership area includes those skills required to help individuals make decisions, motivate others, and manage change.	• Accountability • Change leadership • Collaboration • Communication skills • Impact and influence • Information technology • Relationship building • Self-confidence • Self-development • Team leadership • Community orientation	A team project during which the student demonstrates the identified leadership skills. A real life project in which the student is a change agent in their organization.

	The Management area includes those skills necessary to optimize the management of healthcare organizations.	• Organizational awareness • Performance measurement • Process management • Organizational design • Project management • Human resources management • Interpersonal understanding • Professionalism • Talent development	A learning activity in which the student demonstrates the identified management skills.
	The Problem-solving area is intended to provide students with those skills necessary to achieve tangible and long-lasting organizational results.	• Analytical thinking • Financial skills • Information seeking • Innovative thinking • Initiative • Achievement orientation • Strategic orientation	A learning activity in which the student demonstrates the identified problem-solving skills.