

Planning Portfolios: Authentic Assessment for Library Professionals

Carol A. Brown, Assistant Professor of Librarianship, Educational Technology, and Distance Information, East Carolina University and Robin Boltz, School Library Media Specialist, Creedmore Elementary School, Granville County, North Carolina

Portfolios provide authentic measures that give a vivid picture of a person or program. The final product is unique to the creator and the institution that assigns it. In preparation for implementing portfolio assessment in the Master of Library Science program at a regional university, a careful review of schools requiring portfolios was conducted to identify commonalities among programs. Analysis of documents available at Web sites were carefully examined for the following characteristics: portfolio required or optional; required reflective writings; artifacts aligned with state and national standards; artifacts aligned with program objectives; evaluation rubrics provided; evaluation by reviewing committee; periodic review with an advisor; and statement of main goal or purpose for the portfolio. Following this review, it was determined that at least fourteen ALA-accredited programs use portfolio assessment for evaluation of student performance in their library program of studies, the majority of which are in school library media. The common characteristics include: artifacts aligned with state and national standards, required written reflections, and faculty advisors to mentor students through the process. Following the first year of portfolio assessment in our program, we have concluded that the continual process of self-examination, comparison to standards, and personal assessment of students' products provided rich learning experiences aligned with program goals and objectives.

Research in learning and cognition provides ample evidence to support the need for students, at all levels and disciplines, to relate new concepts and skills to personal life situations. If methods of teaching are authentic, then it is reasonable to expect authenticity in evaluation of outcomes. Portfolios for assessment of student outcomes, as well as program evaluation (Gredler 1995), provide authentic measures that give a vivid picture of a person or program. The final product is unique to the creator and the institution that assigns it. In addition, the portfolio provides tools for learning and self-evaluation. The student must continually assess his or her progress using national, state, and institutional standards for excellence. The student is constantly collecting and justifying the selection of evidence in support of his or her learning. Benchmarks, rather than pop quizzes, provide the incentive for engaging in the learning process, thus development of appropriate criteria for evaluation should be the first step in the authentic assessment of learning.

Review of the Literature

Portfolios in Other Professions

Many professions have embraced the authentic measure of assessment. In medicine, assessment focuses on performance and abilities as applied to the field of practice. Routledge and Wilson (1997) report plans for medical students to keep a learning diary in which they will record critical incidents, reflection on these experiences, bibliographies of learning resources, and projections for professional growth related to future medical practice. In Great Britain, the National Council for Vocational Qualifications (Wolf 1998) has foundational requirements for combining theories of learning with competencies for certification. The portfolios are criterion-referenced with an emphasis on outcomes of student learning. Portfolio requirements include, “authentic reflections of workplace practice, and should also be highly standardized so that any employer knew exactly what a particular award-holder could do” (413). At the University of Washington, the technical writing skills for engineering students are assessed through the use of portfolios for several reasons. First, assessment of student products provides insight in the effects of the curriculum both inside and outside the engineering program of studies. The writing process cannot be thoroughly evaluated using pre- and posttests. In addition, a true measure of progress is best obtained over the entire training period at the conclusion of a student’s program. Certainly, neither multiple choice tests nor impromptu writing samples provide a true measure of students’ higher order thinking and transfer of learning (Scott and Plumb 1999). At Auburn University (Meadows and Dyal 1999), professionals in the field of school administration document professional growth by providing evidence of theoretical and practical knowledge that is acquired throughout their program in educational leadership. Students see their portfolio as “organized, goal-driven documentation of their professional growth and achieved competencies” (306).

Portfolios in Education and School Library Media

While accomplished teachers are gaining a new level of professionalism through the National Board for Professional Teaching Standards (NBPTS), preservice and initially licensed teachers use INTASC standards for documenting best practices in their classrooms (Bullock and Hawk 2001). NBPTS and Performance Based Licensure (PBL) begin the assessment process by requiring written commentaries and supporting artifacts. The candidate must continually be engaged in reflection and self-assessment related to his or her professional practice. Both sets of standards require substantive evidence that reflect effective teaching in K–12 classrooms.

National Board Certification for School Library Media is available for the first time in 2001–2 (SLJNews 2001). Candidates must prepare a portfolio of professional activities that demonstrate effectiveness in three main areas of competence—what the accomplished school library media specialist should know, what the school library media specialist should do, and how the accomplished school library media specialist should grow professionally. To be effective in the library field, the school library media specialist must demonstrate knowledge of learners, the learning environment, and principles for the effective integration of the library program into the entire school curriculum. There must be evidence that the media specialist uses collaborative strategies for the integration of literacy skills into the school curriculum with equitable access for all students and staff. There also must be evidence that the school library media specialist grows professionally through reflective practices, activities for lifelong learning, and support of community partnerships to promote the library program. A portfolio of documents and videotapes supporting these practices is compiled over a year. Assessors examine these evidences in the form of student products, videotaped lesson presentations, and documents related to the administration of the library program. A reflective statement that provides a

rationale for selection of each artifact as evidence must be included. Assessors examine how well the candidate relates theory to practice in the written reflections.

Professional support personnel are not always evaluated with reliable assessment instruments. School counselors, psychologists, curriculum specialists, and school library media specialists are evaluated with the same appraisal instruments as the classroom teacher. For professionals on the periphery of the classroom, administration of a program, service to other teachers, and the outreach to the community may not be evaluated as part of their professional duties. Helms (1994) recommends consideration of three major criteria when evaluating portfolio submissions for school counselors. The content, design, and presentation of artifacts should be appropriate and relevant to the task. Artifacts representing administrative, service, and teaching duties should be reviewed using reliable and valid instruments that show a true measure of performance. One important advantage in the use of portfolios is that professionals, such as the school library media specialist, are able to document their own progress rather than depending on someone else to accurately report on their mastery of competencies. This multidimensional appraisal of achievement adds opportunity for both learning and teaching.

Commeyras, DeGroff, and Stanulis (1997) gathered data from a national survey sent to literacy professionals in education. Included in the sample were classroom teachers and school library media specialists. From their study, it was apparent that teachers had a head start in the use of portfolios as a tool for teaching and learning. Nearly twice as many teachers (94 percent) as library media specialists (41 percent) reported having experience with portfolios, and 22 percent of the media specialists responded they had “no interest in portfolios” (32). Yet, NBPTS clearly applies the use of portfolios for both professional growth and assessment of job performance. The newly generated standards for the school library media specialist adds to the value placed on portfolio assessment for the library teacher.

Latrobe and Lester (2000) reported the use of portfolios in the master’s program for library and information science (LIS) at the University of Oklahoma. State mandates for the use of portfolios in teacher preparation programs resulted in implementation of portfolio assessment in the LIS program. At the time of their report, few schools of library and information science had included portfolios for either formative or summative assessment. Since that time, at least fourteen schools have officially included the performance or showcase portfolio as a requirement for their program (ALA 2002). The majority are for programs in school library certification.

Contents of the Portfolio

There are three main types of portfolios: process, product, and showcase (Bullock and Hawk 2001). A process portfolio can be in several formats since it is mainly a collection of artifacts that represent an ongoing project such as an internship in a public or school library. The product portfolio is a collection of evidences that show mastery of predetermined competencies. Each artifact within the portfolio provides evidence that an indicator of professional performance has been achieved. Alignment of artifacts to indicators is very important for the product portfolio. The showcase portfolio is a collection of best practices or products. For example, the executive summary for a partnership grant between the library and a local community center would be appropriate for a showcase portfolio. The term “presentation” portfolio may also be included and is very similar to the showcase portfolio (Campbell et al. 1996). Presentation portfolios are often used for job interviews. Components for any of these main categories are dependent on the

purpose (evaluation, job seeking, document professional growth), the audience (program faculty, school principal), evidence (documents, multimedia, Web sites), and reflections (rationale for artifact selection, alignment with standards). Most professional portfolios also include a statement of professional philosophy (Murray 1997; Nettles and Petrick 1995). One's personal philosophy is rooted in deeply held convictions, thus documents supporting those beliefs should be consistent throughout the portfolio.

Format for the Portfolio

Portfolios may be organized within a three-ring binder, burned to a CD-ROM, or published as an HTML file to a Web server. Wilcox and Tomei (1999) developed a model using two formats—the smart portfolio which contains a collection of artifacts in both paper and electronic format and the intelligent portfolio, a digital format that makes the best use of file directories and software with linking capabilities (61).

Electronic portfolios have all the advantages of traditional paper portfolios with the added enhancements of portability, storability, and more flexible creativity on the part of the creator. Barrett (2000) developed a model with five stages in the electronic portfolio development process: (1) defining the portfolio context and goals; (2) collection of artifacts and archiving them in electronic folders for each standard; (3) review of reflective statements written for each artifact and elaborating on the purposes for inclusion; (4) conversion of all artifacts to either PDF or HTML files with linked goal statements, work samples, rubrics, and reflections. One distinct advantage for the e-portfolio is presentation in one or more media before an audience (usually the reviewing committee).

Assessment of Portfolios

Traditional assessment methods are usually isolated events that measure students' mastery of concepts and skills at specific points along an instructional timeline. These events could be few in number, randomly administered, or occur as a solitary culminating examination. Authentic assessment differs in both the timing of administration and method for scoring of student responses. Instead of testing students at discrete, isolated points, assessment occurs in sync with students' learning experiences. In addition to timing, students have some freedom to select a product that best represents what is considered a correct answer. Because standards and objectives are clearly part of the instructional program, students have multiple opportunities for reaching mastery of a particular skill or concept. As part of the formative assessment of student products, checkpoints allow students to reflect on how closely their performance matches the standard, receive guidance from faculty, and revise the product to satisfactory level of competence (Airasian and Abrams 2000). Following a series of formative checkpoints, the culminating experience should be the summative evaluation for the entire total portfolio.

In addition to the selection of standards, the task of choosing which indicators to include is as important as determining which test questions to construct and include in a criterion paper and pencil test. Many service professions, like teaching or library services, require a complex set of behaviors and attitudes (Bullock and Hawk 2001). Levels of competence for these behaviors may be identifiable only through observation in an authentic setting. For example, the reference interview is uniquely tied to the setting and the individuals involved in the search for information. It would be difficult to develop a criterion or "normatively referenced paper and

pencil test” that would be a reliable measure of competence for this type of skill. Thus, indicators should be assigned to each level of competence for a valid measure of the student’s performance.

Another important consideration when designing the rubric is determining the number and designation of scales (Koch and Schwartz-Petterson 2000). When using one to three levels for each category, self-evaluation becomes more restrictive and lacks the precision that is afforded with five or more levels of performance. If the rubric is constructed to include five to six levels, the assessor’s job is more difficult because of added details needed to analyze each artifact. When using five levels, there is the danger of the assessor’s overuse of scoring within the “safe three” or middle of the scale level for every artifact (6).

How the Study Began

With increased use of portfolios for authentic assessment in education, it seems reasonable that school library media specialists should be prepared to model the development of portfolios for self-evaluation and as a means for continuing professional development. The responsibility for preparing the school library media specialist in the use of this method for authentic assessment lies with professional schools, which must train and develop professionals to reflect on their activities for resource management, teaching, and administration of the library program. The question, then, for this study, is what are the common properties occurring in library programs using portfolios as a measure of competence? Are there commonalities that would suggest a better method for program, as well as, student evaluation? And last, what methods can be used to successfully implement summative and formative portfolio assessment as an exit requirement from programs of study?

In the spring of 2000, East Carolina University’s Department of Librarianship, Educational Technology, and Distance Instruction examined the rationale for using portfolios for evaluation of student performance in the field of librarianship. Because the majority of students enrolled in the program were in the school library media track, the program coordinator and faculty agreed to adopt the authentic assessment measures accepted by programs in teacher education. By investigating other library programs, the department hoped to identify characteristics that were commonly included in portfolio requirements and methods of evaluation. In addition, outcomes from the project in development of e-portfolios would be examined and evaluated based on the program’s goals and objectives.

Research Method

The investigation began with an analysis of Web sites within two areas of certification: (1) all programs holding accreditation with the American Library Association (ALA); and (2) selected programs in school library media certification available through schools of education holding National Council for Accreditation in Teacher Education (NCATE) accreditation. Documents available on Web sites were carefully examined for the following characteristics:

- portfolio required or optional;
- required reflective writings;
- artifacts aligned with state and national standards;
- artifacts aligned with program objectives;
- evaluation rubrics provided;

- evaluation by reviewing committee;
- periodic review with an advisor; and
- statement of main goal or purpose for the portfolio.

Two reviewers examined each document. A pattern for common characteristics emerged as the reviews were completed, compiled, and summarized. In instances where requirements were not available online, program administrators were contacted and requirements were obtained by mail.

Following the review of major characteristics for each program using portfolio assessment, a more in-depth analysis of each program revealed commonalities among goals, format, and evaluation criteria. Using the most common elements across programs, a proposal was developed for a special topics course for the purpose of guiding students through the portfolio process. At the end of the semester, open-ended surveys were administered. Students responded with feedback on the usefulness of the course, concerns for development of their portfolios, and their final evaluation. Data from the surveys were compiled and summarized and the information used for revisions and recommendations for East Carolina University's program in library science.

Results and Discussion

Online program descriptions for fifty-three institutions of higher learning were examined. Analysis of the available documents revealed fourteen programs with comprehensive portfolio requirements or options. Although there was some overlap in goals for the use of portfolios, three main categories emerged: (1) those that focus on mastery of professional standards; (2) those which demonstrate success during field work or course assignments; and (3) those which are designed to support the student in organizing material for job seeking. Professional standards in the portfolios are generally derived from competencies recommended by the American Association of School Librarians (AASL). Many programs housed within a school of education, used state teacher standards as a measure of competence. Of the fourteen schools with optional or required portfolios, five programs could be identified as having periodic reviews with a program advisor, seven indicated that reflective writings must connect artifacts with goals or standards, and nine schools had a formal evaluation process with a reviewing committee. While some programs clearly required alignment of artifacts with standards or program goals, many of the library programs only required reflection on how artifacts support the candidate's professional and personal goals. An in-depth analysis of portfolio requirements revealed several common elements for evaluation. Table 1 provides a summary of requirements and method of evaluation for each of the fourteen schools investigated.

Table 1. Analysis of ALA Accredited Schools with Portfolio Requirements

School	Contents	Format	Evaluation
Clarion University of Pennsylvania	Collection of documents that include: resume; clearances; evaluations by administration; recommendations; exemplary unit/lesson plans; evidence of school community service, such as grants, committees, school groups/activities that	Paper format	A statement demonstrating that all of the roles delineated in <i>Information Power</i> are being/will be met by the candidate.

	librarian sponsors, etc.		
Emporia	Reflecting essay: artifacts represent achievement of program goals.	Digital format stored on disk.	Endorsement by certifying committee 1 hour credit course required
Indiana University	For PhD. candidates in Library and Information Science: Table of Contents with professional goals Sample products with annotations Summary of portfolio with plans for reaching future goals	Print format, audio/visual, video, or electronic	Review by Doctoral Steering Committee. Annual progress review until dissertation defense.
Southern Connecticut	Summary of special project Matrix showing relationship between program and professional development (SAILS) Resume Description of field experiences	CD ROM	Variety of documentation from special project must be included. At least 5 – 9 concepts and skills from coursework applied to projects. Portfolio submitted and reviewed last semester before graduation. No evidence of checkpoints prior to final semester.
Syracuse University	For the purpose of job interviews, candidate compiles documents related to practicum experiences	Paper format with annotated outline	Seven competency areas to serve as framework for the portfolio. To be used in job interviews.
Texas Womans' University	Expanded resume with work samples Professional agenda Plan for continuing professional development	Paper format	Evaluated by examining committee. Pass/fail for: Resume Work samples with skills products and research/theory projects. 5 year goals plan
UCLA	Self-assessment of goals statement Examples of work: core courses, electives, and thesis	Paper format (multi-media may be submitted as extra)	Panel of three evaluates: Cumulative accomplishments Significant learning

	Record of advising history Resume Supporting documents		Documentation of how program has contributed to achievement of career goals Professional development course optional
University of Colorado at Denver	Reflection letter Resume Minimum of 3 products related to program competencies Master's project	Paper format, video, CD ROM, or digital stored on disk.	Three-member faculty committee. Overall presentation (appearance) Design (all formats) Organization (accessible) Candidate must provide rationale that relates portfolio to personal goals and these to program goals. 3 hour credit course recommended at end of program
University of Illinois Urbana-Champaign	Contains documents with: Background information, evidence of professional growth through class experiences, practicum, and student teaching documentation.	Paper format	Submitted with extensive documentation at the end of final semester. Evidence must demonstrate progress toward meeting state teaching standards and program requirements for MS/LIS degree.
University of Kentucky	Collection of documents including entries that are aligned with state teacher standards, a matrix with new and experienced teacher standards, rationale for each entry or artifact, and personal philosophy of education	Paper copy and electronic copies with videotapes and multimedia presentation	Checkpoints at entry, midpoint, and before graduation. Must include evidence for both state teacher standards and competencies recommended by AASL.
University of Missouri Columbia	Professional Development Plan: goals/objectives and projects/activities; written reflections via email to advisor; informal appraisal by mentoring school media specialist	Paper format and email communications	Within Practicum course. Evaluation by school mentor. Final grade assigned by faculty member serving as practicum director. Objectives within the PDP must be measurable and include

			timelines, plans of action and strategies for achievement.
University of North Carolina Greensboro	Collection of documents that include: Resume/vita; philosophy of librarianship; plan of growth; teaching license (for school library); internship report; computer skills competencies; professional activities; completion of 4 core courses	Paper format	1-hour independent study. Faculty advisor meets with candidate during the “capstone experience”. Checklist is approved. 1-hour credit course required at end of program.
University of Oklahoma	Compilation of coursework, personal reflections, and self-evaluation. Includes tangible evidence of abilities as these relate to competencies defined by AASL	Three ring binder (Paper format)	Advisor and subcommittee of 3 faculty. Evaluates mastery of professional competencies. Ongoing reflection of change in library philosophy as a result of the program; and statement of plans for continuing education.
University of Washington	Documentation for five categories: Teaching or training; leadership; practical or service experience; design and development of technology product; presentation of document for intellectual development	Multimedia, video, or suitable format appropriate for the product(s)	Evaluated by advisor and one other faculty member. No established criteria. Informal recommendations provided by one faculty member's Web page.

The information was gathered from online descriptions available through university Web sites. Of the programs reviewed, there was evidence of six with a reviewing committee to evaluate and assign final approval for the candidate’s product. Five of the programs required evidence to show a minimum number of program goals had been achieved. Two programs required the approval of a faculty advisor and one included evaluations from the field experience mentor. One program required evidence that all roles “delineated in *Information Power* are being or will be met” (Clarion University 2001). Two programs required evidence that goals for professional development are being met. Three of the programs offered either an optional or required course to guide students through the process for completing their portfolios. The capstone course, in the student’s final semester, was a way of synthesizing coursework and field experiences. At the end of the process, there was a pass or fail summative evaluation. It was also common for programs to require at least three sessions with the graduate advisor for periodic formative evaluations. In most cases, the portfolio served as the final examination. Most programs offered the student at least one opportunity for revision if the first submission did not meet program requirements. A reviewing committee was responsible for scoring, and, in most cases, the pass grade must be a unanimous decision. In some programs, the student was responsible for recruiting the portfolio

assessment committee. In all programs examined, it was the student's responsibility to notify his or her advisor within the first few weeks of the semester or quarter in which the portfolio was to be submitted for evaluation.

Outcomes from Portfolio Development Course

Fourteen students enrolled in LIBS 6903 Portfolio Development. This special topics course included a culmination project with digital portfolios published to a university server. Using a variety of software, students completed at least three pages for their Web site with a minimum of one artifact linked to a reflective writing piece. Students learned the process for portfolio development and the use of file transfer protocol (FTP) software available for free download from our university. Many of the students gained skills in the use of the portable documents file (PDF) and became proficient in planning and developing the links for their final product. The course (included in the related links section) was developed as a combination online and face-to-face method for delivery. Since many of our students live long distances from our rural campus, a hybrid of Web-based and on-campus meetings was needed to provide laboratory experiences in the use of the hardware and software. Students were highly motivated to use the lab facilities, even those with a higher level of technical expertise. Since most of the discussions were related to the reflective writings, students seemed to benefit from face-to-face interaction. Several of the students were familiar with PBL and the reflective writing process, but needed to see samples of how artifacts are selected, aligned with a particular standard, justified for selection, and reflective writings on how a product might be revised or enhanced.

Conclusions and Recommendations

Reflections and Rationales

Many of the universities that utilize portfolios required some degree of written reflection accompanying individual artifacts. The reflective writing process has been implemented in many teacher education programs and is a pivotal component for projects required in PBL for initially licensed teachers (Bradshaw and Hawk 1996). Based on these practices in teacher training, it seems reasonable that those seeking licensure in school library media must also recognize the importance of documenting strategies for teaching information literacy. In addition, it would be important for the librarian to articulate how the library program impacts learning. This would be a first step in overcoming the apathy, revealed in earlier studies, that the librarian has no need for portfolios. Following the piloted project for portfolio implementation, students began, without prompting, to write reflectively about major assignments and projects within core courses. It became a natural part of their coursework and contributed greatly to making connections between university classroom and the workplace. A typical comment from students was, "for the first time, I am seeing how (theoretical) course assignments can be applied to my classroom experiences at school (or the library)."

The reflections and rationales may not always focus on standards or competencies. Candidates should also reflect on their own professional progress. Similar to journaling, students begin to adopt attitudes for personal accountability and habits for lifelong learning. Reflections on professional goals and progress are also useful for documenting growth over time. Clear indicators for program effectiveness are student-generated products that show mastery of skills and growth in knowledge. These products are a natural outcome when using portfolio

assessment, and there is the added benefit of students' comments in support of their own learning.

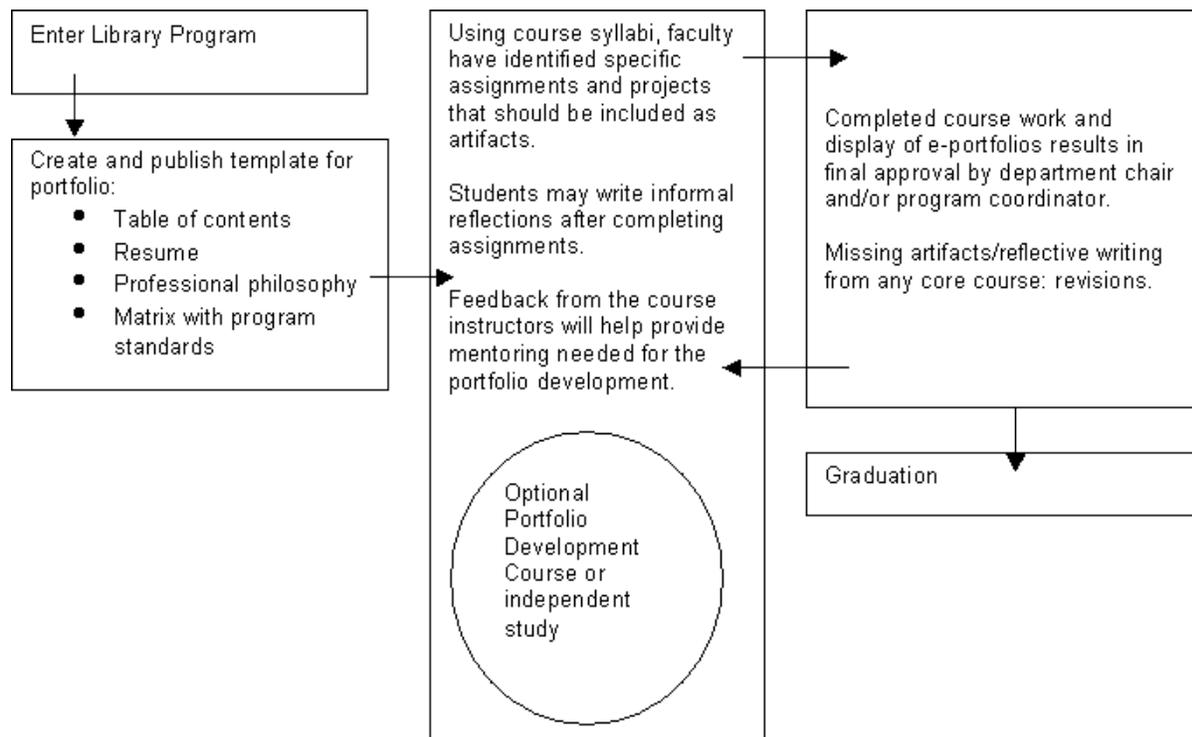
Selections of Standards

Determining which standards to use as measures for student performance was a major consideration. Our first inclination was to give students the freedom to make this choice based on their own career and professional goals. Most students chose either NBPTS or competencies for school library media as recommended by AASL. We also considered the use of our state standards for licensure in school library media. Since our program goals and objectives are representative of both national guidelines for library services and state competencies for school licensure, our final choice was student artifacts aligned with our program goals for library science. Students also have the option for including standards for national board certification with multiple links among artifacts, our program goals, and the national standards. Using this format, students are able to see the relationship between their own program of studies and national standards recommended by learned societies.

Evaluation

Once the measures of competency had been identified, valid measures had to be selected to evaluate students' final products. Shortage of time and resources were major considerations within the department, and there was a reluctance to schedule multiple advising sessions with students. A good solution to the problem was a three-stage model for student mentoring and evaluation. Figure 1 is a graphical representation of the model for portfolio assessment using formative and summative reviews.

Figure 1. Model for Portfolio Assessment in Master's of Library Science Program of Studies



Early in their program, as part of introductory course in library science, students use HTML files to create and publish a template for their portfolio that includes:

- Table of contents
- Resume
- Professional philosophy
- Matrix with program standards

Students may have some technical difficulties, but mastery of skills for file transfer and webpage development are better mastered early in their program. Students also begin the process for selection of artifacts while thinking and writing reflectively.

Using course syllabi, faculty identified specific assignments and projects that should be included as artifacts in the final portfolio. Careful consideration was given to selection of course projects that meet program and university accreditation standards. Thus, student accountability is aligned with program accountability.

Students may write informal reflections after completing assignments. Ongoing feedback from the course instructors helps provide mentoring needed during portfolio development process. An optional portfolio development course is available for students needing additional mentoring and help with technology. Nearing completion of their program of studies, students may register for one hour independent study with faculty. This provides additional mentoring to ensure students make the connection between course assignments, their own professional goals, and artifacts developed throughout their program of studies. Built into the independent study is evaluation of

students' projects using a rubric containing levels of competency related to the library science program objectives. Since each project or assignment is an artifact that provides evidence of competence in the field, criteria within the rubric had to be carefully planned. Levels of competence usually are in the range of not acceptable to exemplary. Indicators within each category are used to describe specific criteria that should be mastered or evident in the learner (Callison 1997). Criteria for evaluation rubric shown in table 2 were selected from a cross section of state and national standards. The matrix shows a portion taken from three areas of competency: (1) knowledge of learning and human development; (2) knowledge for teaching and the learning environment; and (3) knowledge for library and information science.

Table 2. Selected Standards from National Boards for Professional Teaching Standards for School Library Media

Standards	Above Expectation	Meets Expectation	Below Expectation
Knowledge of learning styles and of human growth and development.	<p>Clear and consistent evidence that candidate shows potential for the applied knowledge of</p> <ul style="list-style-type: none"> a variety of learning styles to the selection and use of information when collaborating with teachers, parents, students, and the community a broad scope of developmental needs for children and adults a variety of methods for accommodating special-needs populations diversity in social and cultural needs within the community. 	<p>Clear evidence that candidate shows potential for applied knowledge of</p> <ul style="list-style-type: none"> learning styles to the selection and use of information when collaborating with teachers, parents, students, and the community developmental needs for children and adults methods for accommodating special-needs populations diversity in social and cultural needs within the community. 	<p>Limited evidence that candidate shows potential for the applied knowledge of</p> <ul style="list-style-type: none"> learning styles to the selection and use of information when collaborating with teachers, parents, students, and the community developmental needs for children and adults methods for accommodating special-needs populations diversity in social and cultural needs within the community
Knowledge of principles for teaching and learning that contribute to an active learning environment.	<p>Clear and consistent evidence for knowledge in a broad scope of</p> <ul style="list-style-type: none"> learning theories that support an active learning environment principles for instructional design to assist in the development of enhanced learning activities within the 	<p>Clear evidence for knowledge in</p> <ul style="list-style-type: none"> learning theories that support an active learning environment principles for instructional design to assist in the development of enhanced learning activities within the community a diverse range of 	<p>Limited evidence for knowledge in</p> <ul style="list-style-type: none"> learning theories that supports an active learning environment principles for instructional design to assist in the development of enhanced learning activities within the community

	<p>community</p> <ul style="list-style-type: none"> • a diverse range of content areas for information needs • a broad range of technologies for integration into the learning environment 	<p>content areas for information needs</p> <ul style="list-style-type: none"> • technologies for integration into the learning environment. 	<ul style="list-style-type: none"> • a diverse range of content areas for information needs • technologies for integration into the learning environment.
<p>Knowledge in the principles of library and information studies needed to create effective, integrated library media programs.</p>	<p>Clear and consistent evidence for knowledge in library and information science through</p> <ul style="list-style-type: none"> • daily routines for retaining, accessing, and retrieving information to meet the needs of the entire learning community. • the applied use of the latest technologies for information access and retrieval. • development and management of collections that embrace intellectual freedom and protection of intellectual property • potential for expert design and management of facilities using collaborative approaches for meeting the needs of the entire learning community. • active participation in action research related to the development of information skills, integration of the library program into the learning community, and a growing appreciation for a variety of reading 	<p>Clear evidence for knowledge in library and information science through</p> <ul style="list-style-type: none"> • daily routines for retaining, accessing, and retrieving information to meet the needs of the entire learning community • the applied use of the latest technologies for information access and retrieval. • development and management of collections that embrace intellectual freedom and protection of intellectual property • potential for design and management of facilities using collaborative approaches for meeting the needs of the entire learning community. • participation in action research related to the development of information skills, integration of the library program into the learning community, and a growing appreciation for a variety of reading materials. • knowledge for children's, young adult, and professional literature • accomplished 	<p>Limited evidence in for knowledge in library and information science through</p> <ul style="list-style-type: none"> • daily routines for retaining, accessing, and retrieving information to meet the needs of the entire learning community • the applied use of technologies for information access and retrieval. • development and management of collections that embrace intellectual freedom and protection of intellectual property • potential for design and management of facilities using collaborative approaches for meeting the needs of the learning community. • participation in action research related to the development of information skills, integration of the library program into the learning community, and appreciation for a variety of reading materials. • knowledge for children's, young adult, and

	<p>materials.</p> <ul style="list-style-type: none"> • extensive knowledge for children's, young adult, and professional literature • accomplished practices in processing of information for creative and critical thinking and guiding the learning community in developing these processes • integration of the latest advances in technology learning community. 	<p>practices in processing of information for creative and critical thinking and guiding the learning community in developing these processes</p> <ul style="list-style-type: none"> • integration of technology into the learning community. 	<p>professional literature</p> <ul style="list-style-type: none"> • practices in processing of information for creative and critical thinking and guiding the learning community in developing these processes • integration of technology into the learning community.
--	---	--	---

The standards reflect a portion of the desired performances of accomplished library media specialists. Indicators of expected levels of competency appear within the rubric matrix. Using artifacts selected from readings, course projects, and field assignments, candidates match artifacts to indicators within a standard.

Two common themes emerged from the literature and from examination of programs in library science. Portfolio development, for the purpose of evaluation, must show growth in knowledge and skills over time. Second, ongoing formative assessment of student progress is just as important as the final summative evaluation.

Another consideration is reliability of the evaluation. Interrater reliability is important in how it impacts students' learning as well as a measure for program evaluation. Brennan (in Johnson, McDaniel, and Willeke 2000) reported that interrater reliability is more likely to occur when assigned tasks are the same for all students and scoring techniques are consistent throughout the program. Thus, the development of a carefully planned rubric was an important part of the evaluation. In addition, the identification of specific assignments and projects taken from each of the core courses further ensures consistency for evaluation purposes.

The use of portfolio assessment within East Carolina University's library science program is still in the developmental stage. Currently, the department is investigating the best ways to use rubrics as a valid measure of competence. Further study must be done to ensure evaluations are reliable and can be used for documentation in program evaluation for school and university accreditation. One-on-one faculty mentoring is provided within coursework, but to meet exit requirements, a summative evaluation of completed course work and display of e-portfolios, with at least one artifact from all core courses, results in final approval by department chair or program coordinator. Better methods to achieve interrater reliability also are under investigation.

Callison (1997, 43) said, “Conducting evaluation completes the teaching cycle.” Certainly, as an instructional leader, the school library media specialist should be well acquainted with the process and able to provide information for veteran and initially licensed teachers. Accrediting agencies are looking for evidence that student outcomes are clearly aligned with program goals. With careful documentation of students’ reflective writings and artifacts, the program will have significant matches between outcomes and objectives.

The use of portfolios can have significant affective outcomes. Course assignments and projects that are a reflection of their individual creative differences can be proudly displayed. The continual process of self-examination, comparison to standards, and personal assessment of their products provided rich learning experiences aligned with program goals and objectives. Recognition of theory as it relates to practice was of particular interest since the majority of the program’s coursework is delivered online to distant learners.

One final advantage is that students, having already learned to prepare a standards-based portfolio, are better prepared to seek advancement, either through national board certification or promotion within their professional field. It can become a professional habit of mind. Typical daily activities and decisions will continually be examined for alignment with established competencies as the librarian reflects upon the impact of his or her service in the light of the highest of standards.

Works Cited

- Airasian, P. W. and L. M. Abrams. 2000. The theory and practice of portfolio and performance assessment. *Journal of Teacher Education* 51, no. 5: 398–402.
- American Library Association. 2002. [Directory of Accredited LIS Master’s Programs](#). Accessed May 3, 2002.
- Barrett, H. 2000. Electronic teaching portfolios: Multimedia skills + portfolio development = powerful professional development. In *Society for Information Technology and Teacher Education International Conference: Proceedings of SITE 2000, San Diego, California, February 8–12, 2000. Volumes 1–3*. ERIC, ED 444514.
- Bradshaw, L. K. and P. P. Hawk. 1996. Portfolios for the continuing licensure of beginning teachers: Their development and assessment. Paper presented at the Annual Meeting of the National Staff Development Council, Vancouver, British Columbia, Canada, December 10, 1996. ERIC, ED 404316.
- Bullock, A. A. and P. P. Hawk. 2001. *Developing a teaching portfolio*. Upper Saddle River, N.J.: Merrill Prentice Hall.
- Callison, D. 1997. Portfolio. *School Library Media Activities Monthly* 14, no. 2: 42–44.
- Campbell, D. M., P. B. Cignetti, B. J. Melenyzer, D. H. Nettles, and R. M. Wyman Jr. 1996. *How to develop a professional portfolio*. Boston: Allyn and Bacon.

- Clarion University. Emergency Pennsylvania School Library Media Certification, K–12. Accessed Nov. 15, 2001, www.clarion.edu/libsci/emergencycert.htm#Portfolio.
- Commeyras, M., L. DeGross, and R. Stanulis. 1997. Literacy professionals' ways of knowing: A national survey. Reading Research Report No. 86, National Reading Research Center Project of the University of Georgia and the University of Maryland. ERIC, ED 405559.
- Gredler, M. 1995. Implications of portfolio assessment for program evaluation. *Studies in Educational Evaluation* 21, no. 4: 432–37.
- Helms, V. M. 1994. Multifaceted data collection: The key to evaluating school counselors and other support professionals. Paper presented at the Annual Meeting of the American Educational Research Association in New Orleans, April, 1994. ERIC, ED 376411.
- Johnson, R. L., F. McDaniel II, and M. J. Willeke. 2000. Using portfolios in program evaluation: An investigation of interrater reliability. *American Journal of Evaluation* 21, no. 1: 65–81.
- Koch, R. and J. Schwartz-Peterson. 2000. *The portfolio guidebook: Implementing quality in an age of standards*. Norwood, Mass.: Christopher Gordon Publishers.
- Latrobe, K. and J. Lester. 2000. Portfolio assessment in the MLIS program. *Journal of Education and Library and Information Science* 41, no. 3: 197–206.
- Meadows, R. B. and A. B. Dyal. 1999. Implementing portfolio assessment in the development of school administrators: Improving preparation for educational leadership. *Education* 120, no. 2: 304–14.
- Murray, P. P. 1997. Successful faculty development and evaluation: The complete teaching portfolio. *ASHE-ERIC Higher Education Report no. 8*. Washington, D. C.: The George Washington University, Graduate School of Education and Human Development.
- Nettles, D. H. and P. B. Petrick. 1995. *Portfolio development for preservice teachers*. Bloomington, Ind.: Phi Delta Kappa Educational Foundation.
- Routledge, J. and M. Wilson. 1997. The reflection on the development of a reflective assessment. *Medical Teacher* 19, no. 2: 122–29.
- SLJNews. 2001. Be all you can be. *School Library Journal* 47, no. 1: 18.
- Scott, C. and C. Plum. 1999. Using portfolios to evaluate service courses as part of an engineering writing program. *Technical Communication Quarterly* 8, no. 3: 337–51.
- Wilcox, B. and L. Tomei. 1999. *Professional portfolios for teachers: A guide for learners, experts, and scholars*. Norwood, Mass.: Christopher Gordon Publishers.
- Wolf, A. 1998. Portfolio assessment as national policy: The National Council for Vocational Qualifications and its quest for a pedagogical revolution. *Assessment in Education: Principles, Policy, and Practice* 5, no. 3: 413–46.

Related Online Links

Brown, C. A. Sept. 7, 2001. LIBS 6902: Developing Portfolios. An online course for students in the master's of library science program at East Carolina University. Accessed May 15, 2002, www.soe.ecu.edu/LTDI/brown/6902/syllabus.html.

California State University, Chico. February 1, 2001. Department of Education Library Media Teacher Services Credential Program. Portfolio contents checklist of competencies. Accessed April 1, 2002, www.csuchico.edu/~pmlibury/PortfolioContentsChecklist.html.

East Carolina University. April 5, 2002. MLS Student Portfolios—Department of Librarianship, Educational Technology, and Distance Instruction. Linked to program requirements and student portfolios in progress. Accessed April 5, 2002, www.ecu.edu/soe/ltidi/mls/portfolios/.

Emporia State University. 2001. SLIM Student Handbook: 2000–2001. Student handbook for seniors in the school library media program. Accessed Nov. 15, 2001, <http://slim.emporia.edu/handbook/handbook.pdf>.

National Board for Professional Teaching Standards. 2002. Homepage for NBPTS. Accessed May 3, 2002, www.nbpts.org.

North Carolina Department of Public Instruction. 2002. Handbook for Performance-based Licensure. Accessed Apr. 5, 2002, www.dpi.state.nc.us/pbl/index.html.

Southern Connecticut State University. September 9, 2001. ILS Guidebook: Portfolio and Special Project Requirements. Accessed Nov. 15, 2001, www.southernct.edu/departments/ils/folio_req.html.

Texas Woman's University. Feb. 16, 2002. Master's Handbook: A Guide to Graduate Study for Students Seeking Master's Degrees and/or Preparing for the Learning Resources Endorsement. Accessed Nov. 15, 2001, www.libraryschool.net/resources/mhndbook.htm#finalexam.

UCLA. Jan. 17, 2002. UCLA Information Studies: Portfolio Assessment Requirement. Accessed Nov. 15, 2001, <http://is.gseis.ucla.edu/students/portfolio.htm#general>.

University of Colorado, Denver. Nov. 8, 2000. Library Media Requirements—Portfolio. Accessed Nov. 15, 2001, www.cudenver.edu/ilt/library_media/req_portfolio.htm.

University of Kentucky. 2001. School Media Library Portfolios. Description of the requirements for portfolios. Accessed Jan. 15, 2002, www.uky.edu/CommInfoStudies/SLIS/schoolmedia/portfolio.htm.

University of North Carolina at Greensboro. Sept. 1999. Portfolio Clearance Form: Department of Library and Information Studies. Apr. 5, 2002, www.uncg.edu/lis/forms/portform.html.

University of Washington. Spring 2002. Information School MLIS Portfolio Requirement. Accessed Nov. 15, 2001, www.ischool.washington.edu/mlis/portfolio.htm.

School Library Media Research (ISSN: 1523-4320) is the successor to *School Library Media Quarterly Online* and the predecessor to *School Library Research*, an official journal of the American Association of School Librarians. The purpose of *School Library Media Research* is to promote and publish high quality original research concerning the management, implementation, and evaluation of school library programs. The journal also emphasizes research on instructional theory, teaching methods, and critical issues relevant to the school library profession. Visit the [website](#) for more information.



The mission of the American Association of School Librarians is to advocate excellence, facilitate change, and develop leaders in the school library field. Visit the [AASL website](#) for more information.