

The Use of Technology to Improve Assessment of Pre-Service Teacher Learning Outcomes

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Scholarship of Teaching and Learning

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\$25,000 requested

Abstract:

This project will systematically investigate the potential for an electronic portfolio to enable a cross-program standards-based assessment system for pre-service teachers that includes student self-assessment, reflection and ongoing feedback. The Research Team will gather qualitative and quantitative data to compare the assessment practices of student teachers who have used a hard copy portfolio with those who have used an electronic portfolio. In addition, we will pilot processes and products that inform the MDOE revisions to the state-wide assessment system.

Dr. Eunsook Hyun, Chair, Department of Curriculum & Instruction Date

Dr. Carol L. Colbeck, Dean, Graduate College of Education Date

Dr. Paul Fonteyn, Provost, University of Massachusetts Boston Date

Statement of Problem: Students in the pre-service teacher preparation programs at UMass Boston's Department of Curriculum and Instruction (C&I) are expected to meet state and professional standards in order to be licensed as teachers in Massachusetts. Currently, our programs measure their ability to meet some of these standards at the end of their programs, but we want to develop an assessment of their ongoing progress towards reaching the mandated outcomes throughout their time with us.

Background: Faculty in C&I are currently considering how to improve our programs' ability to better prepare what the faculty in the Graduate College of Education refer to as "thoughtful and responsive educators" for our urban schools. Having come from a period of time in which both the College and Department were led by a series of interim Deans and Department Chairs, C&I has achieved a level of stability and direction it has lacked in the past few years. The Department now has a permanent Dean and Department Chair, a core of junior faculty on the verge of tenure, and an increased number of tenured faculty. We have also been selected by Massachusetts Department of Education to partner in the development of an outcomes-based assessment system that will potentially be used by other pre service programs across the Commonwealth.

The faculty in C&I are now in a position to make substantive program changes based on solid information about student knowledge, skills, and dispositions through standards-based assessments across our programs. All of these factors combine to make this the perfect time for a Scholarship of Teaching and Learning grant, which will allow our faculty to embed technology within our developing assessment process and to generate research data that will inform our program revisions and our scholarly growth.

Goals: Our long-term goal is to improve our pre-service teachers' ability to meet external state and professional standards, and internal standards as defined by our programs. The focus of this grant is the first step in this process: to review and improve the way we assess our pre-service teachers' ability to meet the external (state and professional) standards. We have identified Chalk and Wire as an e-portfolio system to enable us to forge transparent links across courses and make explicit the developmental progression of our pre-service teachers' growth. A natural outgrowth of using e-portfolios will be the

ability to apply the assessment data at multiple levels (pre-service teachers, course, program, department, state) for multiple purposes without duplicating our efforts.

Research Focus: Empirical research connects 1) ongoing assessment and feedback, 2) pre-service teachers' reflection, and 3) opportunities for self-assessment to improved pre-service teachers' performance (Darling-Hammond & Bransford, 2005; Hunt-Bull & Packey 2007; Wiggins & McTighe, 2005). This project will investigate how the e-portfolio provides pre-service teachers with these learning and assessment experiences as part of an ongoing, standards-based assessment system. Through our research we will obtain comparison data between pre-service teachers who have experienced the e-portfolio assessment process and those who have experienced our current assessment practices.

Assessment of project: To assess the success of this project, we will use the data to determine how the e-portfolio assessment process has led us to improve the way we assess our pre-service teachers' ability to meet the state and professional standards. We define "improvement of assessment " as assessment that:

At student and course levels: Contains ongoing feedback from instructors, student reflections, and student self-assessments; clearly links to state and professional standards.

At program and department level: Connects progressively complex competencies; assists in monitoring of progress throughout program to "catch" student needs and make adjustments; results in data that can be used to review programs and make necessary improvements; includes an explicit collaborative agreement with Instructional Technology department for continued IT support.

At state level: Informs a model for other teacher training programs in the Commonwealth, as part of our pilot project with Massachusetts Department of Education.

This project encompasses the first step in a long-term revision of our programs. The second step, for which we plan to seek external funding, will seek to answer questions about the improvement of the pre-service teacher's performance on the standards-based outcomes assessments, increased use of technology by pre-service teachers within their own Pre-K classrooms, changes in our views on assessment, and the supports needed to implement and sustain the process.

In addition, the second step in our ongoing process of improving pre-service learning will identify and add individual program benchmark assessments, develop our own programmatic standards for preparing successful urban educators well-suited for Boston Public Schools, and collect data, including work samples, from graduates of our programs 1, 2 and 3 years following graduation.

Research Design: The project's Research Team will evaluate the success of our project through a mixed methods program evaluation design making use of teacher research data. By mixed methods design we mean using both quantitative and qualitative methods of data collection and analysis in an effort to tell a more complete story. Our qualitative approach will rely on grounded theory as we aim to better understand the process of ongoing assessment. By teacher research we mean systematically collecting and analyzing data from faculty members' own teaching experiences. We will gather data from:

- A review of pre-service teachers' applications to our program using our existing rubric to ensure that pre-service teachers from the paper and e-portfolio groups are comparable, to take into account any differences, and to establish baseline data relative to the standards.
- Interviews with faculty and pre-service teachers as well as review pre-service teachers' work to compare the use of pre-service teachers' self-assessments, ongoing reflections, and instructor feedback before and after the implementation of this project (Note: instructors are currently required to save samples of pre-service teachers' work for each course they teach)
- A review of the paper portfolios that are currently completed in the culminating course--the pre-service teachers' teaching practicum--to evaluate how well our current assessments measure pre-service teachers' ability to meet required outcomes.

Project Activities:

Pre-grant activities (Spring '08): 1) programs review current assessments and align them with state and professional standards, 2) faculty develop rubrics, 3) obtain IRB approval

Summer '08: 1) e-portfolio training from Chalk and Wire's consultant, 2) rubrics format for use in Chalk and Wire; 3) collect and analyze qualitative and quantitative data about the pre-existing assessment system including data from pre-service teacher applications to the programs.

Fall '08: 1) trained instructors implement e-portfolio assessments in 2 courses in each of the 4 programs, 2) identify and train additional instructors who will participate in Spring '09. 3) collect and analyze program data, 4) adjust e-portfolio implementation, 5) write preliminary report, 6) work with college administration to develop department reporting process and components, 7) begin to write the grant application for Funds to Improve Post Secondary Education (FIPSE)

Spring '09: 1) trained instructors implement e-portfolio assessments in 2 additional courses in each of the 4 programs, 2) collect and analyze program data, 3) adjust e-portfolio implementation as needed, 4) write the final project report assessing how well we have met our goals, 5) finalize guidelines and support materials for students, faculty, program and department administrators, 6) confirm continuation of designated IT support 7) review program and department-wide assessment data and establish process for responding to data, 8) submit FIPSE grant application in May.

Post-grant: 1) disseminate to other colleges within UMass Boston, across the UMass system, and across the state through conference presentations and scholarly journal articles, 2) write final project report.

Capacity/resources: The Research Team is comprised of one tenured faculty member, two tenure track faculty, a half-time lecturer and an Instructional Designer from UMB's Instructional Technology Department. All three faculty are Program Area Leaders of their respective pre-service teacher training programs: Elementary, Middle/High School, and Moderate Disabilities. Dr. MaryAnn Byrnes is a tenured associate professor with expertise in assessment. She was selected to represent the Graduate College of Education to be trained in assessment as part of the NCATE standards-based assessment process that included trainers from Alverno College. Dr. Janna Jackson and Dr. Stephen Ribisi are approaching their faculty fourth year review. Both are technologically skillful, with experience in standards-based teaching and assessment. Dr. Mary Brady has been part of the e-portfolio movement within the UMass system for

several years, has piloted three different e-portfolio systems, and co-wrote the previous UMassBoston e-portfolio pilot grant. Ms. Irene Yukhanonov, the Instructional Designer, will be responsible for ensuring that materials are developed for students and faculty about using the assessment technology, provide training to students within the courses as requested by the faculty, and consult with individual faculty as they develop their Chalk and Wire assessment templates. All members of the Research Team have participated in the e-portfolio SIG training by Alverno faculty and/or the Chalk and Wire training provided graciously by UMassDartmouth colleagues.

The Research Team will work with the research assistant and assume responsibility for gathering baseline and comparative assessment data from their respective programs. In addition, Dr. Brady will work with the new Early Childhood pre-service teacher training program to ensure that they develop the standards-based assessments and assessment system described in the project. The Instructional Designer will collect data about the types of needs requested by faculty and students, and the amount of effort required to support the project.

Project Deliverables: This project will produce:

- 1) pilot process, products and data that inform the Massachusetts Department of Education standards-based outcomes assessment system, including rubrics and templates for expanded use
- 2) data gathering structures and tools related to student, courses, program and department outcomes, and to sharing that data with students and other stakeholders
- 3) submission of Scholarship of Teaching articles to refereed journals, and conference presentations.

Budget:

Faculty training by Chalk & Wire consultant		\$4500
Accessibility Testing, with recommendations		\$1000
e-portfolio accounts for 165 students @ \$53 each		\$8745
Research Assistant @ \$15/hr		
4 weeks at .5 FTE during June	\$1200	
9 weeks FT during July & August	\$5400	
Total RA for summer		\$6600
Faculty summer stipends \$1000.		
J Jackson, S.Ribisi, M.Brady, MA.Byrnes		\$4000
Materials & Supplies		\$ 155
TOTAL:		25,000

Appendix

References

- Darling-Hammond, L. & Bransford, J. (2005). Preparing teachers for a changing world. San Francisco: Jossey-Bass.
- Hunt-Bull, N., & Packey, H.M., (2007). Doing Assessment as If Teaching Matters. *Assessment Update*, Vol, 19 No. 6, pp. 1-15.
- Wiggins, G., & McTighe, J. (2005) "Improving Learning by Thinking Like an Assessor." In *Understanding by Design*. Alexandria, Va. Association for Supervision and Curriculum Development.