



WESTERN MICHIGAN UNIVERSITY

Assessment for Learning

Education Research Scholars:

Capacity Building in Mathematics & Science Education





About the Program

Assessment for Learning (AfL) Research Scholars, a collaborative project for research and learning supported by the National Science Foundation, is committed to advancing the research base and leadership capacity supporting K-12 and higher education classroom student evaluation design, implementation, analysis, and application. The work of this project is guided by five underlying principles:

- To improve student evaluations we must develop and work from a well articulated, coherent, and comprehensive set of goals and standards for assessments.
- Quality classroom assessments should play a central role in any effort to improve classroom-based student learning.
- Quality assessments are best developed through rigorous research including field testing, evidence gathering, and revision.
- Teaching practices and assessment materials should be highly interdependent. Integration of these two elements synergistically increases the effectiveness of both.
- Research addressing classroom assessment practices can inform policy and practice and in so doing narrow the gap between the ideal and the achieved instruction program.

Given these principles, the primary goals for this AfL project are to:

- Produce five or more doctorates in mathematics and science education with expertise in assessment for learning.
- Conduct professional development for teachers, focusing on assessment for learning.
- Investigate the impact of classroom assessment materials and practices on student and teacher learning.
- Stimulate communication regarding classroom assessment among K-12 stakeholders.

The work of AfL Education Research Scholars is organized around three central initiatives: Doctoral Program Development, School Partnerships, and Research.

Doctoral Programs

Three Centers (WMU Center for the Study of Mathematics Curriculum, The Evaluation Center, and the Mallinson Institute for Science Education), two Colleges (College of Arts and Sciences and the College of Education), and the University's Interdisciplinary Doctoral Program in Evaluation at Western Michigan University have joined together to support PhD fellows specializing in classroom assessment. Faculty and fellows across these programs meet regularly to collaborate on research and program improvement.

AfL doctoral fellows:

- Study classroom assessment issues and trends, and gain expertise in assessment development, evaluation and research.
- Take coursework to develop a broad base of knowledge needed by science and mathematics education professionals.
- Collaborate with university and school partners on a program of research to better understand what kinds of formative assessment are most effective.
- Complete independent research, culminating in three articles in professional journals.
- Teach university-level courses.

Who should apply?

Individuals with an interest in assessment for learning in mathematics and science education. These individuals might aspire to work in university, school district, or state department of education settings. Entering PhD students should have a strong mathematics or science background. They should also have K-12 or other teaching experience.

What financial support is available?

AfL Doctoral Fellows receive a graduate fellowship, stipend, fringe benefits, tuition scholarship, office space, and professional travel support. Ongoing support is contingent on acceptable progress and contribution to the work of the AfL project.

School Partnerships

The collaborating university centers have working relationships with school districts that serve as laboratories for educational research. Projects will investigate all factors that effect or are effected by assessment for learning.

For example, how is assessment for learning affected by and integrated with the broader curriculum? What roles do school and district administration, policies, and infrastructure play in the viability of formative assessment?



Research

Through this research we will contribute to the body of knowledge that enables all stakeholders to better support student learning with assessment for learning.

Some questions of interest include:

- What are the features of quality assessment for learning materials and practices?
- What benefits can formative assessments have for at-risk learners?
- What barriers must be overcome to implement assessment for learning?
- How are teachers effected by an increased emphasis on assessment for learning?

To facilitate and accelerate the work, AfL Education Research Scholars is organizing a network of educators and researchers who will contribute to the research agenda. This network includes Center staffs from each of the three University centers and their research associates (researcher from non-partner institutions and organizations whose research focuses on assessment and evaluation including the Joint Committee on Standards for Educational Evaluation).

Research conferences on classroom assessment are also organized by these collaborators to provide a forum for exchanging ideas, methodologies, instruments, and sharing findings.





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