Assessment Seminar Report
For Spring Term 2006

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Mathematics
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Project Description

Goal: Create and implement an assessment plan for Math 060 (Beginning Algebra).

Subgoals:
- to assess critical thinking (as part of Lane's Core Values)
- to develop an assessment culture in LCC's math division
- to share current research and methods in assessment and learning with colleagues

Method

For the first 6 weeks of spring term, I participated in brainstorming and writing an interdivisional NSF REESE grant proposal "DIAS "(Deliberate Integrated Assessment Strategy). The DIAS project seeks to increase student engagement and success by

1) making learning outcomes explicit, visible, and meaningful to students,
2) integrating assessment with instruction, and explicitly using assessment as a feedback loop to help students be conscious of their own learning and learning process, and
3) creating an environment where faculty and students are partners in the learning process.

Key math members (Don McNair, Vicky Kirkpatrick, Stephen Selph, and I) planned how to assess Math 060 and Math 111 (College Algebra) within the DIAS framework.

Since fall 2005, I have chaired the Developmental Math Task Force (DevMath), whose task is to comprehensively review developmental math at Lane. Since January 2006, DevMath has engaged the Math Division in a Delphi process to determine consensus on developmental math issues.

As part of the Assessment Seminar (and while researching for the REESE grant), I have read literature about assessment, engagement, and learner-centered education. In response to the readings and discussions in the Assessment Seminar, I have engaged in many conversations with my math colleagues on learning objectives, non-traditional assessment, active learning, etc.

Plan

<u>Spring 2006:</u>

Engage in conversations with colleagues about assessment, Bloom's taxonomy, and metaphors of teaching and learning.
Give several small presentations on assessment topics at several Math Division meetings.
Engage colleagues one-on-one about authentic learning, active learning, and assessing critical thinking.

<u>Summer 2006:</u>

Develop, gather, and prepare materials for Math 60 assessment / DIAS.
Meet with available Math 60 faculty to discuss and create assessments for critical thinking.

Share assessment materials with colleagues who are teaching Math 60 in fall term 2006.
Put Math 60 learning objectives in Excel format and post on my webpage.
Create my faculty webpage.

Fall 2006:

Pilot DIAS (how much I can accomplish depends of whether Lane is awarded the grant):

- -Discuss with students: learning outcomes for the course, rubrics, and multiple roles and types of assessment.
- -Have students write reflective math autobiographies.
- -Have students complete learning style inventories.
- -Present learning style data to students and use it as a starting point to discuss various learning modalities and differences in problem-solving strategies.
- -Several times during the term, the class will complete and discuss deliberately selected assessments. In classroom discussions the instructor will show the connection between mastery of key concepts and student success in Math 60 and subsequent courses.

Assess critical thinking using key assessments.
In Fall 2006, the Math Division colloquia will focus on assessment. Math and Science instructors will be invited to participate.

2007:

Collect data to compare pilot and non-pilot sections of Math 60.
Use results to refine and retune assessments and methods.
On a regular basis, share results with colleagues.

Conclusion

During this seminar, I have observed a synergistic concrescence of events. My participation in Assessment Seminar, the NSF REESE proposal DIAS, the Developmental Math Task Force, and the Retention Task Force have continually focused me towards the topic of authentic student learning and assessment. Additionally, my participation in these four groups has brought me into interaction with different groups of people on campus:

NSF / REESE grant:	administration / high-level management
Assessment Seminar:	colleagues across campus
DevMathTask Force:	MRC staff, math, ABSE, and ALS faculty
Retention Task Force:	colleagues from the Native American Program, Substance Abuse Prevention, counseling, and math

In order to create true change from teaching-centered education to learning-centered education, both faculty and students need to change their paradigms of education and learning. It is imperative, therefore, to include my colleagues in the discussion and process of this project. If my colleagues join in the conversations, then everyone will benefit from their contributions of vision and expertise.

I will continue to read and dialog with my colleagues as I implement Math 60 assessment. The speed at which I will investigate, create, and pilot assessments depends on the DIAS proposal funding, as well as other responsibilities to the math division.