Evaluation of Student Learning, 2005-2006

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Student Learning Outcome #1

Students in the following classes will learn to use technical word processing software: MA-019, MA-108, MA-110. In particular:

- ✓**80% of students completing MA-019 will produce a paper using technical word processing software.**
- ✓**100% of students in MA-108 and MA-110 will produce a paper using technical word processing software.**
- ✓**20% of students in MA-108 and MA-110 will use technical word processing software for an assignment without being required to do so.**

Student Work

Data in the form of papers written by students using technical word processing software have been collected in the following courses:

MA 108, Spring 2005—Mathematical Analysis, **MA 19, Fall 2005**—Multivariable Calculus, **MA 110, Spring 2006**—Modern Algebra

Samples of papers from MA 110 are shown below

Student #1

Student #2

Student #3

Interpretation

The papers from MA 110 demonstrate that students mastered the software sufficiently to produce a paper. However, the quality of the papers was decidedly mixed.

Students were required to use the software on the assignment evaluated here, but 1 of the 5 students in the course used the software on a later assignment for which it was not required (our goal was to have 20% of students in the course use it when not required, so we've met that goal).

Lack of accessibility of technical word processing software was an obstacle to students' learning to use it. The professor of MA 110 implemented her plan to introduce students to more accessible software (freeware, widely used in the academic communities of mathematics and computer science). The software was more difficult for students to install on their computers and required them to spend more time learning to use it than the software used in previous semesters. Consequently, more time (in and outside of class) was needed by students and professor to enable students to use the software. Students did report that in spite of the initial challenges, they preferred having the software on their own computers.

Using the Results and Next Steps

While these pieces of student work demonstrate one particular student learning outcome that our department hoped for, we continue to discuss how to include assessment of our broader goals for student writing in our evaluation of the technical word processing goal.

Toward that end, one faculty member circulated (within the department) a draft of a rubric that could help us take a more detailed look at the work students are producing with technical word processing software (this rubric is available on the department's program review web page). To make use of such a rubric, we need further departmental discussion about the student learning outcomes it would measure. As we considered when to have such a conversation, it became evident that we do not have consensus as a department about the value of pursuing the goal of having our students learn to use technical word processing software.

Moreover, the technical difficulties of installing and learning to use the freeware mentioned above have left us uncertain about whether our students are well-served by its use.

Those faculty who do value the goal may simply decide to make it a goal for the courses they teach, without making it a goal for all of our majors. Those faculty may decide to collaborate with each other on the assessment of that goal, and may find ways to collaborate across courses, but these ideas need further discussion. All the faculty who share this goal will be away for parts of 2006-07, so we will postpone further discussion until 2007-08.

Student Learning Outcome #2

100% of Liberal Studies students taking the CSET exam will pass the subject area exam in mathematics

Data

As of May 2006 CSET scores are available for 8 of the 9 Westmont Liberal studies graduates continuing into the Westmont Elementary program. 100% of students passed in each year

	2004-5	2005-06
Mathematics	4.00	3.875

Interpretation

The scores of Westmont Liberal Studies graduates leave very little room for improvement. The data clearly indicate that the current configuration of the MA160/MA165 series is serving the Liberal Studies majors well.

Using the Results and Next Steps

The scores do not indicate the need for any changes in the current program. Rather, any proposed changes should be carefully monitored to insure that there is not a negative impact.

We will continue to monitor the CSET mathematics scores of Liberal Studies students to insure that the current quality is maintained.