May 28, 2010

Dr. Doğan Çömez, Chair
Department of Mathematics
Minard Hall, Room 305C
NDSU Campus

Dr. Sean Sather-Wagstaff, Chair
Mathematics Assessment Committee
Minard Hall, Room 310D
NDSU Campus

Dear Drs. Çömez and Sather-Wagstaff:

This letter and the enclosed overview and graph serve as the completed review for the assessment report submitted for the Department of Mathematics on January 29, 2010.

A member of the University Assessment Committee volunteered to serve as an independent reviewer for your assessment report on February 5, 2010. However, an independent review has not been received as this letter is drafted. As a result, this review represents a singular perspective.

The disclaimer of singular perspective aside, this report contains some impressive areas of strength. Initial impressions, and some carried over from the previous report, are of an exceptional writing style, a logical assessment plan, the concerns for student learning expressed by several faculty, and candor. This report contains a wealth of information and, as indicated in the previous review, the concern for student learning by many of the faculty begs for a wider appreciation across campus of the faculty involved in this report.

It should, perhaps, be no surprise that report exudes logic.

The report contains an excellent Table of Contents and a list if items that instructors provided to members of the department’s Assessment Committee. Several references were made to addressing comments provided in the previous review. A multi-level rubric was applied uniformly throughout each course. Item analysis of graded material, perhaps one of the strongest assessment techniques because it involves an approach to authentic assessment, was the featured direct method of evaluating student capabilities.

While the report included a number of strong contributions for individual courses or sections, the artifact placed at the start of the report established an effective tone for the entries that followed. The initial item contributed to a comprehensive impression of faculty interest in what students know and can do.
Deriving course objectives from the topics listed in the NDSU Course Catalog for each course was a stroke of insight and evokes thoughts of proof in advertising.

The Levels of Implementation self-evaluation was effective and included comments that were appreciated by this reviewer.

The wealth of data contained in the current report is impressive!

Examples of strong assessment activities included blends of formative and summative assessment techniques, emphasized direct measures of student learning, and included insightful reflective statements. Some of the reflective statements were superficial, as recognized in the conclusions of the departmental reflection. Considered as individual courses, evaluations would range from 6 to 10+ for the entries in this report. Viewed as a whole, an evaluation of 7.8 may be appropriate and represents an increase from the score of 6.0 for the previous academic year.

The "panoramic view" of courses, as mentioned in the departmental reflection, is a product of the assessment plan and the approach to assessment. A significant recognition was the merit of instructors in courses having multiple sections meeting to discuss approaches to teaching the content of the class. (FYI: The state-wide Common Course Numbering System is based upon a minimum of 70% shared content.) Another strength of the report is that the Assessment Committee will seek to identify assessment techniques that will provide useful data for a greater number of faculty.

Some concern must be expressed for the next assessment report. That report will address student learning in courses numbered 164 and below. Those courses involve an exceptionally large number of students and it may become appropriate to modify some of the in-depth reporting that characterized the current report.

The intent of the previous comment is to avoid "burnout" of the members of the Assessment Committee as the courses that focus on students not having majors or minors in Mathematics become the basis for the next assessment report. No specific approach will be offered as that would unnecessarily interfere with opportunities to implement methods and procedures that would be of greatest value to faculty in the Department of Mathematics and to their students.

Two of the three courses offered by the department that have been approved in the Quantitative Reasoning category of General Education will be included in the next report. A comment not present in the previous review was that reporting
of assessment activities in General Education courses is expected to be a part of each assessment report. Please excuse that omission.

The current assessment report from the Department of Mathematics contains a wealth of information and some exceptional individual contributions. If an appropriate journal could be identified, publication of the fundamental elements of this report is encouraged.

Please share an appreciation for the rapid enhancements that have taken place in the department's activities to assess student learning with those involved with, and contributing to, the current report. The report contains a wealth of solid material.

No specific assistance was requested in the summary. However, if any member of the University Assessment Committee or I might provide assistance with respect to assessments of student learning, please contact me at your convenience!

Sincerely,

[Signature]

Robert Harrold
for the members of the University Assessment Committee

Enclosures: Overview, Graph

Copy: Dr. R. Craig Schnell, Provost and Vice President for Academic Affairs
    Dr. Kevin McCaul, Dean, College of Science and Mathematics
    Dr. James Council, Associate Dean
    Dr. Davis Cope, Mathematics Assessment Committee
    Dr. Angela Hodge, Mathematics Assessment Committee
    Dr. Kenneth Magel, representative from the College of Science and Mathematics to the University Assessment Committee
    Dr. Larry Peterson, Chair, General Education Committee
Overview:

Assessment Report for the 2008 - 2009 Academic Year
from the Department of Mathematics

Date that this review was completed:  May 28, 2010

Strengths of the report included, but were not limited to:

- The department’s assessment plan establishes a logical course of action and identifies how each course having meaningful enrollment will report assessment activities during a period of four years.

- The current assessment report was characterized by a clear and effective writing style and was enhanced by effective organization.

- The best contributions to this report contained a significant level of detail, employed multiple direct measures of student learning, included meaningful analyses of what had been learned, and provided clear indications how what had been learned would be used to enhance learning of future students.

- The current report included assessment activities for essentially all courses included in the assessment plan. (Undergraduate seminar was an exception.)

- Concerns for student learning were clearly demonstrated in many of the individual entries that contributed to this assessment report.

Opportunities for future consideration could include:

- Consideration may be given about how to make the next report, one that will include courses with large enrollments and multiple sections, a learning experience for the department without taxing the department’s Assessment Committee and creating a reasonably short report.

Any additional considerations pale in the light of this challenge.
Figure 1. Plot of assessment report evaluations for the Department of Mathematics versus the campus average and the average of the top 25% of reports for the academic years from 1998 - 1999 through 2008 - 2009.

Evaluation Score:

Academic Year

Comments: Evaluation scores for the 2008 - 2009 academic year (Campus average and top 25%) remain in development. To provide a frame of reference, previous values have been carried forward. Those values may be expected to show a slight change when the final data become available.

The report for 2006 - 2007 was an assessment plan.