How Academic Programs Are Closing the Assessment Loop

Anthropology

As a result of the 2007-2008 Assessment of Multi-cultural content, Anthropology has implemented several changes within our program. These changes are:

- Addition of Teaching Assistants for all S/M Anth 100 and S/M Anth 101 sections. These Gen-ed oriented courses account for approximately half of all students in Anthropology courses per semester. These TA's are upper division Anthropology majors who have already mastered the content of the specific courses. The TA's are required to participate in a teaching practicum and hold office hours. TA's in Anth 101 sections conduct review sessions before exams. Most importantly, TA's act as tutors for students who are having difficulty with the multi-cultural content of the courses. Assessing the impact of having these students act as tutors is difficult, but we have received many positive comments from students in Anth 100 and Anth 101 on the SOFI's in these courses, indicating the usefulness of having the TA's available to students, especially for international and EOP/AOP students.

- Expansion of the use of wiki entries in S/M Anth 100 (Aimers section), M/ Anth 224, M/ Anth 226, S/M Anth 229, and S/M Anth 235 so that students can actively engage in and help to create the multi-cultural content of these courses.

- Addition of the use of a pre-test in S/M Anth 215 to more accurately measure the change in students knowledge of multi-cultural content as a result of the course content.

- Shifting to use of primary source materials, as opposed to text books, in S/M Anth 207, S/M Anth 215, M/ Anth 224, M/ Anth 226, S/M Anth 235, and S/M Anth 243. Moving away from text book learning to primary source material in these courses provides a better context for engaging students in an interactive, discussion based approach to learning multi-cultural content. As noted above, discussions in several of these courses occur on the wiki, while the others are in-class discussions.

As a result of the 2008-2009 Assessment of Writing Competency and Theoretical Competency, Anthropology has implemented a few minor adjustments to the program, but left other aspects of the program unchanged. These decisions are:

- Based on the results of the two means used to assess Theoretical Competency, we were generally satisfied with the results and decided to leave the theory sequence of Anth 310 and Anth 321 intact. Comments from former Anthropology students indicated very positive application in both graduate school and in jobs related to the discipline of their understanding of Anthropological Theory and the critical thinking skills which are emphasized in these courses.

- The assessment of Writing Competency has led us to begin to revise our writing requirement. While it appears that in general students are developing as writers, the results of the assessment were somewhat inconclusive and difficult to interpret. It was our judgment that the problem in the assessment was the inability to track the changes in writing competency from the beginning of the students acceptance into the major to the end of the program because students were self-selecting the papers that they included in their file to fulfill the department writing requirement. Beginning this year, we scanned the very first paper students wrote in Anth 105 - Intro to Physical Anthropology as pdfs and have stored them on our server space minus the title pages that include student names. Anth 105 is a required course for our majors and is only taught once a year in the Fall Semester, so the vast majority of Anthropology majors will take the course early in their tenure as majors because it is also a key pre-requisite for later courses in the major. Also beginning this year we will do the same thing for final papers in 300-level courses, especially Anth 301, Anth 307, Anth 313, and Anth 346 which have final papers and are popular senior courses. These two sets of papers will be used in the next writing assessment after which we will formally change the writing requirement for the major and make other appropriate changes if warranted by the results.

As a result of the 2009-2010 Assessment of Library Literacy and Research Methods, Anthropology has implemented a couple of changes to our program. These changes are:
As documented in our Library Literacy results, we have noted a significant lack of sophistication in our student’s use of scholarly library research tools. Undergraduates appear to be particularly weak in recognizing and using scholarly resources and need to hone these skills by formal instruction in the classroom. The results also show that library instruction sessions significantly improve the students as both scholars and researchers, especially enhancing their search and locate abilities. Therefore we have decided to more actively embed library instruction in our major at the 100 and 200 level. For Fall semester 2010, several courses added 1-2 library instruction sessions. These courses are: Anth 100 (Krumrine sections), Anth 204, Anth 207, Anth 216, and Anth 235. Only Anth 100 (Krumrine section) and Anth 216 had library sessions planned prior to this decision and as a result of this revision the number of sessions in Anth 216 were increased.

Our assessment of Research Methods showed two things. First, we found that students ability to successfully conduct independent research projects is limited by their inability to search and locate the appropriate scholarly research in order to provide them with thorough literature reviews. Without the appropriate background information their research projects lacked context and sophistication. We believe the changes implemented above to Library Literacy will help to address this problem. Second, we found that the course we set up to organize independent student research, Anth 392 - Undergraduate Research Seminar, did not work well because the students involved in the course required to much input from the professors who specialize in the topics they were interested in for their research projects. Likewise, one semester the professor with the necessary specialty for two of the student projects was on sabbatical and the professor teaching the seminar found it difficult to properly supervise these projects. As a result of the unsatisfactory nature of Anth 392, we have decided to abandon the seminar format and return to the directed study approach that prevailed prior to creating the course. The one main positive of the seminar, which provides a format for students to practice their GREAT Day and professional presentations in front of peers, will be maintained independent of the course.

As a result of the 2010-2011 Assessment of Human Diversity and Oral Competency, Anthropology will make minor changes and leave aspects of the program unchanged:

- We implemented pre/post test assessments in two of the courses included in this cycle. This approach will be expanded in future assessments as a second means of assessment.
- This cycle is the first since all of the human diversity sections added tutoring through hand-selected teaching assistants. We also incorporated more discussion of current social and economic issues into the course formats (including Anth 100, Anth 105, Anth 215, and Anth 243), added wiki work (Anth 100, Anth 229, and ANTH 235), and replaced textbooks with original sources in several courses (including Anth 207, Anth 215, and Anth 243). We are encouraged by our overall results and will continue to expand the incorporation of these changes into our courses between now and the next assessment cycle for this learning outcome.
- There was a noticeable across the board improvement in student success in these courses since the 2007-2008 cycle, but we feel that the rubric needs to be improved. We are creating a working group to look at all of our rubrics.
- Results in oral competency were generally encouraging. Of the assessment categories, expression is consistently the lowest scoring category. These data suggest that our students are relatively competent at organizing and creating presentations, but that they need continuing practice expressing their results to a group. Consequently, the Department of Anthropology has decided to maintain its commitment to providing students with opportunities to orally present their research results in our courses. This will continue to occur at each level of the program. One of the problems we see with the current standards is that the bar they set is fairly low for exceeding the standards. While these do not deter students from becoming orally proficient, it does limit our ability to assess the level of competency they are achieving. We will make minor adjustments in the rubric to raise the bar across all areas of oral competency. In light of her findings in Anth 204, Barb Welker noted that she will continue to require all of her 200- and 300-level students to conduct a formal presentation of their literature reviews. This year she included a library literacy component with conducting the literature review. For the second means of assessment in the next cycle we will have the students use the same rubric as the professors to evaluate the oral presentations.

As a result of the 2011-2012 Assessment of Writing Competency, Anthropology has implemented minor changes to our program. These changes are:

- This writing assessment used the 100 vs. the 300 level papers for maximal comparison and shifted to use of a modified AAC&U rubric on assessing writing competency.
- After this assessment, the department writing requirement will be changed to requiring students to pass either Anth 201 or Anth 204 with a C- or higher grade. These courses will both be taught by Dr. Welker and she will use a draft and revisions process during the course to improve student writing. The change will concentrate the focus on writing within two similarly structured courses with the same instructor. Similarly, we have now implemented writing at all levels of the program.

As a result of the 2012-2013 Assessment of Research Methods, Anthropology will implement changes to our program. These changes are:

- We are unsatisfied with the research methods requirement in the program as currently conceived because it comes off as too much of a cookbook approach. Methods are embedded throughout the program, but especially in courses with active, hands-on learning experiences. We will make changes to the program to include a transformational learning requirement. By having students engage in anthropology methods themselves, the change from a these are methods to this is how methods work approach will be complete.
- Directed studies (Anth 399) and honor’s research/writing (Anth 393) will be counted as transformational learning experiences and the Anthropology faculty is encouraged to offer and engage students in these manners.

As a result of the 2013-2014 Assessment of Human Diversity and Oral Competency, Anthropology will implement minor changes to our program. These changes are:

- Assessment of human diversity will remain unchanged, but next cycle this assessment needs to get back on track.
- While students appear to be doing very well in this learning outcome, the oral competency rubric will be changed again to reflect more subtle issues in student presentations and in ways that raise the bar even further. The student feedback form will also be simplified to see if the tendency for students to not be critical of one another remains consistent regardless of the instrument.

As a result of the 2014-2015 Assessment of Competency in Theoretical Perspectives, Anthropology will implement changes to our program and leave other aspects unchanged. These changes are:

- Both theory courses will be re-numbered to 400 level to reflect their status as capstone senior level seminars.
- The program will be changed to eliminate alternative electives to the second theory option. Instead, students will now choose between either Anth 410: Classical Theory, or Anth 421: Contemporary Theory. This decision will also have the effect of spreading the seniors among the two courses, serving to reduce the overall class size in both, but especially in Anth 410, which had experienced course sizes in the 28-30 student range between 2010-2014. These are clearly too many students to run an effective seminar with when expecting daily preparation and participation.
• Because of the clearly lower success that students had describing and contextualizing Anthropological theorists in ANTH 410, a review day was added to the syllabus on the final day of the course before the final. During the review, all of the theorists covered during the semester will be summarized and compared and contrasted with each other. Use of the large white-boards in Bailey 110 facilitates listing all of the theorists at once so that connections can be made between them.
• Self-selected responses from former students show a significant level of satisfaction with the content and approach taken in both courses. These will be left intact as it looks like the courses are doing a good job of preparing students for graduate school and other life experiences which require critical thinking skills.

As a result of the 2015-2016 Assessment of Writing Competency, Anthropology is implementing a couple of new changes to our program. These changes are:

• The department writing requirement is being shifted entirely into one course, Human Ecology, Anth 204, which will be re-numbered Anth 316. The number of students taking Anth 201 has tailed off considerably, plus it is much more specialized than Anth 316. By placing all of the department writing requirement in Anth 316 it will allow us to have a more uniform set of writing assignments. Plus we will also benefit from linking the requirement to a course which has a major emphasis in sustainability.
• Anth 105, which is used as the 100 level course for the comparative writing assessment will be re-instituted as a required course for every major. This course will also be required as a pre-requisite of Anth 316. Thus, writing in Anth 316 will build upon writing in Anth 105. INTD 105, 200 level courses - including the Humanities sequence, finishing with 300 level courses in the major which we will use for the writing assessment.

As a result of the 2017-2018 Assessment of Library Literacy, Anthropology is implementing a change to our program related to semester long research projects. These changes are:

• Based on the results of our assessment of library literacy and the recommendations of Librarian Brandon West, we have decided to promote scaffolding research-based assignments. For example, this means having students turn in a list of sources or annotated bibliography, a draft thesis statement or research question, an outline, and then the final assignment. The goal in adopting this approach is to improve the quality of the student work because it will circumvent procrastination.

Art History

Art Studio
Closing the Loop in the Studio Arts Program

Graphed Results

Outcome#1 charts loop.docx
Outcome#1 charts loop.docx
Outcome #2 charts loop.docx

General Comments

The SUNY Geneseo Studio Arts Program like most studio art programs uses two important benchmark points that are used to assessment student accomplishment. These two points are a Foundation Portfolio Review and a Senior Exhibition Review. In both cases a portfolio of work presented by each art major is evaluated by at least three studio art faculty. Although these portfolio reviews offer a tremendous opportunity to assess both students and the art program, neither was done in a formalized way prior to the adoption of standardized assessment practices in 2000. This intuitive has had significant and positive results for the Studio Arts Program. It has helped to develop the capstone graded courses for the studio art program; Sophomore Foundation Portfolio Review, Junior Studio Seminar, and Senior Exhibition.

Assessment Tool

One of the first important changes that were made was developing a list of what the faculty felt were important skills to be measured and then creating a tool to measure these skills. Assessment forms have been developed and used for both the Foundation Portfolio Reviews and Senior Exhibitions Every faculty member in attendance completes an assessment form for each portfolio reviewed. Over the years the form used to measure these skills has changed to include or exclude various items to better fit our program or to make the process less cumbersome or more accurately identify a skill. A companion list is also given to students so their portfolios could better reflect the skills required. Even with the best tool possible, the subjective nature of art adds to the challenge of having clear standards that can be agreed upon by all in every circumstance.

Changes in Structure

The assessment initiative has required many changes including a more formalized structure for meeting students and reviewing work. For Foundation Portfolio Reviews students are now required to set their work up in advance, have their work all labeled with the skill exhibited in the work, select three works to be presented more professionally, and explain their work formally using art terms and concepts. The most significant improvement in student work (Foundation Review and Senior Exhibition) came in 2005-6. Prior to this time the reviews were required events but carried no credits and were not graded courses. Having a class structure with greater and clearer expectations along with a grade, made a tremendous difference in student investment and quality. The students are reaching higher and the faculty raised their expectations. This has been particularly true in the Senior Exhibition (Outcome #1).

Assessment results also led to changing the structure of the Senior Exhibition to help students meet higher expectations. Part of the purpose of the Junior Studio Seminar is to help students understand their individual goals as artists. This includes developing their own artist’s statement and writing a research paper in support. In addition seniors are now required to select advisors to help them with technical, formal, or conceptual issues as they develop work for their exhibitions. This preparation has been helpful to students in creating more interesting and thought-out work. It also has enhanced their ability to speak about their intentions more clearly.

Biochemistry
Biology

Business
- Close the Loop 2018-2019

Chemistry
Because of assessment results (cf. 2006-2007 MFAT results), the department was concerned about the performance of chemistry majors in organic chemistry both on the ACS standard exam administered at the completion of a two-semester course, typically taken in the sophomore year, and the retention of the topic upon exiting the program in their senior year as judged by the MFAT Organic subsection score. Curricular changes to organic chemistry were made as a result, including a change in the course sequence that required all chemistry majors to take Chem 313 (Advanced Organic Chemistry Laboratory) during the second semester of the sophomore year. This laboratory reinforces concepts that are covered in Chem 213 (Organic Chemistry II), effectively bringing the theory of the course to practice in the laboratory. The relatively strong performance in the MFAT Organic subsection score for the 2008-2009 and 2009-2010 academcics years suggests that the curricular changes in the organic chemistry sequence has had the desired effect. We will continue to monitor this area.

Communication
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Communicative Disorders and Sciences

Computer Science
The computer science department is currently about two years into an effort to develop and conduct course level assessments. This effort has led to improvements in our daily operations, although mostly as improved assessment procedures rather than course improvements (for two reasons: first, the effort is relatively young and there is still much to improve in it; second, we do not publicize course assessment results until they can be based on at least two offerings of the course in question and at least two instructors—this policy ensures that assessment assesses courses rather than instructors, but means that it can take several semesters to gather publishable results for a course and so results appear slowly). Nonetheless, two discoveries about assessment procedures are subject to current or future action:

- Based on assessment results from CSci 119, the introductory programming course for computer science majors, we have asked whether our tests accurately capture students' real abilities. For example, a student's practical programming ability may look different on a time-limited pen-and-paper exam than it does when the student can try their ideas on a computer over a period of several hours (which is the more realistic setting for programming).
- Based on experiences with several courses, we have recognized that some course outcomes are phrased in ways that are hard to assess. Outcomes of the form "students will be able to do A and B" are problematic because even if students master one of A or B thoroughly, failure to master both means that the outcome is only partially achieved, which in turn masks the fact that students are doing quite well on other parts of it.

The first of these realizations has implications beyond assessment, namely that ordinary class examinations may mismeasure student abilities in some areas. Following department discussion of this possibility, at least one instructor began exploring laboratory-based examinations to complement pen-and-paper ones.

The computer science department meets once per semester to review assessment results. These meetings are generally structured around a report from the department assessment committee on the previous semester's assessment. Lately, these meetings have concentrated on course level assessment because that is the newest and most active area of assessment within the department, but program level assessment is also a permissible subject for discussion. These discussions make the entire department aware of assessment results and their implications. As illustrated above by the example of laboratory versus pen-and-paper examinations, concrete actions have followed from our discussions.

Education

English
Closing the Loop:

Basic Research Outcomes, 2009-10

English Department

1 November 2010

In response to our recent findings on Basic Research Outcomes, the English Department has worked to close the loop through discussion of the results and individual methods for addressing concerns raised by the results and by making some suggestions for further action on the results.

DISCUSSION

The significantly lower scores for the SYNTHESIZE AND ARGUE from the Basic Research Outcomes Rubric corroborated with the anecdotal sense of department members who engaged in discussion on our wiki page. As one Department member put it, “…our departmental mappings of real strengths and relative weaknesses...are consonant with things that I have observed both in my English classes among beginning and advanced students and also among incoming students in the INTD 105 course I teach each semester.” It should be noted that some respondents wondered about the precise suitability of some categories from the Basic Research Assessment Rubric: for instance, is it really possible to “argue” at all without an ability to properly “synthesize?”

At least two causes for the disconnect between finding research sources and applying them became prominent in recent discussion on the wiki: the overwhelming amount of available information, and the lack of close reading.
Information overload: Unlike many years ago, when students had to “hunt” more arduously through printed indexes and wait for weeks for interlibrary loan articles, a huge amount of material is now available simply by typing a few words into a search box. That search box is often Google’s, even though students have access to more focused Internet search engines such as the Modern Language Associations online bibliographies, not to mention to hard-copy journals still under library subscription and monographs in the stacks. While the assessment results show that students do manage to find materials, some respondents still think that the vast and easy availability of sources has hampered student’s abilities to evaluate the usefulness or appropriateness of secondary materials. It is clear that faculty want to see students make more discriminating judgments about research materials. One department member, however, has observed no essential difference between the synthesizing skills of students in the pre-Internet era and those of current students.

Lack of close reading: Even more respondents spoke at length about the importance of close reading as a prequisite for developing good synthesizing skills. “Students often fail to support a well-organized argument because they are not good close readers; they don’t focus sufficiently on the texts they are reading; they don’t read with enough care and atti;…On critical papers, students often forget to adequately support their good points or conclusions because they’re not used to close reading and to pulling evidence out of a text.” Moreover, many students struggle with reading earlier texts or texts in an unfamiliar dialect; even if they manage to “translate” the text into modern words, students tend to think that this by itself constitutes analysis.

There are already some ways in which individuals or groups of individuals in the Department are addressing this issue. To begin with, all instructors in ENGL 170 for Fall 2010 have initiated a coordinated program to emphasize close reading of texts. (More information about their work, “Practicing Criticism,” can be found at http://go.genesee.edu/170wiki). Other Department faculty have been focusing specifically on synthesizing skills. One example is the Department member who assigns a series of short response papers from which the students receive detailed feedback about their application of sources. Yet another instructor has devised an assignment for INTD 105 and ENGL 170, “a specific in-class discussion and practice unit on synthesizing various arguments (evidence) on a single point of interpretation,” in which students read a Robert Frost poem alongside excerpts from two different critical responses. Finally, several faculty give students the opportunity to turn initial assignments, such as short essays or annotated bibliographies, into semester-end research essays.

While these are individual solutions can be effective, they do not yet rise to the level of a departmental policy. In a somewhat formal manner, we discussed some of these results together at the regular Department meeting on 27 October 2010. We noted that the responses to the report and sharing of solutions on the wiki can and should be folded into our deliberations for revising the major that have started this fall.

In our discussions of research outcomes (primarily on the wiki) Department members engaged in the discussion have suggested several courses of action we should address in the near future:

- use 170 to teach close reading instead of focusing on research skills
- define a way to collaborate with the library on research techniques and source evaluation
- expose students to the best and most pertinent search engines and teaching students to use them effectively to find appropriate sources
- incorporate research skills in particular courses so that students are ready to apply these skills in 300-level courses
- develop assignments that can maximize the advantages of easily-available information
- promote and incorporate assignments that focus specifically on synthesizing information

Graham Drake
Departmental Assessment Coordinator

Foreign Languages
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Geography
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Geological Sciences

Closing the loop on a student-by-student basis:

Our general assessment philosophy has aspired to measure our learning outcomes in successive required classes. Those students identified to be not meeting or exceeding expectations early in their education are noted. The professor teaching those early classes informs the rest of the department which students are in need of special attention or encouragement to meet a learning outcome. In this way we strive to have all of our students meeting all learning outcomes by the time they graduate.

We have been most successful with this approach as applied to our “communication of geological knowledge in written and oral forms commonly used by professionals.” Major writing assignments are required in GSCI 210, GSCI 220, GSCI 331, GSCI 341, GSCI 351, and GSCI 361. Students who perform poorly on their GSCI 220 paper are flagged and the GSCI 220 instructor (Farthing) are identified for the GSCI 341 (Giorgis) and/or GSCI 361 (Ober) professors. We explain the writing requirement for the major, how the student(s) need to improve to meet the requirement, and the resources available to assist them reaching their goal. In a similar manner, those students with poor writing skills leaving GSCI 341 or 361 (Fall classes) are noted to the professors teaching GSCI 331 or 351 (Spring classes).

We approach the oral discourse portion of this goal in the same way. Students are required to give two presentations in GSCI 341 and GSCI 391. Those that do poorly in their first class are noted and encouraged to take steps to improve in the second class.

Learning outcome goals three (understand theory behind analytical equipment commonly used in the geosciences) and four (understanding operation of analytical equipment commonly used in the geosciences) have the potential to be addressed in the same way. Theory and practice of major instruments are used in successive required classes (GSCI 210, 220, 361). We do not, however, formally communicate scores on these goals for each student from semester to semester. We need to formalize this communication to track and help students improve on these goals.

Closing the loop on a department wide basis:
Our first learning outcome, “professional advancement through employment or graduate school as a demonstration of knowledge of geology and principles of science”, has been the focus of our most recent “closing the loop” discussion within the department. It has become clear in the last three years that fewer of our students are going to graduate school directly after completion of the degree program at Geneseo. As long as this learning outcome is measured over a five year time period, we do achieve an 80% score, but if we consider a shorter time series (i.e. one year) we do not reach an 80% success rate. This is not necessarily a bad thing, however it is a change. Based on this information we have made a conscious effort to inform students about graduate school sooner and on a more regular basis to insure that they know their options. Anecdotally, this seems to be working. More students have applied to graduate school in the last two years than in the previous two. It is difficult to know if this observation is significant.

Secondly, Academic Program Assessment Committee (APAC) noted, employment or graduate school is an indirect measure of the how well our students “demonstrate knowledge of geology and principles of science.” We need to come up with a direct measure of this information and have considered two options: first, our junior-senior capstone seminar. This class (GSCI 391) requires students to synthesize much of their geological knowledge in the context of a two-week long field trip and a research project that follows. We use this as a forum to evaluate student oral communication skills (Learning Outcome #2). Furthermore, students are to propose and complete an original research project as part of the class. This clearly requires students to use the “principles of science” and “demonstrate knowledge of geology.” Using this as a measure has two downsides: (1) students often work in pairs, so it is difficult to evaluate individual contributions and (2) students demonstrate knowledge of geology with respect to the specific need to complete their project. Most students select a project topic in a field in which they are comfortable and knowledgeable, therefore using this as a direct measure will likely yield scores that will tend to be higher. At this time, this is our best idea. We have considered using a nation-wide professional geologist examination administered by Associate of State Boards of Geologists (ASBOG). At this time we are unwilling to pursue this route because it is an expensive exam and it covers several areas that the faculty at Geneseo do not teach (e.g., Engineering Geology or Seismology).

History

Mathematics
Closing the Loop
Implementing Assessment Results

During the last six years, the Department of Mathematics has undergone two five year reviews. In each of these reviews, the external reviewers have provided the department with recommendations that they felt could be used to make a strong program even stronger. During AY 2009 – 2010 the department has attempted, to the extent possible, to implement these recommendations.

The pages that follow list the recommendations made by the external reviewers in 2004 and 2009, and describes the efforts that the Mathematics Department has made to implement these suggestions. Clearly, SUNY’s budgetary hardships have made it very difficult, if not impossible, to implement several of these proposals: e.g. new faculty lines in mathematics education and statistics. None the less, we have made progress in quite a few of these areas, and are positioned well to implement several others. In addition, there are a few that the department is currently discussing internally in an effort to be sure that changes suggested are, in fact, in the best interests of our students and the college as a whole.

Recommendations From 5-year program review – spring 2009

“Geneseo has asked much from the Mathematics Department. The department has been required to provide superior training for mathematics education majors, prepare a second cohort for graduate school, offer masters candidates an applicable degree in mathematics education, effectively teach terminal mathematics coursework for all natural science majors, lead in the mathematical instruction of childhood educators, and inspire students in the humanities with its general education coursework in mathematics. The burden falls on a limited number of faculty members who work hard to balance ever-increasing responsibilities of teaching, service, and research.

To maintain such a superb level of performance will be difficult for the department, particularly in extremely difficult budget times where resources may not be readily (if ever) available. We are confident, however, that with support from the Geneseo administration the department can move from excellent to extraordinary. Our recommendations outlined below are made with this in mind—moving from the excellent to the extraordinary.[1]#ftn1[^1]_

Recommendation 1: [Minimal expense] Pre-service teachers within the department need more exposure to ‘authentic’ teaching and outreach experiences earlier in their careers. While student teaching is often transformational as a capstone experience, earlier clinical experiences either as a part of targeted coursework or through PRISM are necessary and rewarding.

Action: Students enrolled in INTD 302 spend time working with middle school students at Geneseo Central School as a part of class requirements. We will continue to pursue relationships. Additional interaction of this type needs to be implemented.

Recommendation 2: [Minimal cost, but diplomacy needed] With such a large annual cohort in mathematics education, pre-service mathematics teachers would be better served if state-mandated requirements in literacy and technology were tailored for pre-service teachers in mathematics.

Action: A substantial portion of the state mandated instruction in the appropriate use of technology has been moved into INTD 302 so that it can be presented in a content specific context. In addition, Dr. Sutherland has recently established a relationship with Texas Instruments through which she conducted, last fall, a pair of seminars that instructed student teachers in the effective usage of a new technology, the TI – Inspire, and which procured for the department a set of 30 Inspire/CAS calculators that are on the cutting edge of this variety of technology.

We are closely watching the enrollment figures for secondary education to determine if we can justify requesting a section of EDUC 215, Foundations of Literacy, to be taught in a math-specific manner.

Recommendation 3: [Significant cost] An additional faculty member in mathematics education should be hired as soon as possible.
Action: We have requested this position for the past two years and will continue to do so.

Recommendation 4: [No immediate cost, but potentially costs in the long term] Undertake a thorough re-examination of the program and coursework offered in the Master of Science-Secondary Mathematics Education Program currently provided at SUNY Geneseo, and subsequently make fundamental changes.

Action: This is well under way. We have been collaborating with several members of the School of Education to formulate a revised MS.Ed. program that we feel will better serve our graduate students. It will include the current number of required content courses, but includes a substantial component in teaching mathematics to students with special needs. The program revision is very nearly complete and will be submitted to the College Senate this fall. In addition we have appointed an ad hoc committee to re-evaluate each of the graduate mathematics courses to determine whether or not they need to be revised or dropped from the curriculum.

Recommendation 5: [Significant cost] Hire a statistician.

Action: We will request permission to conduct a search for a tenure track line for a statistician.

Recommendation 6: [Little cost] Create mathematics minor tracks for various majors across campus.

Action: We recently added a minor in Bio-mathematics and are in the process of assessing its success. We then plan to open discussions with other department/programs (chemistry, physics, economics) to evaluate the viability of such programs.

Recommendation 7: [Little cost] Improve advising.

Action: In order to insure that each student gets at least one comprehensive advisement session, the department chair now conducts all pre-graduation checks. This, along with the “hold” on registration now being imposed by the Dean’s Office, is a first step implementing this recommendation.

Recommendation 8: [Little cost at this point] Continue to develop courses and concepts about an honors program; however, remain carefully aware of how the Honors Program will fit with the total departmental program.

Action: Honors Mathematics I and II were offered for the first time during AY 2009 – 2010. In addition, we have begun work on Honors Mathematics III and IV and plan to submit proposals for these two new courses in Fall 2010. In the mean time Honors Mathematics III will be offered in the fall as Math 388 – Experimental.

Recommendation 9: [Relatively little cost] Consider enhancing the current Supplemental Instruction (SI) Program whereby a single Supplemental Instructor offers recitation services to small groups of students in introductory and intermediate level mathematics courses under the direction of a mentoring professor.

Action: No action as yet. The department participated in the SI program during 2008 – 2009, however we don’t believe that AOP continued the program this year.

Recommendation 10: [Little cost] Continue experimenting with guided discovery techniques of instruction.

Action: The department is supporting one of its newest faculty, Professor Rault, in his pursuit in this area. He has a mentor, Walker White from Cornell, who is skilled in Inquiry-Based learning (IBL). They meet regularly and it appears that both professors have seen steady improvement in Professor Rault’s instruction. In addition, we have proposed to the Provost that Dr. Rault and Dr. Nicodemi team teach a section of Math 239, Introduction to Proof, in the fall. This will allow for Dr. Rault to continue to have a mentor and will also allow Dr. Nicodemi to learn some of the techniques of IBL.

Recommendation 11: [Modest cost] Establish structured support for travel and presentation opportunities for exceptional students.

Action: Funding issues have placed this on hold.

Recommendation 12: [Modest cost] Connect with and stay connected with departmental graduates.

Action: With encouragement from faculty, the student mathematics organization, PRISM, founded a Facebook Page this spring (2010) which has already been joined by over 200 present and former students. We hope to use this to maintain contact to our graduates in greater numbers than we have in the past.

Major Recommendations from 5-Year Program Review Spring 2004

1. Establish a strong applied statistics course

Math 260, a non-calculus based statistics course, was dropped from our course offerings in 2007 and replaced by Math 262, Applied Statistics, based on the model suggested by the reviewers.

2. Strongly encourage students to apply for a summer REU and other such programs

This has been implemented successfully in each of the last several years. We have had students apply to and be accepted by programs across the country, including Trinity University in San Antonio, the University of Wisconsin, the University of Nebraska, the University of North Carolina, and several others.
3. **Offer a capstone course for seniors that includes a research project.**

In 2006 we added Math 348 to our course offerings. While not exactly a “capstone course, it does require a research paper and a requirement that the research be presented at some sort of forum. About 30 mathematics majors will be presenting at great day next week, most of whom are presenting work that resulted from Math 348.

4. **Establish an honors sequence in calculus**

This is a work in progress. In we have already established Honors Math I and II which, when completed qualifies a student for any course that has a prerequisite of Calculus I, II, or III. In addition the student meets the prerequisite for entry into an course for which Math 239 is required. We are currently in the process of submitting that paper work to add Honors Math III and IV to out course offerings, which will result in a four course, 16 credit honors sequence in mathematics which will provide a very strong background for students planning graduate study in mathematics.

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[1][ftntref1] From _Report of the External Reviewers, April 2009._

**Music**

**Philosophy**

How Philosophy Has Closed the Assessment Loop

The Department of Philosophy’s assessment is based upon essays written by students majoring in Philosophy when enrolled in the five main required “content” courses within the major (PHIL 205: Ancient Philosophy; PHIL 207: Modern Philosophy; PHIL 330: Ethical Theory; PHIL 340: Theory of Knowledge; PHIL 355: Metaphysics). In response to our several years’ worth of assessment results, the Department has initiated the two following responses:

1. Students are given clearer guidelines concerning the structure of philosophical writing and argumentation. The Department has developed a writing guide for this purpose; instructors distribute this writing guide to students.

2. Students are given clearer guidelines concerning the nature of philosophical research. The Department has developed an instruction guide to the main research tool (The Philosopher’s Index) for this purpose; instructors distribute this instruction guide to students and, on occasion, instructors lead tutorial demonstrations of the proper use of this research tool.

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**Physics and Astronomy**

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**Political Science and International Relations**

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**Sociology**

The department of sociology has focused on ‘closing the loop’ throughout our decade of assessment experience. To prepare this report, the department met and reviewed its full assessment results. To describe how the department has closed the loop, this report has two parts – the first part outlines the meanings we associated with our assessment results, and the second part outlines changes the department undertook and is considering as a result of our assessment program.

**Part I**

What was found through our assessment program and what do these findings mean?

The department of sociology was one of the first departments on campus to adopt learning outcomes and identify fundamental skills to be taught in each of the required classes. Perhaps as a result, our assessment results without exception have demonstrated success in achieving our learning outcomes.

Our assessment results show that because of department efforts, students (1) value inquiry of social inequality, and are able to (2) apply the sociological imagination to contemporary social issues, (3) identify a research question and appropriate methods for answering that question, (4) write a research report addressing a research question, (5) write effectively, (6) understand the basic theoretical positions of Marx, Durkheim and Weber, (7) understand contemporary debates in sociological theory, (8) demonstrate an understanding of the types of social research, (9) demonstrate knowledge of basic descriptive statistics, multivariate analysis, inferential statistics, and use of statistical software, and (10) develop an understanding of how sociological analysis could inform policy.

Because the ability to apply the sociological imagination is a central learning outcome, we assessed our efforts on this outcome in two different semesters using different sorts of samples. Our assessment of this outcome has provided confidence in the success of our program.

**Part II**

What specific changes has the department made as result of our assessment activities?

When we assessed our students’ abilities to write a research report and their abilities to write effectively (learning outcome #5), we found a substantial minority (of around 20%) that lacked solid writing skills. This is perhaps not surprising as the department serves substantial numbers of underprepared students. Because communication ability is so essential to sociologists (and college graduates), we tightened our major requirements, requiring a C- (rather than a D) in writing-intensive theory courses and requiring that students re-take these courses no more than once. The latter requirement was designed to encourage students to take advantage of faculty consultation and college-wide writing resources so that they develop adequate writing skills.

After the requirement changes are fully phased in, the department intends to re-assess our successes at teaching student writing. If a substantial minority continues to underachieve, we will consider requiring that students who are identified as having writing difficulties, get writing coaches. We might also consider requiring such students take a one-unit class in concert with one of our writing-intensive classes, in which students would work with individual faculty as they draft their essays.
Our assessment also indicated a similar substantial minority (of about 23%) do not develop sharp statistical skills (learning outcome #9). As a result, we added a tutoring program to assist underperforming students. We expect to re-assess student abilities in this area in the next year in order to measure the success of our efforts.

Finally, assessment of what students learn in the course designed to provide students with an understanding of the types of social research (learning outcome #8) suggested some students who come into the Social Research Methods course with substantial statistical knowledge gained only modest incremental increases in understanding. Although we considered providing some students with a waiver for this course, we instead decided to redesign the course to focus more on qualitative research methods. An assessment of whether the course provides more value-added to well prepared students than it previously did is currently being planned.

The department of sociology is committed to assessing one or more of our learning outcomes on a yearly basis, as we have found them to be quite useful in our deliberations on improving student achievement and curriculum reform.

Theatre