

# RICHARD STOCKTON COLLEGE OF NEW JERSEY

# EVIDENCE

## PROGRAM ASSESSMENT FOR CONTINUOUS IMPROVEMENT

JANUARY 2004



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## Assessment Progress in the Programs

Sonia V. Gonsalves

Both the January and February issues of *Evidence* will feature reports from programs about their progress in planning, implementing, and using assessment to examine and improve student learning. Programs have been moving with different speeds on a variety of assessment fronts and this semester we are committed to maintaining both our momentum and our direction. To this end the assessment committee members are firm in their resolve to making progress on each of the following areas this semester:

**Sharing** – we can share instruments, planning procedures, actual plans, anything that is working for one program may give an idea to another. Psychology shared our writing assessment instrument with the criminal justice program and they were able to adopt it with a few modifications.

**Planning** – programs must continue to plan for next steps forward.

**Using** the assessment results that we have - we are assessing to find out where we are with respect to our objectives and goals for student learning. Planning must include the use the assessment data that you have at each point in time.

**Doing** the next step in the assessment plan; planning is as necessary as action. If you have been planning for more than a semester try implementing some part of your plan this spring.

## Assessment Report for BASK Math Programs

Ellen Mutari

The BASK Math Program held a retreat to discuss assessment on Saturday, May 3, 2003. We received funding for the retreat from a Stockton mini-grant. While we have been conducting on-going meetings to review our program goals and course objectives, we benefited from having a substantial amount of time off campus to focus on assessment processes.

The focus of the meeting was designing an assessment process, given our goals and objectives for our courses. Among the issues discussed were:

- (1) When do we want to assess? (end of BASK experience? other G-courses? tracking future performance &/or attitudes?)

- (2) Who do we assess? (samples vs. population?)
- (3) How? (multiple methods?)
- (4) What? (content, reflecting our learning objectives? affective goals? behavioral?)

Again, since ours is not a program with majors, the issues involved in assessment are distinct from those of most other programs.

The program is beginning by focusing on content-oriented assessment at the end of BASK 1203 (the end of the BASK experience). Consensus has built toward a hybrid exam that balances computation with problem-solving skills. One idea being investigated was to select multiple

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## Assessing the Romance and Classical Languages & Literatures Program

Arnaldo Cordero Román

On Thursday, December 11th, 2003 *The Romance and Classical Languages and Literatures Program* held its second meeting of the fall semester. Present at that meeting were the following members: Fred Mench, Classical Studies, and Program Coordinator; Jeanne Andrée Nelson and Joseph Marthan, the French section; and this year's Spanish section comprised of Norma Grasso, Gorica Majstorovic, and María Castillo. During the meeting, I was allowed to report, summarize and persuade my fellow colleagues about the informative role that assessment plays in teaching and learning. I spoke about the Assessment Committee Mission and Goals; and about my active participation within the Assessment Subcommittee. As I had anticipated, I was met with some resistance. However, I asked my colleagues to give me feedback concerning the Articulating and Assessing Intended Student Learning Outcomes' Handout, prepared by Peggy Maki. After further discussion, I was able to rally support; especially after proposing that the Spanish section move forward with implementing the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines and the National Standards for Foreign Language Learning. The members of the Program were very receptive to this initiative, and they are presently awaiting the results and outcomes from the target areas: Beginning Spanish I and Intermediate Spanish I. This is the very first step toward developing a series of procedures that measure oral language acquisition skills.

As for more widespread participation from other areas, a program assessment subcommittee was formed. Joseph Marthan (May he rest in peace), Gorica Majstorovic and Arnaldo Cordero-Roman were planning to summarize the results of the Spanish section initiative, identify common core cognitive and affective competencies concerning oral proficiency. Coincidentally, our ROML Program is currently preparing a Five-Year Program Review to be completed by March, 2004. Dr. Alberto Barugel, Chair of Modern Languages at Jersey City University, will be our outside evaluator. The Assessment subcommittee will meet with Dr. Alberto Barugel to discuss the outcomes and to plan for the future, especially the fall semester, 04.

Impact: Gorica, Maria, Awilda Colón and I have been in constant communication throughout the semester. There is evidence of our intention to improve oral proficiency in the course syllabi, in our daily class sessions, and active participation in Service Learning. Many students of Spanish in the beginning and intermediate levels of language learning are voicing their positive feedback. The course, Spanish For Human Service Field, SOWK-2220/CROSS LISTED Lang 2220, has been one of keen interest. The Service Learning component of this course has greatly improved putting into practice the oral proficiency objectives, particularly the national standards: communication, cultures, connections, comparisons and communities. Gorica Majstorovic has also directed her attention to the pedagogical advantages of implementing assessment strategies in oral proficiency. With that intention, she has become more actively involved in this area. In November, she attended an Assessment Workshop at New York University.

## Nursing Program Assessment Report

Michelle Sabatini

### 1. PROGRAM DECISIONS AND COMMITMENTS

The nursing program has decided to begin the process of program assessment by examining critical thinking. The program has resolved to start this process by administering the National League for Nursing (NLN) *Critical Thinking in Clinical Nursing Practice* multiple-choice test. The tests were ordered in September and received in November. We plan to administer the tests to incoming students in the Spring 2004 term that are enrolled in Nursing Theory 3331, and again to the same students prior to their graduation.

### 2. ASSESSMENT GOAL

The goal of the current assessment plan is to evaluate the development of critical thinking skills in students enrolled in the RN to BSN program at RSCNJ.

### 3. PLANS TO USE ASSESSMENT RESULTS

The Nursing program plans to use the results to evaluate the critical thinking content in the curriculum. The results will also be utilized for accreditation purposes.

### 4. RESOURCES

The nursing program required money to purchase the Critical Thinking tests, faculty cooperation in administering the tests, and administrative support. All required resources have been forthcoming thus far!

### 5. FUTURE PROGRAM ASSESSMENT PLANS.

The nursing program would like to add a qualitative aspect to the critical thinking test in the future. Options include case studies or essays evaluated by the Critical Thinking Rubric already utilized by the nursing faculty. The nursing program would also like to explore additional concepts such as professional attitudes and leadership.

## Assessment Summary – Psychology

Jennifer Lyke

The psychology program has made substantial progress in establishing and enacting a plan for assessing student learning. Specifically, our objectives are to identify core content areas to assess, develop instruments for assessing these areas, administer pre tests and posttests in core courses and across the psychology major generally, analyze the results to determine whether students are learning what we would like them to learn, provide feedback to program faculty, and develop strategies for improvement. Toward these objectives, we have so far identified the core subjects in psychology and major content areas within them in accordance with the recommendations for learning objectives for undergraduate psychology programs of the American Psychological Association. Thus, we have taken steps toward identifying what exactly psychology majors should know or be able to do at the end of their psychology major that they do not know or cannot do before it.

We have also begun to develop some assessment instruments for these content areas, and have focused initially on some of the skills that apply to multiple courses. Specifically, we have begun by assessing students' learning in the areas of statistics and APA style. During the summer of 2003, we developed two instruments to measure students' understanding in these areas and had them approved by the program faculty. We then administered the APA style instrument as a pretest in all Fall 2003 sections of Statistical Methods and Experimental Psychology, two core courses taken by all psychology majors. At the end of the semester, we administered both instruments to the same classes.

Preliminary analysis of the pretest results for students' understanding of APA style indicate that scores of students who have taken Experimental Psychology were significantly better than either those who have not taken it or those who were currently enrolled ( $F(2,127) = 9.51, p < .001$ ). On the basis of these results, we suspect that taking Experimental Psychology is effective in helping students understand APA style. We are currently in the process of analyzing the posttest results for the APA style instrument as well as the results from the instrument to evaluate students' understanding of statistics.

Once we have developed instruments to assess student learning in all the major content areas, we expect that the results of pre- and posttests will provide evidence for whether and what students are learning in the core courses of the psychology major. In addition to providing a broad perspective on teaching outcomes in the psychology program, item analysis will also allow us to pinpoint specific

topics that we are effective or ineffective in addressing.

To continue developing our assessment strategy, one short-term objective is to again administer pre and posttests for these two instruments in Experimental Psychology and Statistics classes in Spring 2004. In addition, we will identify two more content areas for assessment and begin development of instruments for these areas. In order to accomplish these objectives, we will require time from faculty for analyzing results and developing instruments, and student assistance with data entry. Given these resources, we will certainly be able to continue our development of an effective assessment procedure for evaluating teaching outcomes in the psychology program.

## Assessment Report for BASK Math Programs

### Continued from page 1

choice questions from the old New Jersey College Basic Skills Placement Tests and augment them with more open-ended word problems. Since the retreat, we have been circulating copies of NJCBSPT questions so that we could select topics to emphasize. One unresolved issue was how to provide incentives to motivate students to take the test seriously. Should it factor into the course grade?

The second issue discussed was tracking students after they leave BASK. Two issues were of particular interest: (a) discovering which Q-courses our students take so that we appropriately design our courses to prepare them and (b) retention and graduation rates to verify that we are assisting "at risk" students. Since the retreat we piloted tracking former students using the SIS system to see which courses they had taken and whether they had successfully completed them. We are interested in sampling students in the same cohort and track their progress at Stockton. Finally, we have briefly discussed the possibility of utilizing Math Attitude Scales to assess affective goals. There are pros and cons to using these scales and more investigation is needed.

The results of our assessment would be used to refine our curriculum to ensure that we are meeting our goals and objectives and to periodically review the goals and objectives themselves.

We have not developed a formal list of needed resources. One possibility would be funding for a student assistant to help with the tracking aspect of the assessment process. At present, we are not seeking funds for any packaged tests.

The program has planned another retreat in February to discuss these issues in greater depth. At present, we do not have a timeline for implementing these processes.

# Assessment of Student Learning – Chemistry Program Progress Report

Brian Rogerson

## Summary

What are the particular levels of knowledge, skills, and abilities that our students attain as a result of their experiences with the Chemistry Program curriculum?

In response to this question, the Chemistry Program came up with a list of skills/outcomes we wanted our students to have when they graduated. The categories were: Basic Laboratory Techniques, Intermediate Lab Techniques, Instrumental Skills, Chemical Concepts, Quantitative (Science) Skills, Technical Communication, and Decision Making. A copy detailing the learning goals in each of these categories has been provided in earlier reports.

However, these goals were far too numerous and only intended for our majors (CHEM and BCMB). Early fall 2003, the program decided to charge a committee with identifying a more manageable set of learning goals. The committee members are Kelly Keenan, Kristen Hallock-Waters, Shanthi Rajaraman, Bob Olsen, Ada Casares and Brian Rogerson (chairperson). What follows is a brief summary of what the committee has been working on and plans to submit to the Chemistry Program for discussion, feedback and eventual approval.

The committee has identified eight broad learning goals that need to be assessed:

- 1) Understanding solutions
- 2) Appreciating atomic, molecular, and macromolecular sizes
- 3) Recognizing the properties of compounds
- 4) Knowing how to separate a compound from a mixture
- 5) Knowledge of inter/intramolecular interactions
- 6) Understanding molecular representations
- 7) Ability to make correct measurements
- 8) Data analysis skills (graphing, data interpretation)

Each of these broad goals was expanded into a subset of concepts, from which we will select a small group that define each of the main goals. We propose to assess the understanding of these concepts in a broader student population (BIOL, MARS and ENVL students, in addition to our CHEM and BCMB students).

These students share a number of introductory courses, but are also exposed to a few different chemistry courses of their choice. Therefore, we are proposing to select concepts so that progress in student understanding can be monitored as they proceed through the chemistry curricu-

lum. In other words, we want to be able to assess the same concepts throughout the most common sequences of courses. Multiple exposure in different course contexts should lead to a positive learning outcome.

Once we arrive at a consensus of what the learning goals and concepts should be, a discussion will be initiated at the committee level concerning appropriate assessment instruments to measure learning outcomes. A number of us (Olsen, Hallock-Waters and Rogerson) are already experimenting with several American Chemical Society standardized tests (Toledo, First-term and Two-term exams) for general chemistry concepts. We are assessing skills and knowledge in a number of areas at the beginning and end of certain courses or sequences of courses (CHEM I by itself and the CHEM I + IV sequence). However, all this work is still in the experimental stage.

It should be emphasized that while experimentation with standardized tests has begun, we will not rely exclusively on such tests to measure learning outcomes. The committee has come up with additional ideas for assessment instruments and during this semester we plan to discuss them, assess their feasibility and develop them. We will then bring these ideas to the Chemistry Program for discussion, feedback and approval.

It is our hope that by the end of spring 2004, some learning goals and assessment instruments will be adopted by the Program as a whole, so that in fall 2004 we can begin to gather larger amounts of data for all of the seven broad learning goals identified earlier.

## Resources

At this time, the Chemistry Program anticipates that it will need assistance in data analysis and guidance in the development of some of its own assessment instruments.

## IN THE NEXT ISSUE OF **EVIDENCE**

- Program updates from philosophy, writing, and history programs.
- A summary of the assessment resources that we have at our disposal
- A commentary by Dr. Marc Lowenstein on the art of supporting program assessment efforts in the divisions.

## Assessment in Criminal Justice

Christine Tartaro

### Program decisions and commitments with respect to assessment of student learning.

The program met with Sonia Gonsalves to discuss assessment. After that meeting, the program decided to administer a modified version of the APA instrument used by the Psychology Program. The instrument was administered to four different criminal justice classes at the end of the Fall 2003 semester, and will be administered to a few more sections during the first two weeks of the Fall 2004 semester.

### Goals and objectives / Plans to use the assessment results

The goal of the program is to understand the level at which our students comprehend the APA rules. This is a particularly important topic, since students who do not understand how to cite things properly are at risk of committing plagiarism. Once we are able to analyze the data, the program will discuss steps to take to improve student learning.

### Resources needed

We need continued support for data entry.

### Steps for next semester

As was mentioned, the program is going to administer some more surveys, analyze the data and discuss steps that need to be taken to improve student learning.

## Upcoming Assessment Conference Presentation

This spring, Stockton will participate in the Association of American Colleges and Universities (AAC&U) General Education and Assessment conference. The conference theme is Generating Commitment, Value, and Evidence and it takes place in Long Beach California March 4-6.

The Stockton presentation is on Friday, March 5, 2004 2.00 PM - 3.00 PM

### Using Diversity Assessment to Further General Education Goals: Starting With What You Know

Attendees will participate in a discussion about the challenges of assessing outcomes in the affective domain. We will describe the steps in developing a valid and reliable measure of diversity attitudes, emphasize the importance of pre-instructional assessment of these attitudes, demonstrate how to customize instructional materials to reach diversity goals, and explain the interventions that were successful in changing the attitudes of freshman students and the differences in the students' diversity interests by demographics.

*Sonia V. Gonsalves, Professor of Psychology, Tim Haresign, Associate Professor of Biology, Merydawilda Colon, Assistant Professor of Social Work, at Richard Stockton College of New Jersey*

Conference program link

<http://www.aacu.org/meetings/generaleducation/program.cfm>

## Assessment in the Biology Program

Tim Haresign

During the spring semester of 2003, the biology program tested ~150 juniors and seniors on a subset of basic biological knowledge. Eighteen multiple choice questions were taken from a test bank supplied with the introductory biology text (*Biology 6th Ed.*, N.A. Campbell & J.B. Reece). One additional question was created to determine student beliefs about evolution, and there were a number of questions that were used to gather demographic data about the students.

The test results were compiled, shared with the members of the program and discussed at a program meeting. The results of the test were mixed. On some questions a large percentage of students answered correctly, and on other questions only 40-60% answered correctly. The main question the program considered was: Now what? (or perhaps: so what?). Do the results indicate that we should change anything about what we teach or how we teach? We did not come up with a definitive answer to that question. It was decided that we would like to see the test modified and repeated, perhaps with a slightly different set of content areas being assessed. We would also like a more comprehensive test.

One problem we have is that biology is a very broad discipline so it is difficult to develop a relatively short assessment instrument that does a good job of evaluating a large range of content and concepts. Any assessment takes time, and there will always be a tradeoff between getting reliable, comprehensive data, and keeping the test relatively short. Our current instrument takes about 30 minutes to administer. With only 18 questions, at best it provides a crude snapshot of the general level of student knowledge.

To get a better picture we need more questions (and some of the questions we used need to be changed). Since we can't afford to use large amounts of class time administering these tests we are looking into developing an online version of the instrument which we could require our students to take on their own time. Hopefully this will be in place by the spring of 2004.

We are also looking at developing an additional assessment instrument that could be administered to students at the start of the introductory biology sequence. This would provide baseline data that we could then use to track progress as students advance towards the biology degree.

We have just started the process of assessment. In order to get useful information it is clear that we will need to commit to long-term, consistent data collection and analysis. As this data is analyzed, strengths and weaknesses should become clear, and trends should become evident. Once we have this information it will be easier to make informed decisions regarding pedagogy and curriculum, and to monitor the effectiveness of any changes we decide to make.

## Value Added by NSSE

Sonia V. Gonsalves

Faculty members do complex work, and they have diverse strengths. The evaluation of faculty work has not done justice to the many aspects of faculty performance, as it has focused on three easily measured variables: SET scores, *number* of publications, and grants. These are common indicators of major areas of faculty productivity, but there are many other important roles that are not as easily quantified and therefore not as easily assessed in a relative or absolute way. The National Survey of Student Engagement (NSSE) brings some of these less-esteemed areas of faculty work to the attention of the college community.

The NSSE asks freshmen and senior students to report their impressions of the quality of relationships with faculty inside and out of the classroom. The NSSE data are not faculty specific; they reflect students' perception of the faculty as a whole. The ratings are norm-referenced with a select peer group cluster and national norms for comparison. Students rate the *time talking with faculty about career plans, discussing ideas outside of class, working on research projects, working on committees or extra-curricular activities and doing community-based projects as part of a regular course* for frequency of occurrence.

If these aspects of faculty work are rated regularly by students, several more aspects of our work will come into sharper focus as we all assess the contributions that faculty make to the overall quality of the students' experience. As we watch for trends in students' opinions, we will surely remember the faculty who devote time to *offering independent study, organizing and supervising study abroad and who require service learning in their courses and supervise senior theses*. Seniors and freshmen also rate frequencies of these experiences on the NSSE.

I believe that the broader range of assessment points for faculty work is a positive step. Granted these are indirect measures; we are looking at opinions rather than direct measures of faculty activity. However, these opinions are shaped by the experiences of students, and over time and in the aggregate they should mirror them. I hope that the public and recurring nature of the NSSE will be a catalyst for the development of a more appropriately flexible and comprehensive set of criteria for the evaluation of the work of faculty.

"We measure what we value," some wise person said; or was it "We value what is measured"? Either way, the measured relates to the valued.