Provost's Learning Innovations Grants for Faculty Projects 2001-2002

Project Title: Promoting Access for Deaf students in College of Science Courses: a Cross-College team Approach

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Project Associates:

Colleagues who have attended the discussion sessions and contributed to the design of this plan.

Kevin Bermadt
NTID Science and Engineering Support

Marcia Birken
COS Math

Rosemary Saur
NTID Science and Engineering Support

Kristen Waterstram-Rich
COS Allied Health Sciences
1. Title and Summary of Proposed Project

Promoting Access for Deaf Students in College of Science Courses: a Cross-College Team Approach

The goal of this project is to increase access and participation for deaf students enrolled in service and major courses within the College of Science. The plan reflects a collaborative effort among faculty within the COS and NTID, and is grounded in the expressed needs and expectations of the COS faculty. Brainstorming with the faculty led to the activities described in this proposal, and feedback will be central to its continued success. Because of the size, culture, complexity, and organizational structure of the university, we believe this customized approach is most suitable for RIT. This project will serve the important function of being a model for the other colleges of RIT, yet remain focused on the unique and expressed needs of the faculty and students of COS. If the model proves effective, it will be offered to other colleges of RIT and designed in a similar fashion, e.g. through discussions with faculty in those colleges.

This project also is related to and consistent with other university initiatives. It can, for example, be integrated into the Institute Teaching Effectiveness Committee's current work to define what each college is doing in this regard and to provide the forum for each college to learn from the others. Furthermore, the model supports the New Faculty and Staff Orientation Committee's recent recommendations that include the re-establishment of a university-wide orientation program, with an understanding that colleges would remain responsible for more detailed and focused orientations. Finally, this project supports the goals of the Institute's Deaf Access Committee by providing a teaching effectiveness program focused on deaf students. The project will occur simultaneously at two levels—(1) College wide programming, and (2) Individual coaching for instructors and deaf students. Each of these levels is described below.

Level 1: College wide programming

This level of programming is designed for faculty and students in larger groups, and creates settings in which faculty and students come together to celebrate the successes of deaf science students and learn about strategies to increase access for deaf students enrolled in COS majors or service courses. Three College-wide events are planned, one during each quarter. They are described briefly below.

Focus on Awareness and Visibility of Deaf Alumni (Fall Quarter)

1. Deaf Alumni invited to be a guest speaker at College-wide forum
2. Small discussion groups in afternoon with students and faculty

Luncheon/workshops (Winter and Spring Quarters)

1. Three hours in length, including both full group presentation and small break-out group discussions
2. Presenters/facilitators:
   a. Deaf Student Assistants
   b. COS Faculty
   c. NTID Science Support Department Faculty/Staff
3. Content:
   Strategies to enhance classroom practices in ways that increase access to course instruction and materials for deaf students, and to extracurricular events and social activities within the COS.
   Specific topics covered will include:
   a. Lectures
   b. Labs
   c. Field Trips
   d. Use of technology in instruction and learning
   e. Group and team work both in and out of class
   f. Self advocacy regarding learning activities for deaf students


**Level II: Individual Faculty and Student Development**

This level of programming involves one to one and small group coaching. The program is designed for deaf students who seek to enhance their active involvement in college classes or extracurricular activities within the COS, and faculty who seek to enhance their teaching with deaf students and have deaf students in their classes. Up to 5 faculty participants will be accepted (2 during winter quarter, and 3 during spring quarter). Up to 10 deaf student participants will be accepted (five each for winter and spring quarters). The format and content of the individualized level of programming is summarized below.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Students</th>
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<tbody>
<tr>
<td><strong>Format:</strong></td>
<td><strong>Format:</strong></td>
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<tr>
<td>1. Environmental assessment of the classroom with a focus on accessibility for deaf students.</td>
<td>1. Classroom observations by Deaf Student Assistants (approximately twice during the quarter)</td>
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<td>2. Classroom observations (approx. 2 hours per week)</td>
<td>2. Individual/small group debriefing sessions following observations</td>
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<tr>
<td>3. Individual coaching/debriefing sessions (approx. 1 hour per week)</td>
<td>3. Small group discussion sessions with Deaf Student Assistant and/or Support Department faculty focusing on needs identified through observations</td>
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<table>
<thead>
<tr>
<th>Content:</th>
<th>Content:</th>
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</thead>
<tbody>
<tr>
<td>1. Strategies for improving the class environment (e.g. lighting, placement of equipment, seating arrangement)</td>
<td>1. Strategies for enhanced participation</td>
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<tr>
<td>2. Strategies for enhanced teaching</td>
<td>2. Strategies for communication in team activities</td>
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<tr>
<td>3. Suggests for eliciting participation of deaf students</td>
<td>3. Basic information regarding positive forms of self-advocacy in learning situations</td>
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<tr>
<td>4. Targeted suggestions regarding special issues (e.g. lab work, use of computers, team activities)</td>
<td>4. Information regarding appropriate and optimal use of support services in cooperation with college instructors</td>
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<td>5. Use of support faculty in content areas to fine tune teaching strategies</td>
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<tr>
<td>6. Effective use of notes and interpreters to enhance participation</td>
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2. **Targeted learners**

Primary learners are deaf students enrolled in courses within COS, including students in COS majors and students enrolled in COS service courses. All COS students will be invited to the three College-wide events. Additionally, 10 deaf students will be selected to participate in the individual/small group development activities during winter and spring quarters. Over time, we hope to impact all deaf students in these two target groups (approximately 25-30 deaf COS majors and 330 deaf service students quarterly).

COS instructional faculty are secondary learners. All faculty will be invited and encouraged to attend the three College-wide events. Additionally, 5 faculty will be selected to participate in the individual/small group development activities. Over time, we hope to impact all COS faculty (nearly 100).

3. **Anticipated impact on teaching and/or learning**

It is anticipated that the combination of college and individual level activities will increase the range of strategies that faculty and students can use to promote access and participation in mainstream college classes within the COS. The College-wide programming is designed to give instructors and students information on a variety of topics as well as the opportunity to discuss access issues within small groups. Individualized development activities focus on the specific needs of participating faculty to further hone their skills and comfort level with instructing deaf students. Students who participate in this activity will learn how to work effectively with their instructors and hearing peers to increase their learning and participation in COS courses.
4. Measuring impact, reporting findings, and sharing information about the project in a faculty forum:

The researchers on the team (Foster and Long) have a primary responsibility to (a) document the process through which this model is developed and implemented, and (b) measure the level of satisfaction and learning of participants. The first task, documenting the process, is ongoing and will continue next year as we document meetings, materials, class observations, workshop activities, etc.

We will measure satisfaction and impact in three ways. First, a short survey will be administered to those who attend the Deaf Alumni Speaker event and/or one of the workshops. Feedback will be solicited on content, delivery, and venue, as well as suggestions for improving these events. Second, participants in the individualized development activity will be interviewed at the beginning and end of this activity. The first interview will focus on their reasons for participating in this activity and expectations regarding possible benefits and outcomes. The second interview will focus on the degree to which the activity met their expectations and suggestions for how it might be improved. Results regarding project development, implementation and evaluation will be included in a final report. Results will also be presented in a faculty forum at the conclusion of the project.

5. Rationale for the Project:

a. Why it is not part of regular college business.

b. Relevance to required college competencies.

RIT classes and materials should be accessible to all enrolled students. However, special populations often require modification of pedagogy and materials. Deaf students have been part of RIT for many years, and the number of cross-registered deaf students is increasing. Faculty who want to be as inclusive as possible may not have the information or skills to achieve this goal. Additionally, what works for one course or instructor may not be effective for another. For this reason, we will customize the delivery and content of information to meet the specific needs of a single college, and include both college-wide and individualized venues. The COS was invited to collaborate in this effort because they work with a large number of deaf students through their service courses, and because they have a strong history of effort and interest in the inclusion of special student populations, including deaf students.¹

c. How this project is relevant to other faculty and what it would take to transfer success to other faculty.

Faculty at RIT need to be skilled in delivering course content effectively to all enrolled students, including deaf students. Moreover, there is evidence to suggest that when classes are accessible to deaf students, they become more accessible to all students.

In order for this project to be transferred to other colleges of RIT, a mechanism must be available for the documentation, collection, packaging, and dissemination of the strategies and materials resulting from the COS activities. The Center for Professional Development has responsibility for orientation of new faculty and continuing professional development. This Center will assume a critical role in transfer of the work derived from this project to other faculty and students at RIT.

d. Relevant credentials, experience of involved faculty/staff

e. How this innovation is in your discipline or program

Eileen Marron: Assistant Dean and Director of Undeclared Science, participant in the Provost's Intensive Sig Program, participant in Project EDGE, COS Curriculum Committee, GLOBE trainer (Global Learning Observations—a web based international environmental science program), currently supervises deaf students to act as classroom TAs in Undeclared Science (a program that has a 20% deaf population).

¹ For example, COS was awarded a grant through NSF titled “Ending Discrimination in Gender Education” (EDGE).
Marcia Birken: Professor of Mathematics and Statistics, Participant in the Provost's Intensive Sign Program, co-chair of (FIT) Faculty Institute of Teaching Technology, Eisenhart Award faculty, developed curriculum and taught collaboratively with faculty in College of Liberal Arts, awarded numerous grants and invited to present research at an international conference on European education.

Kristen Waterstram-Rich: Assistant Professor of Allied Health, Director of Nuclear Medicine. Participant in FITT, grant recipient for the design of clinical and technical information access for use in teaching in allied health. President of the National Nuclear Medicine Technology Professional Organization (provides leadership for teaching technology nationally), used sign skills with deaf community as former RIT Safety Officer.

NTID:

Sharon Rasmussen: Associate Professor in Science and Engineering Support. Has taught and tutored deaf students enrolled in the COS for many years, and also has established long term working relationships with many faculty in the COS.

Kevin Berndt: Visiting faculty in the Science and Engineering Support Department and a deaf alumnus of the COS. Has the dual perspective of deaf student and faculty tutor.

Rosemary Saur: Associate Professor in Science and Engineering Support. Brings past experience in administration of support services, research on mainstreaming at the post-secondary level, and instruction/tutoring of deaf students enrolled in COS courses.

Sue Foster and Gary Long: Research Associates, have been conducting research on access of deaf students in mainstream college settings for over 10 years, and are skilled in both quantitative and qualitative research and program evaluation methods. They have published numerous articles and given presentations at professional conferences on the topic (See Appendix B for listing).

CIMS/Human Resources:

Kathleen Martin: Manager of the Center for Professional Development. Expertise includes development, design and delivery of training and professional development programs for RIT faculty/staff; marketing and communications support; dissemination of best practices through university level faculty/staff orientation program.

6. Timetable:

Fall:
1. Hire deaf student assistants
2. Coordinate Deaf Alumni Speaker event
3. Recruit faculty to participate in individual development activities
4. Develop workshops
5. Develop project evaluation surveys and interview protocols

Winter:
1. Offer first workshop
2. Conduct individual development activity with 2 faculty
3. Evaluate first workshop and individual development activity
4. Use information from evaluation to modify activities for spring
5. Begin planning for packaging and dissemination activities for AY2002/03 through the Center for Corporate Education and Training

Spring:
1. Offer second workshop
2. Conduct individual development activity with 3 faculty
3. Evaluate second workshop and individual development activity
4. Complete plan for packaging and dissemination activities for AY2002/03 through the Center for Corporate Education and Training
5. Prepare final report