NTID RESEARCH BULLETIN

Designing a Learning Community for Young Deaf Adults: Can We Improve Program Completion Rates?

by Carol Lee De Filippo

Carol De Filippo is an associate professor in the NTID Department of Research.

Participation in a Learning Community is known to increase retention of students in colleges for normal-hearing students (see, for example, Gabelnick, MacGregor, Matthews, & Smith, 1990; Tinto, Love, & Russo, 1994). Learning Communities enhance feelings of connection to the academic environment, which can result in more time spent on learning. The outcome is greater academic success, which engenders greater persistence and, ultimately, completion of the program.

In our preliminary study, we attempted to affect the retention of students who are deaf and hard of hearing by implementing the definition of a Learning Community as presented by Smith and MacGregor (n.d.): "a variety of approaches for linking courses around a common theme or question so students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers." The purpose of this paper is to describe the project design and to report initial outcomes.

The target group were entering students at the National Technical Institute for the Deaf (NTID), a college of the Rochester Institute of Technology (RIT), who were not yet academically qualified to apply to a major, and who were at risk based on low reading and writing test scores relative to the class mean. Fourteen students who agreed to participate were enrolled in a clustered learning environment, with links among the students and staff. They attended the same dedicated section of English (taught by Kathleen Crandall), Freshman Seminar (Del Dagel and Sid Barefoot), and a course in critical thinking (Marianne Gustafson). They were followed closely by one counselor who also co-taught Freshman Seminar (Del Dagel). An older student who was deaf served as a Teaching Assistant for Freshman Seminar and as a role model during the first quarter. Regular staff meetings provided mutual support and a forum for discussing how to meet individual student needs, often on a daily basis.

A second group of fourteen students with equivalent English test scores served as a control and were enrolled in similar courses, but did not receive intensive supports or efforts at linkages across courses. Background characteristics and foundation skill levels were similar across the two groups.

In-Class Performance Results

Successful student behaviors supported in the three linked courses generalized to other courses. Teachers were asked to rate the students on three aspects of classroom involvement without knowing whether the students were in the experimental or control group (n=33-47 teachers, depending on the quarter). Findings are summarized in Figures 1a and 1b (page 3) and Figure 1c (page 8) and show an advantage for the Learning Community students.

Class attendance. The experimental group had a higher rate of class attendance overall than the control group (Figure 1a). By the latter half of winter quarter, when students realize that attendance is often not

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Notes of Note

The Center for Research, Teaching, and Learning and the Center for Arts and Sciences at NTID recently sponsored a two-day meeting on **Reading Literacy: From Laboratory to Classroom**. The meeting featured six internationally recognized authorities in the area of reading and reading difficulties. These included Des Power and Peter Freebody (Griffith University), "Deaf Adults and English Literacy: Context, Community and Culture;" Larry Yore (University of Victoria), "Enhancing Science Literacy for all Students with Embedded Reading Instruction and Writing-to-Learn Activities;" Charles Perfetti (University of Pittsburgh), "Skilled Reading Optimally Builds on Spoken Language: A Challenge for Deaf Readers;" Ronnie Wilbur (Purdue University), "Reading for Real Life: What's ASL Got To Do With It?" Carol Padden (University of California, San Diego), "Interrelationships Among Language Abilities in Young Deaf Children;" and Jane Oakhill

Prophets in Their Own Lands

I recently attended a conference focusing on the reading abilities of deaf students. The out-of-town presenters were all experts in the field and were explicitly invited because their work would be of general interest and general use to all educators and investigators working with deaf students at all grade levels.

Now, we can argue about the causes and consequences of deaf students' difficulties with reading, but I have only met one (clearly not well-informed) person who denies that this is a real issue. In the case of this meeting, all of the presenters acknowledged the problem, even if they varied (but not widely) in their opinions about possible solutions. Actually, there was a remarkable convergence among the presenters over the two-day conference, leading to the real possibility that we can make some progress together.

The focus of this story, however, is not what happened during the conference, but something that happened minutes after it ended. I was telling one of the guest presenters—an internationally prominent reading researcher, but someone who does not know much about deaf readers—that his findings about hearing children's reading difficulties were strongly supported by some of my colleagues' recent studies with deaf college students. The out-of-towners were very interested in the NTID research, but these results were dismissed by some of my other colleagues who were standing nearby.

Later, I caught up with my dismissive colleagues and asked why they were willing to believe the guest presenter but not our mutual friends. The round-about answer boiled down to the opinion that real solutions require that we "call in the experts," and our local researchers are . . . well, local. And there lies the point: For whatever reason(s), many educators of deaf students think that the experts are somewhere else, that local talent can't be good talent, that the grass is greener on the other side of the fence, that real prophets can't live next door.

Okay, let me be fair: Some people did not attend the meeting at all, even though it was held practically in their own backyard. These folks missed the opportunity to learn things that could be directly applied in their own teaching and scholarship, regardless of its focus. I suspect the problem here is that once the prophets came into the yard, they could no longer be prophets—or at least real ones. Real prophets don't come to visit; you have to visit them on the mountain tops (or at conferences). And, so, missed opportunities like this one are repeated almost daily.

This might be a story about a single place, a single time, or a single issue. But it isn't. It is a story about not being able to share one's expertise or not being able to accept that one's colleagues might know more than we do. The saddest part is that the people who could most use such help will be the last to recognize it or admit. (No, this column isn't about *you*.) I don't feel sorry for them, though. I feel sorry for the deaf children and young adults who will miss other opportunities simply because so many of us are so smart.

Marc Marschark
Director, CRTL

Carol De Filippo's background is in rehabilitative audiology, and she maintains an active interest in research in this field. Current research projects address issues of student persistence in college programs, and the focus of visual attention (eye gaze) during reception of simultaneous communication by deaf people. For more information, contact De Filippo at CDFNCP@RIT.EDU

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required in college, there was a slump in class attendance for the control group, not seen in the experimental group.

Keeping up with assignments. Teachers rated timeliness of homework submission as an indicator of whether students were falling behind. As shown in Figure 1b, after a slow beginning in the first quarter of college, the experimental group showed an increase in compliance over the control group for the final periods of data collection.

Effort. The graph in Figure 1c shows teachers' ratings of how hard students were trying to succeed relative to a baseline of average effort. The bars above the line show that the mean perceived effort for the experimental group was above average; the mean for the control group was at or below average.

End-of-Quarter Academic Outcomes

The proportion of credit-bearing courses completed successfully is shown in Figure 2a (page 4). For both quarters, the experimental group exceeded the control group in number of courses successfully completed. Grade Point Average (GPA), shown in Figure 2b, was not sensitive to differences between the groups. Two students in the Learning Community, and none in the control group of students, achieved the Dean's List.

Overall Student Persistence

Over the year, the experimental group lost two students due to suspension and one to financial problems. In the control group, there were four leaves of absence, one transfer, and one withdrawal without notice.

Student Attitudes and Feelings

Ten participants attended individual interviews, conducted primarily by Susan Foster, at mid-year. The control group did not respond to repeated requests for an interview. Most of the Learning Community students said they would choose this college again. Eight students were influenced by the advice of older deaf students from their hometown or school. One preferred another college, but stayed at NTID for location. All expected to graduate.

For these students, schoolwork was a stated priority. One student who played varsity basketball planned to quit in the subsequent academic year to focus more on school. Students expressed concern about managing their time and preferred to learn about their options before joining a campus activity.

Most did not recall the invitation to participate in this project; nevertheless, they felt that the group engendered confidence and assertiveness. It "saves time" to be in a familiar group because "you already know everybody." At the same time, some students felt it limited their chances to meet other people.

Discussion

The current effort, with three linked courses and regular faculty consultation, represented a modest cost to the program and the faculty. Despite its limited scope, the results still favored the Learning Community. Similar in-class performance and course completion rates were characteristic of successful deaf first-year students studied by

A Learning Community continued on page 4

Figure 1.

Note: Fall1 means the first half of fall quarter; Fall2 means the second half of fall quarter, same year, etc.

■ *Control*
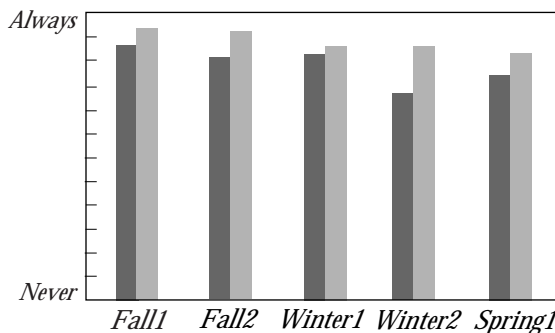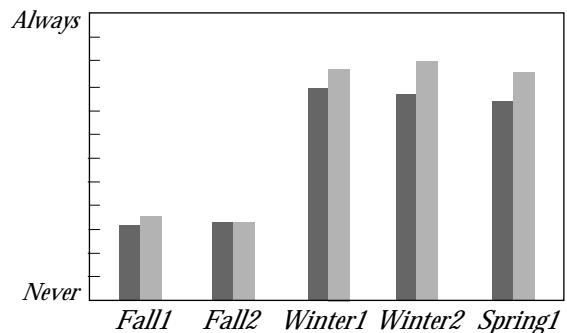■ *Experimental*

Figure 1a. Attendance

Figure 1b. Keeping Up

A Learning Community continued from page 3

Anderson & Kluwin, 1998. Although final results of this effort must await longitudinal monitoring until all of the participants exit from college, we can recommend some additional components, based on student comments, to strengthen future efforts:

• *Hire peer-mentors as role models.* Students respected their friends' opinions regarding college selection and expected to be included in the social group of upperclass students. A Learning Community might benefit from upperclass students who are deaf or hard of hearing serving as residence hall advisor, teaching assistant, or peer mentor.

• *Create a clustered living environment.* When students see the same faces in the dormitory as in class, there may be an increased sense of community and, by extension, a continuation of classroom thought in an out-of-class context. Although students denied having strong friendships within the Learning Community, and perceived their sole link to be a struggle with written English, they still might have benefited academically from remaining a community of learners outside the classroom.

• *Increase links across courses.* Students were surprised to discover links among their courses. With more effort to have common themes across the curriculum, students can gain a greater sense of connectedness within their program and might see how to apply their knowledge across separate disciplines.

We are encouraged to find that the benefits reported for normal-hearing college students can be achieved at the postsecondary level for students who are deaf and hard of hearing, even with a modest investment in scheduling time together for students and teachers. If fewer students leave school before completing a program, we can achieve a more cost-effective program and benefit greater numbers of students in achieving their personal and career goals.

References

Anderson, C., & Kluwin, T.N. (1998, April). *Retention of deaf college age freshmen.* Paper presented at the conference of the Postsecondary Education Programs Network (PEPNet) of the Postsecondary Education Consortium, Orlando, FL.

Gabelnick, F., MacGregor, J., Matthews, R.S., & Smith, B.L. (1990). *Learning communities: Creating connections among students, faculty, and disciplines.* San Francisco: Jossey-Bass.

Smith, B.L., & MacGregor, J. (n.d.). *Learning community models.* Olympia, Washington: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education.

Tinto, V., Love, A.G., & Russo, P. (1994). *Building learning communities for new college students: A summary of research findings of the Collaborative Learning Project.* Syracuse, NY: Syracuse University, National Center on Postsecondary Teaching, Learning, and Assessment.

Figure 2.
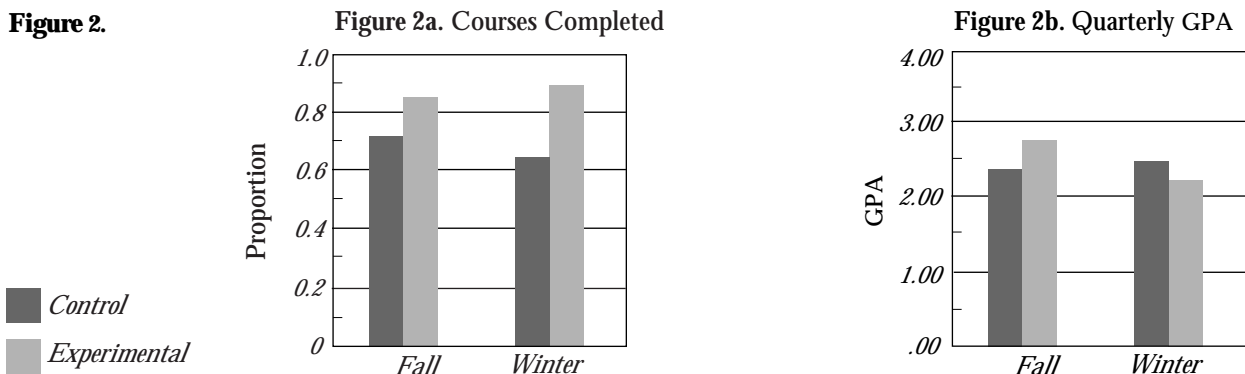
Figure 2a. Courses Completed

Figure 2b. Quarterly GPA

Control
Experimental

"An alternative way of assessing communication effectiveness is to ask deaf students directly for their thoughts about the amount and adequacy of their receptive and expressive communication and their feelings about communication."

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The Relationship Between Students' Ratings, Classroom Communication, and the SCPI Ratings of Their Instructors

by Gary Long, Michael Stinson, Ron Kelly, and Yufang Liu

This study examines the extent to which students' perceptions of ease of communication in the class-room are related to the sign skills of their instructor. Thirty-three faculty, teaching a variety of courses at the National Technical Institute for the Deaf (NTID), were rated on "Communicaton Ease" by their students over a two year period. Faculty sign proficiency was evaluated independently using the Sign Communication Proficiency Interview (SCPI). This study explored the link between teacher sign skill and students' direct experience of classroom communication via their teachers.

Communication Perspectives

Communication ease is conceptualized here as having two dimensions—a cognitive dimension and an affective dimension. The cognitive dimension is concerned with self-perceptions about the amount and quality of information that deaf students receive and send. The affective dimension is the deaf students' subjective responses about their communication experiences, which may be positive, such as feeling good, relaxed, comfortable, confident and having control; or negative, such as feeling frustrated, nervous, and upset (Long, Stinson, & Braeges, 1991; Braeges, Stinson & Long, 1993).

Most studies regarding the effectiveness of communication with deaf students have used tests to assess the extent of knowledge that students have gained from a class presentation. In those cases, deaf students' communication is described objectively. An alternative way of assessing communication effectiveness is to ask deaf students directly for their thoughts about the amount and adequacy of their receptive and expressive communication and their feelings about communication. This approach was used in this study.

The Classroom Communication Ease Scale (CCES), modified for the present study, has been found to be highly reliable with deaf respondents and to relate significantly to academic achievement (Braeges, Stinson & Long, 1993; Garrison, Long & Stinson, 1993; Long, Stinson & Braeges, 1991; Stinson, Liu, Saur & Long, 1996). The authors have concluded that when deaf students feel at ease with their communication with teachers and peers, they see themselves as having more control in the educational setting and are more likely to become engaged, active learners.

The Sign Communication Proficiency Interview (SCPI) is based on the Language Proficiency Interview and uses a conversational approach to evaluate the sign communication competence of respondents (Newell, Caccamise, Boardman & Holcomb, 1983). The SCPI involves a one-to-one conversation between the interviewer and an interviewee, with each interviewee's performance videotaped and subsequently rated independently by three SCPI trained raters.

The SCPI assesses American Sign Language (ASL) as it is used among skilled sign language communicators in the United States. This use includes the full range of ASL from pure, linguistic description of ASL to English-like signing. This full

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Notes of Note

(University of Sussex), "Children's Difficulties in Text Comprehension."

Presentations are being collected and the papers will be published in a forthcoming special issue of the *Journal of Deaf Studies and Deaf Education*.

Marti Gaustad is the CRTL Visiting Scholar for 1998/99. She is a professor in the Department of Special Education at Bowling Green State University in Bowling Green, OH, where she directs the deaf education teacher training program. Her research plans include examination of the development of deaf students' knowledge of English morphology from the primary age/grades through college level. This information will facilitate the creation of a model for computer-based reading materials which focuses on the visual rather than phonetic aspects of English print.

Gary Long's research interests include student motivation and classroom communication, access to information in mainstream settings, and distance learning. For more information, he can be reached at GLLERD@RIT.EDU

Mike Stinson's research interests include the instruction of deaf and hard-of-hearing students in mainstream settings and the effects of technology, interpreting, notetaking, and tutoring. He is also interested in the social integration of deaf students who are mainstreamed and in the motivation of students in the classroom. For more information, he can be contacted at MSSERD@RIT.EDU

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Yufang Liu is a graduate research assistant in the NTID Department of Research.

range is characterized by meaning-based sign language vocabulary selection consistent with standardized signs in current use by skilled sign language users and a variety of grammatical features that are consistent with effective use of gestured/visual language for communication.

This study examines the relationship between the instructor's communication proficiency, as assessed by the SCPI, and students' self-assessment of their own classroom communication experience.

Method

Thirty-three faculty agreed to administer a revised version of the CCES along with the normal student rating form at the end of each quarter. This procedure resulted in 732 student ratings for the thirty-three faculty. The faculty who participated had an average of ten years' experience teaching deaf students. Twenty-five of the thirty-three indicated that they had a high participation class. Twenty-three faculty were at the associate or full professor level, while ten were assistant professors or lecturers.

The Classroom Communication Ease Scale used in previous studies was modified by selecting only items examining communication with the teacher. Thus students responded to 23 items on a six point Likert scale, indicating how often the experience stated was true (e.g., "My teacher understands me when I ask questions," "My teacher uses sign language clearly," "I understand my teacher's instruction about what is important to learn").

The SCPI rating system places interviewees into one of eleven categories (ranging from "No Functional Skills" to "Superior Plus") based on the results of the heuristic rating procedure used. The thirty-three faculty in the present study ranged from "Survival Plus" to "Superior" on the SCPI rating scale. The SCPI scale was entered as a continuous variable with Survival = 1, Survival Plus = 2, Intermediate = 3, Intermediate Plus = 4, Advanced = 5, Advanced Plus = 6, and Superior = 7.

Results

Results of this study indicated that student ratings of instructors' communication in the classroom had a modest positive (r=.25, p(.01) relationship to teachers' SCPI ratings. That is, students in general perceived greater communication ease in the classroom with teachers who had higher SCPI ratings than they did with teachers who had lower SCPI ratings. Students ratings of classroom communication ease tended to divide faculty into three SCPI groups (see Table 1). Students were least comfortable communicating with faculty rated at the "Intermediate" level and below, and they were most at ease communicating with teachers rated

Table 1.
Means and Standard Deviations on the Teacher Focused Communication Ease Scales by Teacher's SCPI Rating.

[a] n refers to the number of students rating teachers at each SCPI level.

[b] refers to the number of teachers being rated at each SCPI level.

Communication Ease	Survival Plus and Intermediate (n=110)[a](5)[b]	Intermediate Plus (n=258)(10)	Advanced (n=212)(11)	Advanced Plus and Superior (n=152)(7)
Communication Methods	3.47 (1.10)	4.03 (.90)	3.98 (.96)	4.29 (.70)
Student understands Teacher	3.48 (1.06)	4.06 (.90)	4.00 (.89)	4.21 (.79)
Teacher understands Student	3.37 (1.22)	4.02 (.94)	4.00 (.94)	4.35 (.87)
Teacher's support of communication	3.51 (1.16)	4.07 (.94)	4.08 (.88)	4.32 (.81)
Feelings about Communication	3.46 (1.31)	4.06 (.97)	4.03 (.88)	4.18 (.91)
Total Teacher Focused Communication Ease Scale	3.51 (1.05)	4.06 (.82)	4.04 (.79)	4.27 (.67)

Ron Kelly's research interests include problem solving, comprehension, cognitive processing, and technology applications for deaf and hard-of-hearing students. For more information, he can be reached at RRKNCP@RIT.EDU

Yufang Liu, a graduate research assistant with several members of the Research Department at NTID, maintains research interests in second language acquisition and bilingual code-switching. For more information, she can be contacted at YXLNRD@RIT.EDU

"Advanced Plus" and above. Students didn't perceive any differences between communicating with a faculty member rated "Intermediate Plus" when compared to those rated "Advanced." These two groups of faculty fell between colleagues rated "Intermediate" (and below) and "Advanced Plus" (and above) on ease of classroom communication. The differences between each of the three groups were statistically significant for the revised CCES.

Educational Importance

The results suggest that teachers with greater sign communication proficiency will tend to have students who report greater comfort with communication in class. Efforts to improve the communication effectiveness of teachers of deaf students are important because teacher-student communication is a primary means for learning, and students need good access to this communication to successfully perform learning tasks and fully participate in class activities. The importance of sign proficiency for effective classroom communication supports efforts of programs in schools for deaf students to improve their faculty's sign proficiency. In addition to improving sign proficiency, efforts to improve classroom communication of instructors may include greater sensitivity to students' perceptions of the quality of communication in class, greater attention to variations in communication needs of students, and development of teaching strategies for effective interactive communication.

For this postsecondary institution (NTID) serving many deaf students, students' judgments of the communication skills of their instructors had a limited correspondence to their teachers' SCPI scores. The SCPI ratings differentiated teachers

"…teachers with greater sign communication proficiency will tend to have students who report greater comfort with communication in class."

into seven skill levels. The mean ratings of teachers' communication skills for groups of students, divided on the basis of their teachers' CCES ratings, suggested that students differentiated among only three SCPI skill levels. One reason for this reduced correspondence may be that the student communication skills ratings included other communication skills, such as their ability to use examples, organize information and deliver a coherent easy-to-understand lecture, in addition to sign proficiency.

A more extensive report of these findings was presented at the 1998 American Educational Research Association conference, and can be obtained from Dr. Long, *GLLERD@RIT.EDU*

References

Braeges, J., Stinson, M., & Long, G. (1993). Teachers' and deaf students' perceptions of communication ease and engagement. *Rehabilitation Psychology, 38*, 235-247.

Garrison, W., Long, G., & Stinson, M. (1993). The classroom communication ease scale. *American Annals of the Deaf, 138*, 132-140.

Long, G., Stinson, M., & Braeges, J. (1991). Students' perceptions of communication ease and engagement: How they relate to academic success. *American Annals of the Deaf, 136*, 414-421.

Newell, W., Caccamise, F., Boardman, K., & Holcomb, B.R. (1983). Adaptation of the Language Proficiency Interview (LPI) for assessing sign communication competence. *Sign Language Studies, 41*, 311-351.

Stinson, M., Liu, Y., Saur, R., & Long, G. (1996). Deaf college students' perceptions of communication in mainstreamed classes. *Journal of Deaf Studies and Deaf Education, 1*, 40-51.

Notes of Note

Online "best practices" and resources for faculty are available through a new WWW page developed by RIT's Distance Learning Services. The site includes research, online learning techniques, faculty development modules, and an overview of distance and online learning. The information is available at *http://learn.rit.edu/resources*

The Best of All Worlds, the 1998 NTID recruiting videotape, has just been completed by the NTID Department of Instructional Television. The video features a compilation of academic, Rochester area, campus, dorm life, sports, and activity segments. It also features a three-minute introduction to the NTID "Explore Your Future" program. The video is voiced and captioned in English; a Spanish captioned version is in progress. NTID recruiters will use the video at college fairs and during high school presentations. For further information about the video or the upcoming NTID open houses (April 9, 1999 and October 8, 1999) contact Vicky Darcy, e-mail *VFD8674@RIT.EDU*
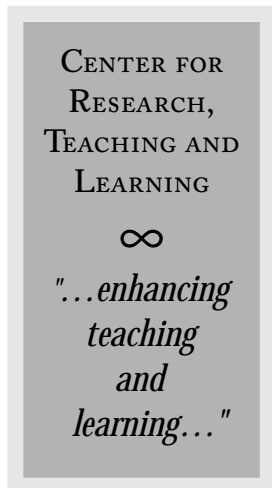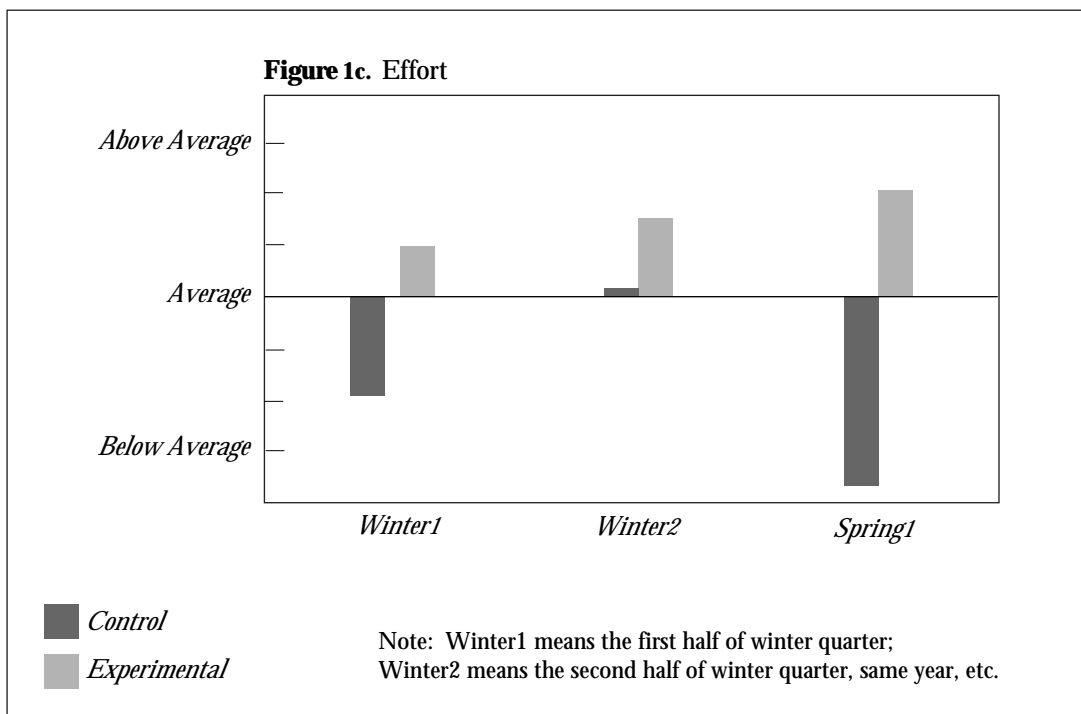
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National Technical Institute for the Deaf

NTID RESEARCH BULLETIN

Center for Research, Teaching and Learning · National Technical Institute for the Deaf · Rochester Institute of Technology

A Learning Community based on a model of linked courses was implemented for fourteen first year students with low reading and writing test scores compared to other entering students at NTID. Students in this experimental group appeared to benefit from a clustered learning environment and intensive monitoring of their progress by instructors. They more often attended classes and submitted homework on time, were perceived as putting in more effort, and completed more courses. A measure of how hard these students were trying to succeed is shown in Figure 1c at right. For a discussion of this research, see the article on page 1 of this issue.

Figure 1c. Effort

Control
Experimental

Note: Winter1 means the first half of winter quarter;
Winter2 means the second half of winter quarter, same year, etc.

In 1993, the National Technical Institute for the Deaf established the Center for Research, Teaching and Learning. A primary mission of the Center is to "foster advances in teaching and learning that enhance the academic, professional, social and personal lives of people who are deaf or hard of hearing." Among its other functions, the Center both conducts research relevant to that goal and supports research conducted by colleagues from across NTID.

As part of our collaborative efforts, the Center regularly undertakes the collection and dissemination of relevant research findings from across NTID. Included for each publication is a description of the implications of the research findings the author thinks will be most relevant for NTID's audiences.

Albertini, J.A., Bochner, J.H., Dowaliby, F.J., & Henderson, J.B. (1997). Valid assessment of writing and access to academic discourse. *Journal of Deaf Studies and Deaf Education, 2,* (2), 72-77.
To more accurately place deaf and hard-of-hearing students in preparatory courses and determine their readiness for degree programs at NTID/RIT, a direct measure of writing was developed. The purpose of this study was to estimate how well the new measure compared with an established measure and how well it predicted success in the university's gateway Freshman composition course. Results provide evidence that it orders students similarly to The Test of Written English (Educational Testing Service, 1992). It also predicts how long it will take students to complete the Freshman composition course.

Implications:
This test may be used as a rough, early predictor of readiness for degree programs at NTID/RIT. Along with other indications of a student's English language and writing ability, the results of the test may be used to help them prepare for degree programs and to select appropriate degree options.

Foster, S. (1996). Communication experience of deaf people: An ethnographic account. In I. Parasnis (Ed.), *Cultural and language diversity: Reflections on the deaf experience* (pp. 117-135). New York: Cambridge University Press.
Communication barriers can make it difficult for deaf people to acquire the wealth of social and cultural knowledge which hearing people learn incidentally through observation and overhearing the conversations of others. Failure to access technical, social and cultural information has many negative consequences, ranging from inaccurate perceptions of social protocols to missed information about school and work tasks. While interpreters and notetakers are helpful in providing deaf people with access to direct or formal communications, they are much less helpful in facilitating access to incidental or informal learning experiences. However, through interactions with one another, deaf people find many of the experiences they miss with hearing people, including friendship, meaningful conversations, information and community.

Implications:

Often, hearing people assume that if the person has an interpreter or notetaker, they have full access to the environment. However, these support services are only the first step in accommodation. Making sure the deaf person has access to "the grapevine," explaining informal rules and expectations, and including the deaf person in casual conversations are just a few examples of ways in which hearing people can fully include deaf persons.

Keefe, B., Scherer, M.J., & McKee, B.G. (1996). MainePOINT: Outcomes of teaching American Sign Language via distance learning. *Technology and Disability*, 5(4), 319-326.

MainePOINT (Providing Opportunities for Integrating New Technologies) was a large and multi-faceted project to deliver instruction in American Sign Language to high school students via interactive television. The MainePOINT project was large and multi-faceted and NTID researchers became involved in a collaborative effort to determine the characteristics of students who are successful with such a distance learning format and those who are not. Results indicated that students who were most successful and who liked this type of instruction the best described themselves as "curious and excited about new things," had a desire "to control their own learning pace," had "previous exposure" to other technology in education and had "low anxiety" in using technology.

Implications:

Successful and satisfied students were those who were familiar and comfortable with the technology being used and who valued the control and independence afforded by the instructional format. Students who describe themselves as needing more interpersonal contact or who generally are not comfortable with technology are less successful. Teachers considering offering courses via distance learning should make every effort to be sure their students are familiar and comfortable with whatever technology is being used.

If you would like to obtain information in an area beyond what you see listed, you can write to the first author of closely related papers, c/o NTID. If you are unable to obtain one of the publications on this sheet from your local library, you may send this form to: Educational Technologies Resource Room, National Technical Institute for the Deaf, 52 Lomb Memorial Drive, Rochester, NY 14623-5604.

_____ Albertini et al. Valid assessment of writing and access to academic discourse.
_____ Foster. Communication experience of deaf people: An ethnographic account.
_____ Keefe et al. MainePOINT: Outcomes of teaching American Sign Language via distance learning.

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Or send request via e-mail (ASKCRTL@RIT.EDU), giving full citation for the article.