

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

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Abstract

A Learning Community based on a model of linked courses was implemented for 14 freshmen with low reading and writing test scores compared to other entering students at a college for students who are deaf or hard-of-hearing. Instructors collaborated on curricular objectives supporting successful learner behaviors, and discussed student progress weekly. A deaf student teaching assistant and intensive career and personal counseling were also provided. Goals were to develop attitudes and behaviors that would support positive academic experiences, engender feelings of connection, and thereby increase the likelihood of program completion. Compared to a control group, the experimental group more often attended class and submitted homework on time, was perceived as putting in more effort, and completed more courses. Students appeared to benefit from the clustered learning environment and intensive monitoring of their progress. Weekly staffings and an older deaf student as a teaching assistant were other key components of the project.



Introduction

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). It enhances feelings of connection to the academic environment and thereby results in more time spent on learning. The outcome is greater academic success, which engenders greater persistence and, ultimately, completion of the program. This project is an initial attempt to use a Learning Community to increase retention of students who are deaf and hard-of-hearing. If fewer students leave school before completing a program, the school can achieve a more cost-effective program that will benefit greater numbers of students in achieving their personal and career goals.

The style of Learning Community that we established was inspired by the definition 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." A Learning Community can exist strictly within the confines of one course or it can be a defining characteristic of an entire campus (Angelo, 1997; Gabelnick et al., 1990). The current project crossed over the boundaries of

several courses, but was not so broad as to encompass an entire program of study. The group of interest was either undeclared or not yet academically qualified to apply to a major.

The purpose of this paper is to describe the design and conduct of the Learning Community project and to provide a snapshot of the status of the participants as they progress through their first year of college. Final results of this effort will be available only through longitudinal monitoring of the group and comparison with the rest of their cohort on campus.

Objectives of the Project

The immediate goal of the Learning Community project was students' attainment of attitudes and competencies that would support their potential for academic success. This accomplishment was expected to increase students' feelings of connection to the campus community and the likelihood of their persistence through to program completion. In operational terms, the objective was to optimize students' time-on-task in pursuit of the knowledge and skills needed for completion of an academic program.

Method

Project Design

This project was implemented at the National Technical Institute for the Deaf, a college of the Rochester Institute of Technology. It targeted entering students identified as at-risk based on reading and writing test scores that were low relative to the mean for their class. Components of the intervention that were successfully implemented included a clustered learning environment, course linkage at the level of general educational objectives, and links among the students and staff. Students in the experimental group were all enrolled in the same section of English, Freshman Seminar, and a course in critical thinking. They were assigned to, and followed closely by, the same academic counselor (D. D.) who also co-taught Freshman Seminar.

The instructor team and one of the researchers (C. DeF.) held weekly staffings throughout the year. These meetings provided coherence and direction for the project as a whole and for focusing on individual students, sometimes on a day-to-day basis. An additional support component was a Teaching Assistant assigned to Freshman Seminar, an older student who was deaf, and who also served as a role model during the first quarter. Students in the control group were enrolled in similar courses, but did not receive the additional intensive supports or efforts at grouping.

The Learning Community Participants

Out of an entering class of just over 200, 28 students qualified for the study on the basis of their reading and writing test scores. Half of them consented to participate and became the experimental group; the remaining 14 were followed as a control group. Selected student characteristics are shown in *Table 1*. All but one student had a severe or profound hearing loss from birth or before the development of spoken language. One student with a pure tone average threshold at the level of a moderate hearing loss had a history of receiving support services typical for students who are deaf. The parents of all of the participants had normal hearing. Foundation skill levels were similar across the two groups.

Results

Although the ultimate gauge of the success of a retention project is the proportion of students who remain until completion of a program, the purpose of this paper is to report interim measures of the students' progress, valuable for guiding on-line adjustments and for indicating future predictive variables. Data available for reporting here pertain to the students' first and second academic quarters (fall and winter), and the beginning of the last quarter (spring) of the participants' first year in college.

Table 1.
 Characteristics of Learning Community Participants (Experimental Group)
 and Control Group Students.

	<i>Experimental Group</i>	<i>Control Group</i>
Gender		
Male	7	10
Female	7	4
Minority Ethnic Group	9	7
Age in years	17:11 - 23:9	19:2 - 25:4
Pure Tone Average Threshold in dB HL	45 - 113	80 - 117
California Reading Test grade equivalent score	5.7 - 7.8	6.3 - 8.0
Stanford Achievement Test Math subtest	5.4 - 12.9	5.3 - 12.9

In-Class Performance

Our intention was to examine the extent to which successful student behaviors supported in the three linked courses (English, Freshman Seminar, and Foundations of Critical Thinking) generalized to other courses. The list of teachers providing instruction to the 14 experimental and 14 control group subjects numbered 33-47, depending on the quarter. These teachers' observations were solicited weekly for the first quarter, and at two intervals for the remaining quarters (middle and end), regarding the students' attendance, assignment submissions, and effort (these behaviors were also noted by Andersen & Kluwin, 1998, as being associated with persistence of deaf first-year students). None of the teachers, with the exception of the four who were part of the project team, were aware of whether the students named were in the experimental group or the control group. Findings are summarized in *Figure 1*.

Class attendance. On average, students in both groups attended their classes regularly, at least through the first half of winter quarter. Perhaps this reflects an initial carry-over of expectations from high school. There appeared to be a slump in class attendance within the control group in the latter half of winter quarter. Students may have realized by that time that class attendance is rarely required by college instructors. The notable finding is that the experimental group had a higher rate of class attendance than the control group for all periods.

Keeping up with assignments. Teachers were asked how many assignments were due in a given week, and how many each student handed in on time. Timeliness was emphasized over quality or completeness of the work because we wished to monitor whether these students were falling behind, or were demonstrating some level of care, regarding course requirements. The quality of their work could be better reflected in other data, namely end-of-term grades. As shown in *Figure 1*, the average rate of turning in assignments on time for both groups of students was low for the first quarter of college. By winter quarter, compliance increased. For the final three periods of data collection, the experimental group exceeded the control group.

Effort. In the winter and spring quarters, we began to ask teachers to rate the students' effort, compared to other students in the class. We wanted some measure of how hard these students were trying to succeed, albeit from a teacher's perspective. The graph in *Figure 1* shows the two groups relative to a baseline of average effort. The bars above the line show that the mean effort for the experimental group was perceived to be above average. The mean for the control group was below average for the first half of both the winter and spring quarters.

End-of-Quarter Academic Outcomes

Proportion of courses completed. At the end of fall and winter quarters, we counted the number of credit-bearing courses each student completed with a grade of D or higher. The proportion of courses completed successfully is

Figure 1.

Mean in-class performance of participants in a Learning Community (experimental group--Expt'l) and a control group, as reported by their teachers. Data are for the first and second half of the fall (Fall1, Fall2) and winter (Wintr1, Wintr2) quarters, and the first half of spring quarter (Sprng1) of the students' first year of college.

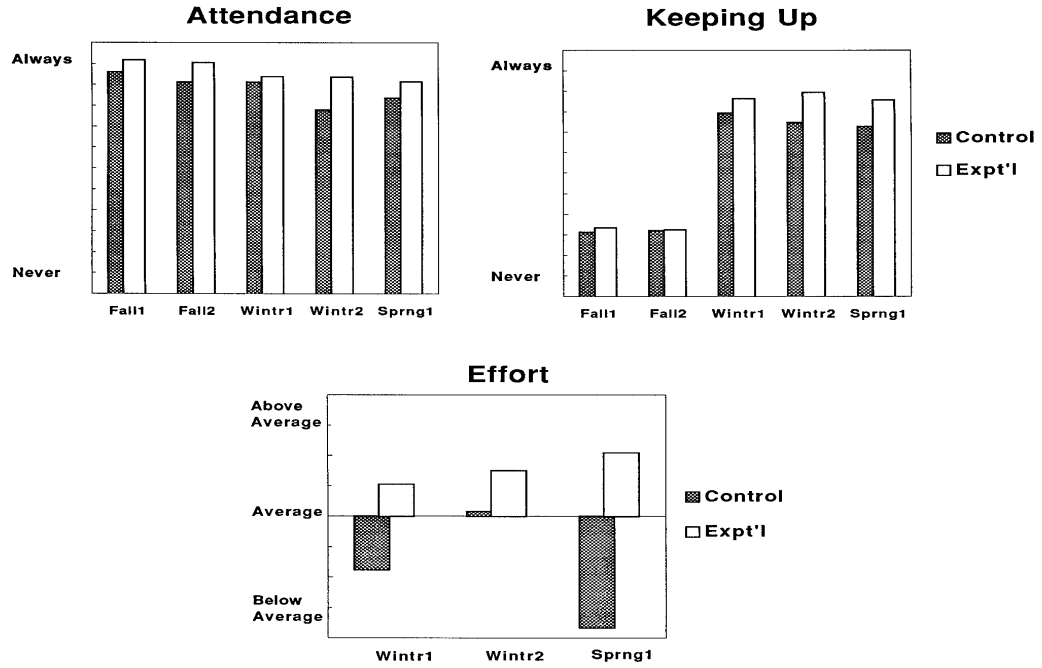
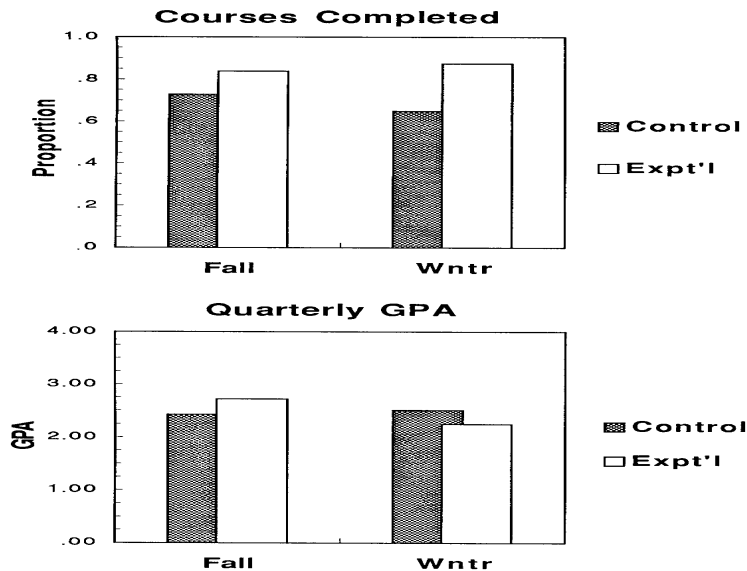


Figure 2.

End-of-quarter academic outcomes (proportion of courses completed with a grade of "D" or better, and GPA--Grade Point Average) for participants in a Learning Community (experimental group--Expt'l) and a control group for fall and winter quarters on their first year of college.



shown in *Figure 2*. For both quarters, the experimental group exceeded the control group. There was a larger difference, favoring the experimental group, in the second quarter, compared to the first.

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 a total of four leaves of absence; one student transferred out; a sixth left campus during fall quarter and his status remains unknown.

Attitudes and Feelings

Student Integration Survey. We used two means to assess students' attitudes and feelings about their initial college experience. The first was the Student Integration Survey (SIS; Dowaliby, Garrison, & Dagel, 1993), a paper-and-pencil questionnaire that is routinely administered to entering students at the end of their summer orientation program. All of the entering class was invited to respond to the survey a second time, at the end of the first quarter. Students responded to 28 Likert items on the survey to indicate their perceptions of themselves as students and members of the campus community. There were 98 usable surveys, 10 of which were from the Learning Community group.

For the purpose of this project, the datum of interest was the degree of change, if any, from the time of entry to the end of the first quarter of college. We assigned numerical values to each response, from 0 = "Strongly Disagree," to 4 = "Strongly Agree." Negative survey items, such as "I have not made many friends..." were reversed. We then subtracted the initial response value from the retake response value. To de-emphasize minor shifts in response tendencies, we combined negative shifts of two or three categories and considered this degree of change to suggest that a student was "More Negative" overall by the end of fall quarter. Likewise, we combined positive shifts of two or three categories to identify students who were "More Positive" overall. Shifts of one category in either direction were recorded as "Little Change."

What distinguishes the groups is a small portion of the Learning Community who provided more negative responses on the second administration compared to the first, as shown in *Figure 3*. To determine the source of this negativity, we divided the survey items into four clusters based on the observations of the developers of the SIS. We

calculated the average response of each individual for each cluster of items and compared the average cluster response at entry to that at the end of the quarter, as shown in *Figure 4*.

One cluster of 3 items pertained to whether the students felt socially integrated. Both groups reported either a positive change, or little or no change over their first quarter of college. On the cluster of 16 items pertaining to whether the students felt they could manage their time and work, and the 4-item cluster pertaining to whether they thought they had good study habits, the groups appeared similar. About the same proportion of individuals either shifted in a more positive direction, or showed little or no change in their self-perceptions in these two areas of college life.

It was on the fourth cluster of 5 items, those pertaining to whether the students expected academic difficulties, that we noted any shifts in a negative direction. Although the numbers are small, we were surprised to see a greater percentage of individuals in the experimental group who seemed to feel less confident about the difficulty of college work after one quarter in school than in the control group. We were further surprised to discover that these students were the ones who were performing best academically. Upon reflection, this might be explained as a case of reality tempering some early enthusiasm.

These students, with weaker English skills than the nonexperimental group, attained their good grades only by expending exceptional effort. It is understandable if they report, after the fact, that college is even harder than they had expected.

Figure 3.

Change from beginning to end of fall quarter in responses on the Student Integration Survey completed by participants in a Learning Community (experimental group--Expt'l) and a control group.

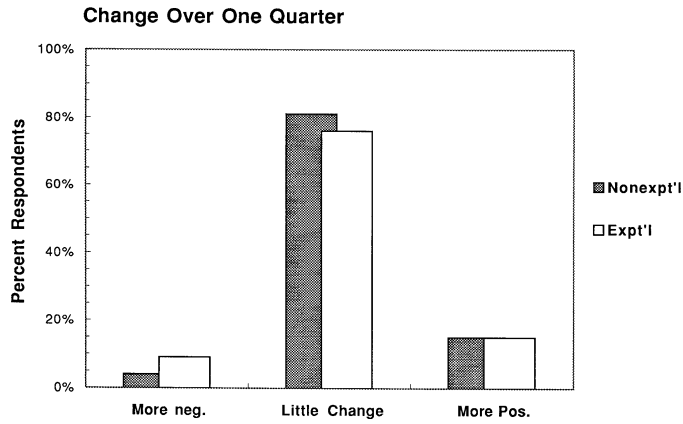
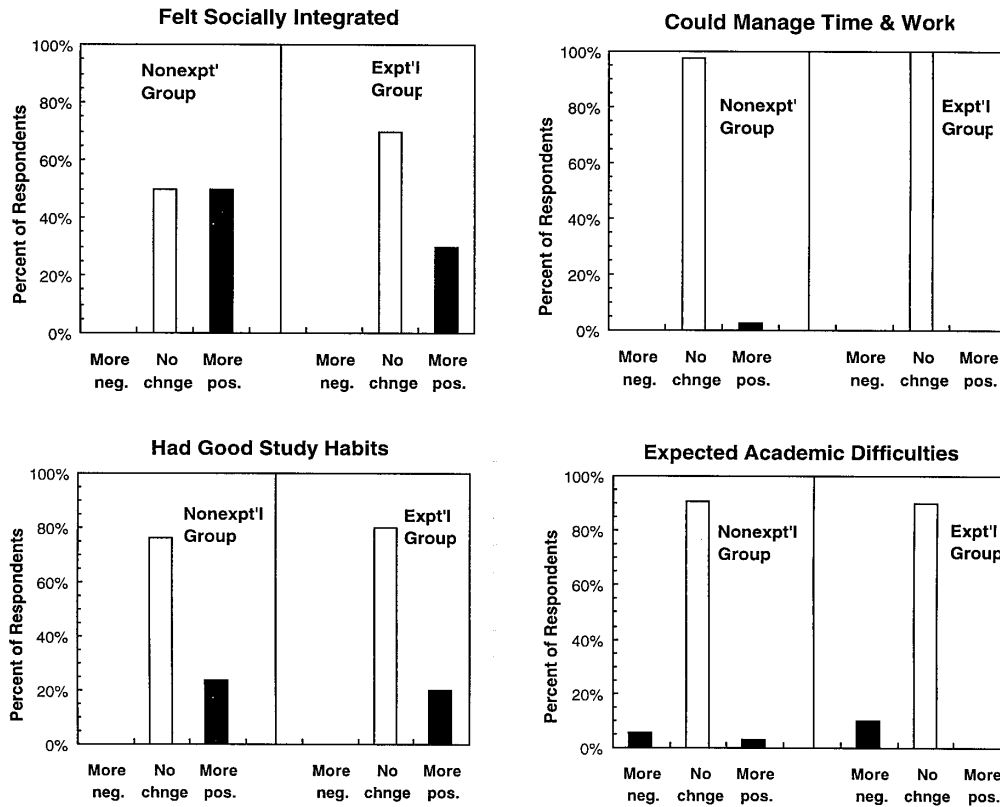


Figure 4.

Change from beginning to end of fall quarter in responses to clusters of items on the Student Integration Survey completed by participants in a Learning Community (experimental group--Expt'l) and a control group.



Student interviews. Individual focused interviews of the participants in the Learning Community were conducted primarily by one of the project team members (S. F.), recorded on audiotape during the interview by a voice interpreter, and transcribed. Of the 14 students, 10 were available and willing to share their comments. Interviews occurred toward the end of the students' second quarter in college. Highlights of the preliminary analysis of the transcripts are summarized here; interpretation of the students' comments must await completion of the interviews of the control group students.

Most of the students said they would choose this college if they were to do it over again and did expect to graduate from this college. Two were still undecided about a major and felt unsettled about their choice. One other student expressed a desire to attend a different college for the deaf, but preferred the location of this college. There were 8 students whose choice was influenced by the advice of older deaf students from their hometown or school.

Outside of class, these students most often reported that studying or doing homework was a priority. One student played varsity basketball, but was planning to quit next year in order to focus more on her education. Students said that they preferred to "settle in" and learn about the variety of options on campus before joining something, perhaps next year, and expressed concern about managing their time in the first year.

Regarding the Learning Community project, most did not recall the invitation to participate. Their reactions to block scheduling were mixed. They noted as positive the opportunity to get to know each other, learn from each other, and make friends. They felt that the group was comfortable together. This resulted in greater confidence and assertiveness. Familiarity meant that students were less likely to be embarrassed to raise their hand in class or feel awkward about making a comment. It "saves time" to be in a familiar group because "you already know everybody." At the same time, some students remarked that they did not like being with the same people for more than one class, that it was boring, or would limit their chances to find out what other people are like. Some students did study with each other outside of class on a limited basis, mostly when an assignment required it.

Project team benefits. The weekly team meetings served at least two purposes: They provided an opportunity for staffings on each of the Learning Community participants. And, they offered a network of support, both intellectually and emotionally for members of the project team (note comments about the benefits of learning communities for faculty in Smith, 1991). At the meetings, each student's progress in the linked courses was discussed, and instructors commented on each other's observations. They described the dynamics within their respective classrooms, their expectations for student participation, and their criteria for judging students' work, all in the context of the students' response to instruction.

All of the project team faculty remarked on the value of sharing information about students. The team served to validate, as well as challenge, each other's perceptions about individual students and about the group as a whole. With knowledge of the issues that each was handling with a given student, they could reinforce other instructors' messages to the students and reported that the students seemed to benefit from the added emphasis.

Discussion

The purpose of this paper was to describe the current effort, which was limited to a model of three linked courses and regular faculty consultation. This represented a fairly modest cost: First, it required that students be grouped for some of their courses, but it did not alter the selection or timing of courses typical for entering students. And, second, it brought faculty together on a regular basis, but it did not burden them with curricular modifications or additions. Even given the limited scope of this effort, the results to date favor the Learning Community, in particular, students' in-class performance, course completion rate, and persistence. Based on the initial outcomes, and in light of

student comments about their experience, we recommend the following additional components which might strengthen a Learning Community for a similar group of entering students.

1. Peer-mentor/role model. Students called our attention to the importance they gave to the opinions of their friends regarding college selection. They seemed to expect that they would have been included in the social group of upperclass students as much as, if not more than, that of their entering class. An upperclass undergraduate student who is deaf or hard-of-hearing could increase the effect of a Learning Community by serving as a residence hall advisor, teaching assistant, and/or peer mentor. A graduate student who is deaf or hard-of-hearing could serve as a tutor.

2. Clustered living environment. If "time-on-task" is defined as any activity that includes thinking about or talking about school-related topics, then we could increase time on task by housing students near each other. When students see the same faces on the dormitory floor as they see in class every day, it might increase their sense of community, as well as increase the likelihood that they will interact in some way regarding homework or in-class events. Our students emphasized that strong friendships did not emerge from the Learning Community; nor did they see the Learning Community as necessarily having much more in common than their competence with written English. We did not evaluate this as a negative outcome because we are aware that a community tends to benefit from its diversity. A Learning Community does not strive to produce friendships; its success is measured by its effect on scholarship.

3. Increased links across courses. Some general objectives were common across the three linked courses in which the Learning Community was enrolled for fall and winter quarters. There were a few instances of shared materials, as well. Students tended to react with surprise to these links. The teachers found the students' response to have a positive effect overall. With planning, the teachers in all of the linked courses could deliver a portion of their diverse content using one or two of the same themes. This might increase the students' sense of a connectedness within their program and broaden their understanding of how their knowledge might be applied across separate disciplines.

We plan to continue to monitor the Learning Community and control group students until they exit from the college. We will record the frequency and timing of any separations from the campus (leaves-of-absence, withdrawals, suspensions, transfers), and the reasons for them. We will track students' rate of movement through a program, including time to decide on a major, time until eligible to enter a major, and time to completion of a program. We will also note the number of changes in major, and level of degree attainment (from diploma to bachelor's degree). We are encouraged about initiating more learning communities among entering students in future years, given the insights gained from the current effort and positive indicators 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.

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