Deaf college students, like their hearing peers, value teachers who have extensive knowledge of course content, exhibit positive interpersonal skills, and are open to different points of view (Zieziula, 1981). There are other characteristics college professors can develop, however, that will benefit students with hearing losses, and which have implications for faculty development. One characteristic, in particular, is the instructor’s understanding of deafness as an educational condition. In institutions where small numbers of deaf students are enrolled, is this concern one that faculty developers share? Is it feasible to provide special offerings pertaining to deafness when enrollments remain small? What are the benefits for all students in the class when faculty concern themselves with the special needs of deaf students? This paper examines the need for attention to the educational characteristics of deaf students. Strategies currently in use are described to illustrate the wide variety of approaches that are possible. We present a framework for faculty developers and support service professionals to address deaf students’ educational characteristics, and we discuss benefits for faculty who participate in programs designed to help them address these students’ needs.

In a recent survey, we asked faculty to comment on the need for programs on deaf students’ educational characteristics. The comments of one respondent reflect the attitude of the
majority of those who completed our survey: “When educational institutions make a commitment to educate hearing-impaired individuals, they must be prepared to educate the staff. It is important that the faculty be comfortable with these students and that a positive environment be created.” It was, in fact, a unanimous feeling among the survey respondents that faculty development programs should include components pertaining to deafness. While the need is apparent, the appropriateness of various faculty development strategies bears further scrutiny. We will look more closely at the results of the survey as we discuss ways in which faculty developers may approach this need.

Deafness, understandably, poses a communication barrier. A loss of hearing often restricts socialization and other education-related experiences to various degrees, and may hinder academic development. Consequently, deaf students may have greater needs for remediation when compared to hearing peers. Even moderately hearing-impaired students experience difficulty in receptive and expressive language skills and are not fully prepared for the college curriculum (Flexer, Wray & Black, 1986).

Frequently, an interpreter accompanies the deaf student to class, presenting an unfamiliar scenario to the professor. Such a scenario is increasing in frequency, however. Prior to 1970, the number of deaf students enrolled in postsecondary institutions for hearing students was very low. Reports on unemployment and underemployment of deaf persons and a growing concern among professionals in organizations serving deaf people led to Federal legislation to ameliorate the problem. In the first edition of A Guide to College/Career Programs for Deaf Students, Stuckless and Delgado (1973) reported 27 postsecondary programs serving 2,271 deaf students. Since then, the number of postsecondary programs with small enrollments of deaf students has increased considerably. The recent edition of College and Career Programs for Deaf Students (Rawlings, Karchmer, DeCaro, & Egelston-Dodd, 1986) lists two national programs and 136 regional programs having a coordinator of services for deaf students who devotes a minimum of 50 percent of his or her professional time to directing the program. Hundreds of other postsecondary institutions have smaller enrollments of deaf students with
little or no special support for either the students or the faculty. The current estimate of the total number of full-time and part-time deaf students attending colleges and universities throughout the United States and Canada is about 10,000 (Castle, 1986).

GUIDELINES FOR POSTSECONDARY PROGRAMS

In 1973, the Conference of Executives of American Schools for the Deaf (CEASD) published its Principles Basic to the Establishment and Operation of Postsecondary Programs for Deaf Students (Stuckless, 1973). The report states that "in-service orientation and training of staff working directly with deaf students should be an ongoing activity" (p. 6). The report stressed that faculty in postsecondary programs should not be expected to cope with the special needs of most deaf students without special support, and that deaf students should not be expected to adjust readily to learning situations in which faculty are unaware of their special needs. The authors recommended a variety of educational formats, including formal presentations, consultation services, and organized training. They also emphasized the need for continuous, systematic orientation programs to assist professionals in developing a repertoire of knowledge and skills pertaining to the effective education of college-age deaf students.

Are current faculty development practices effective in bringing this knowledge about deafness to the classroom teacher? What are the needs of support service coordinators and faculty developers who may be interested in implementing the CEASD recommendations? In the process of answering these questions, we will propose a model for faculty developers to begin exploring ways to meet the specific needs of their colleagues.

WHAT ARE THE NEEDS?

In the Spring of 1986, the authors distributed a questionnaire to the 138 American postsecondary institutions listed in College and Career Programs for Deaf Students. Coordinators responsible for providing support services for deaf students were asked to identify their needs and the strategies they use
to assist faculty having deaf students in their classes. Other postsecondary institutions with deaf student enrollments may benefit from the results of this study since many of the strategies identified are appropriate for a variety of environments.

Of the 138 postsecondary institutions surveyed, 79 coordinators (57 percent) returned the questionnarie. Fifty-one (65 percent) of the respondents stated that their institutions have faculty development programs.

**TABLE 1**

Geographical Location and Number of Programs in Faculty Development Survey

| Geographical Location of Programs | Number of Programs Surveyed | Number and Percentage of Programs Responding |
|----------------------------------|----------------------------|--------------------------------------------|
| Northeast                        | 16                         | 10 (62%)                                   |
| Midwest                          | 31                         | 19 (61%)                                   |
| South                            | 45                         | 25 (56%)                                   |
| West                             | 52                         | 25 (48%)                                   |
| **Totals**                       | **138**                    | **79 (57%)**                               |

Table 1 shows the regional distribution of responding institutions. Their sizes ranged from small community colleges to large universities. The average percentage of full-time deaf students for the two-year colleges in this study is 1.1 percent. For four-year programs the average enrollment is 1.7 percent. These data indicate that even in the colleges with "larger" enrollments of deaf students, the number is relatively low.

Faculty development activities related to aspects of educating postsecondary deaf students were offered by 29 of the 51 support service programs. Hence, only 37 percent of the 79 responding institutions address the recommendations of the CEASD through formal faculty development programs. The remaining 63 percent of the coordinators in the support service areas find themselves responsible for orienting faculty to deafness outside of their institution-sponsored faculty development program.
Although 73 percent of the respondents stated that they believed they had appropriate or adequate resources, many provided explanations for not having implemented offerings pertaining to deafness in their postsecondary environments. Finding formats and content that motivate faculty to attend the planned offerings is a strong need. Another concern is a lack of coordinator time. This is especially a problem for coordinators responsible for students with handicapping conditions other than deafness, both those in centers such as "Disabled Student Services" or coordinators who work individually such as a "Counselor for Special Populations."

There is also a strong need for information, including brochures on successful strategies for mainstreaming deaf students on the postsecondary level, compilations of current resources available for faculty development, and information on preparatory texts for remedial work with deaf students. Other needs include data on enrollments, success rates, attrition, and academic entry levels of deaf students in postsecondary institutions in the United States; information on diagnostic testing, particularly for reading and writing skills; suggestions for applying ESL approaches to teaching deaf students; and information on interpreting services. The results of this survey suggest a need for national or regional conferences focusing exclusively on faculty development practices in postsecondary programs where deaf students are enrolled.

The concept of networking to share resources among faculty who teach deaf college students is a very important one. The Postsecondary Education Consortium (PEC) at the University of Tennessee, for example, has experienced success with its affiliate states, most of them in the South (Ashmore & Woodrick, 1986). PEC provides consultation and technical assistance in such areas as program accessibility and evaluation, staff practices and utilization, inservice training in deaf culture, American Sign Language, orientation to deafness, and the use of notetakers and other support services. Collaboration among colleges may be a beneficial strategy for many institutions which have small enrollments of deaf students. Through the establishment of networks, these institutions may identify effective faculty development practices, and improve remediation and support service programs. Importantly, networking provides increased opportunity to pool resources and to communicate
academic deficiencies more effectively to the K-12 programs.

FACULTY DEVELOPMENT APPROACHES

A vast amount of literature is now available on the general characteristics of deaf learners (Moores, 1982; Lange, 1987). A number of studies have been conducted which have identified characteristics of successful mainstreamed college deaf students. In particular, Saur & Stinson’s (1986) discussion on facilitating participation of deaf students in the classroom is informative. These educational researchers reviewed selected studies, finding that: (1) when deaf students are provided with appropriate support in college, their achievement reflects their ability rather than their degree of hearing loss, speech-reading skills, or speech intelligibility; (2) their motivation is largely influenced by their sense of personal control and responsibility for success; and (3) although quality support services in the classroom are important, it is the responsibility and initiative of the individual instructor that enables deaf students to participate meaningfully in class activities and discussions.

Figure 1 illustrates a framework we have used for several years for incorporating information pertaining to deaf students within the context of a faculty development program. The model has five broad categories: Deafness, Communication, Teaching, Discipline Knowledge, and Organizational Knowledge.

| STAGES                      | Orientation | Integration | Creative |
|-----------------------------|-------------|-------------|----------|
| Deafness as an Educational Condition |             |             |          |
| Communication               |             |             |          |
| Teaching                    |             |             |          |
| Discipline Knowledge        |             |             |          |
| Organizational Knowledge    |             |             |          |
The category "Deafness" encompasses instruction on the psychosocial, cultural, and learning characteristics of these students. Unless a simulated hearing loss (with a tinnitus masker, for example) is experienced over a period of at least a few hours, a college professor may not be aware of the effects deafness has on eye fatigue. Deaf students have difficulty in attending to several visual tasks simultaneously, such as following an interpreter, taking notes, and attending to details in a classroom demonstration. The importance of deaf students' reliance on the visual mode cannot be overemphasized. Since an interpreter is frequently "behind" the speaker, a deaf student may not feel comfortable jumping into a group discussion. Ambient noises, including those outside the classroom, are amplified by a hearing aid as well as the instructor's voice. And, importantly, the feeling of being "different" discourages some students from participation with their hearing peers. These are just a few of the implications of deafness that a college professor may learn through faculty development activities.

The category "Communication" includes information on expressive and receptive sign language and speaking, listening, and written communication skills of the teacher in preparation for the delivery of instruction. A typical session may also include a discussion of the reading and writing skills of deaf students, particularly those who learned English as a second language. The implications of the lag in language development for teacher-generated materials, especially tests and quizzes, are similar to the concerns educators have in regard to other second-language learners.

The last three categories (Teaching, Discipline Knowledge, and Organizational Knowledge) are similar to those topics found in traditional faculty development programs (for example, "teaching effectiveness" seminars, presentations on problem-solving and thinking skills, academic advising, student motivation, computer software demonstrations and training, and faculty discussions on the tenure and promotion processes).

The three stages of the model (Orientation, Integration, and Creative) provide for planning a range of activities from introductory to advanced skills and knowledge depending upon an individual's previous background and experience. Newly-hired faculty members at our college are frequently in the integrative or creative stages of "Discipline Knowledge" but in the
To Improve the Academy

orientation stage of “Deafness” and “Communication.”

Faculty development offerings pertaining to teaching deaf students can introduce innovative strategies and materials to the college professor. Such programs can also provide opportunities for faculty to identify concerns and to approach them with appropriate resources.

GENERAL FORMATS

Table 2 lists topics for faculty development programs on deafness, and indicates delivery formats reportedly used by survey respondents to convey this information to faculty. Survey respondents use a variety of human resources to reach the faculty, either collaboratively with faculty developers or

| Faculty Development Topics                  | Number of Responses Per Topic | Director/ Program Coordinator Delivery | Support Service Staff Delivery | Consultants/ Outside Speakers Delivery | Other Programs/ Agencies Delivery |
|---------------------------------------------|-------------------------------|----------------------------------------|-------------------------------|----------------------------------------|----------------------------------|
| Overview of Education of Deaf Students      | 40                            | 40 100                                 | 27 68                         | 12 30                                  | 1 2                              |
| Language and Communication                  | 39                            | 34 87                                  | 27 69                         | 11 28                                  | 4 10                             |
| Speech/Audiology                            | 15                            | 5 33                                   | 11 73                         | 7 47                                   | 4 27                             |
| Teaching and Curriculum Development         | 32                            | 24 75                                  | 20 62                         | 7 22                                   | 3 9                              |
| Psychology of Deafness                      | 30                            | 22 73                                  | 15 50                         | 6 20                                   | 3 10                             |
| Social/Cultural Aspects of Deafness         | 33                            | 30 91                                  | 17 52                         | 11 33                                  | 1 3                              |

*Total number of responding programs was 79.*
through the individual efforts of the coordinator and his/her staff. The use of outside speakers, particularly experts in the field of deafness, is restricted by limitations on funding.

Workshops and seminars in the respondents' institutions range in scope from comprehensive, one-day sessions during the opening week of the school year to one-hour department-level presentations. Some program coordinators have involved community agencies and personnel from local schools serving deaf students, including local programs for deaf adults, speech and hearing centers, centers for communication disorders and vocational rehabilitation offices. Workshops range from orientation experiences for new faculty to detailed discussions on using English as a Second Language (ESL) approaches to teaching deaf students for whom American Sign Language is their first language. Other strategies mentioned by survey respondents include videotapes of discussions by faculty and handicapped students who have developed successful strategies for teaching and coping; panels with deaf students, faculty, and interpreters; "silent retreats" on weekends for both faculty and students; and demonstrations and skits by deaf students showing effective teaching/learning strategies. One institution reported offering a formal "Studies in Deafness" course to its faculty. Open forums with language specialists, support service staff, and deaf persons have been found to be successful in a number of colleges and universities. In others, faculty are invited to luncheons with deaf students and interpreters for social exchange.

Individual consultations with faculty appear to be a common approach. This allows the discussion on deafness to be tailored to each professor's particular concerns. The amount of structure provided to such an approach varies greatly. In a number of institutions, a letter or brochure is sent to faculty members who have deaf students in their classes. Follow-up is then dependent on the individual faculty. Other coordinators prefer to use more aggressive strategies, including phone calls, personal notes, and appointments.

Other approaches include a "Professional Development Day" with faculty being released to attend activities (including sessions on deafness), or a campus-wide "Handicapped Awareness Day" coordinated by the student government association. Sign Language classes are offered to both students and faculty in a majority of these institutions. Evening or lunch-hour sign
instruction, including discussions on issues related to deaf awareness, is a popular format.

Are the recommendations of the CEASD being followed? The survey results indicate that a variety of formats, including formal presentations, consulting services, and organized training, are being used to some extent. No effort was made in the present study, however, to determine the efficacy and motivational value of the various strategies used to bring information about deafness to college teachers. Since the needs of the respondents who wish to implement continuous, systematic programs are largely unmet, there appears to be an opportunity for improved articulation between coordinators of support services and university faculty developers. Comments of the respondents indicated that the survey itself served as a catalyst for such collaboration.

IMPLEMENTING FACULTY DEVELOPMENT PROGRAM OFFERINGS

How do support service coordinators and faculty developers begin to address this need? One of the first steps in planning faculty development activities which focus on educating deaf college students is to identify basic issues to be addressed. From these can be derived broad goals for program offerings. For example, most postsecondary educators with deaf students in their classrooms have a need for faculty development activities which will help them deal with the serious concern they have about remediation. Because of the nature of deafness and the effects it has on learning, the theory and practice of remediation appears to be a necessary integral component of any faculty development program. In the programs we surveyed, 50 percent of the two-year colleges and 18 percent of the four-year institutions offered special preparatory/remedial services to deaf students. While these services are not faculty development offerings *per se*, their availability should be communicated to the classroom teacher.

As with traditional faculty development programs, the involvement of faculty and administrators in the planning process and visible institutional support for the program will increase success (Eble and McKeachie, 1985). Since the number of deaf students enrolled in most colleges will remain relatively
small, needs assessments may have to be revalidated periodically.

Participants should have opportunities to follow up on group activities on an individual basis, with presenters helping them to apply the information gleaned from the presentation to their specific teaching, curriculum development, or counseling situations. The general needs identified in this survey for information on diagnostic testing, remediation, attrition, writing skills, and other topics may also be addressed by consulting the campus coordinator of support services or local school programs serving deaf students. Local agencies and faculty developers in neighboring colleges with established programs on deafness are also potential sources of information for meeting the needs identified by the faculty. The authors of this report would welcome letters of inquiry about specific informational needs.

Whether activities are coordinated by a formal faculty development program, by a support service program for handicapped students, or through a collaboration of these two, faculty should be integrally involved in planning and evaluation of the usefulness of the programs offered.

CONCLUSION

Expanding one’s repertoire of skills and knowledge in order to teach non-traditional students, especially those with physical or sensory impairments, can be a rewarding experience. We have heard repeatedly from professors who claim that efforts to enhance their teaching to meet the special needs of deaf students resulted in improved learning for all students in the classroom. Whether it is a simple strategy such as writing homework assignments on the board or the more challenging task of avoiding linguistically-loaded test items on a final exam, each effort will be sincerely appreciated by the student with a hearing loss.

Support services have frequently been advocated for the college deaf student. We must provide effective “support services” to their instructors as well.
REFERENCES

Ashmore, D. H., & Woodrick, W. E. (1986). Postsecondary education consortium: An array of services. In D. H. Ashmore and S. Carey (Eds.). Proceedings of the regional conference on postsecondary education for hearing-impaired students. Knoxville, Tennessee: University of Tennessee.

Castle, W. E. (1986). A 1986 reflection on the 1973 CEASD principles for postsecondary education programs for deaf students. In D. H. Ashmore and S. Carey (Eds.) Proceedings of the regional conference on postsecondary education for hearing-impaired students. Knoxville, Tennessee: University of Tennessee.

Eble, K. E., & McKeachie, W. J. (1985). Improving undergraduate education through faculty development. San Francisco: Jossey-Bass, Inc.

Flexer, C., Wray, D., & Black, T. (1986). Support group for moderately hearing-impaired college students: An expanding awareness. The Volta Review, 88, 223-229.

Lang, H. G. (1987). Academic development and preparation for work. In M. C. Wang & M. C. Reynolds (Eds.) The handbook of special education: Research and practice (Vols. 1-3). Oxford, England: Pergamon Press.

Moores, D. F. (1982). Educating the deaf: Psychology, principles, and practices. Boston: Houghton Mifflin Company.

Rawlings, B. W., Karchmer, M. A., DeCaro, J. J., & Egelston-Dodd, J. (Eds.) (1986). College and career programs for deaf students. Gallaudet University, Washington, D. C., and the National Technical Institute for the Deaf, Rochester, NY.

Saur, R. E. & Stinson, M. S. (1986). A comparison of successful mainstreamed hearing-impaired students: A review of selected research. Journal of Rehabilitation of the Deaf, 20, 15-21.

Stuckless, E. R. (Ed.) (1973). Principles basic to the establishment and operation of postsecondary education for deaf students. Washington, D. C.: Conference of Executives of American Schools for the Deaf.

Stuckless, E. R. & Delgado, G. L. (Eds.) (1973). A guide to college/career programs for deaf students. NTID, Rochester, NY, and Gallaudet College, Washington, D. C.

Zieziula, F. (1981). Students' perceptions of instructor performance in specialized professional training programs in deafness: Recommendations for teaching strategies. American Annals of the Deaf, 126, 1037-1042.

NOTES

1. Dr. Conner is a Professor in NTID's School of Business Careers. Dr. Lang is the Coordinator of the Office of Faculty Development and a Professor in NTID's School of Science and Engineering Careers.