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ABSTRACT
          This collection of conference papers centers on eight major
subjects: (1) different perspectives of change; (2) transitioning from high
school to college; (3) academic issues; (4) enhancing support services; (5)
student life issues; (6) nontraditional and underserved students; (7) career
planning and placement strategies; and (8) staff development and
administrative issues. Papers include: "The Impact of the Current Political
Climate upon Legislation for Persons with Disabilities" (Robert Stodden);
"The Challenge of Change: Bringing the Federal Perspective to the Local
Level" (Bobbie Beth Scoggins and others); "Understanding Each Other" (Steve
Laren); "The Impact of Change on Student Services" (Jane Jarrow);
"Transitioning Collaboration with Schools and Vocational Rehabilitation"
(Wayne Giese and Catherine Wilson); "Transition Planning: A High
School-Postsecondary Connection" (Theresa Smythe and others); "Your Parents
Are Not with You Anymore" (Charlotte O. Kirby and Tris Ottolino);
"Perspective on Liberal Arts Learning: First Year Seminar" (Catherine
Andersen and others); "Exploring Assessment Alternatives for Deaf Students"
(Karen Clack); "Classroom Assessment of Writing: Purpose, Issues, and
Strategies" (John Albertini); "Teaching ESL to ASL Users" (Anna Vammen and
others); "ESL Tutor: Educational Software for Improving English Skills of
Students Who Are Deaf" (Dave Zenk); "Computer Mediated Literacy Development
in Deaf and Second Language Populations" (Beth O. Carlson); "Supporting
Science Teachers through a National Network: The Access to English and
Science Outreach Project (AESOP)" ((John Albertini and Harry Lang); "Realtime
Captioning: Access Equals Success" (Sandy Eisenburg and Harlene Rosen); "What
Is a Qualified Interpreter and How Do I Get One?" (Debra Brenner and Bruce
Finkbone); "Computer Speech Recognition as an Assistive Device for Deaf and
Hard of Hearing People" (Joseph Robinson and Carl Jensema); "A Customized
Residence Hall Experience for Students Who Are Deaf or Hard of Hearing (Nancy
Kasinski and others); "Alcohol and Other Drug Use among Post-Secondary Deaf

and Hard of Hearing Students" (Kathy Sandburg); "Helping Minority Individuals
Navigate through Successful School and Work Transitions" (Glenn B. Anderson
and Susan K. McGee); "Services for Students Who Are Hard of Hearing" (Pamela
J. Belknap); "Academically Gifted Deaf Students Attending Regular Four-Year
Colleges and Universities" (Robert S. Menchel); "Successful Job Development
and Placement Strategies with Deaf and Hard of Hearing College Students"
(Sara L. Geballe); "Career Success of Deaf and Hard of Hearing Graduates:
Preliminary Findings of a Ten-Year Study" (John G. Schroedel and others);
"Mentorship for the Working Interpreter" (Caroline Preston); "Time To Change
Hats: The Changing Role of the Disability Services Provider" (Janet White);
and "The Unwritten Curriculum: Teaching Deaf Students in the '90s" (David A.
Stewart). (CR)

1996
Conference Proceedings

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of Hearing

Marcia Kolvitz, Editor

Conference Sponsors:

Postsecondary Education Consortium
at The University of Tennessee, Knoxville

PEC Affiliate Programs

Conference Co-Sponsors:

California State University, Northridge
Seattle Central Community College
St. Paul Technical College

April 17 - 20, 1996
Knoxville, Tennessee

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Foreword and Acknowledgments

Educators have often faced the prospect of change. While some changes are welcome, others are met with uncertainty. While change is inevitable, good planning and proactive efforts can make transitions easier with disruption to students kept to a minimum. The Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of Hearing focused on dealing creatively with change and enhancing educational opportunities for students who are deaf or hard of hearing.

Disability support service centers are affected by changes within the student population, within the institution itself, within the state system, and within the federal government. Forty breakout sessions and six plenary sessions addressed issues related to change as well as their relationship to the future of developing quality programming for students who are deaf or hard of hearing. Many of the breakout sessions offered "best practices" approaches that service providers may replicate or modify in their own settings. Special professional interest networks (SPINs) provided participants with the opportunity to meet and network with colleagues sharing the same interests.

The response to the conference was phenomenal. In addition to sponsorship from the Postsecondary Education Consortium at The University of Tennessee and its ten affiliate programs, the other federally funded regional postsecondary programs for students who are deaf or hard of hearing co-sponsored the conference. Participants came from across the United States as well as Canada to learn new information, share their experiences with their colleagues, and establish linkages with other service providers. This conference also served as a link between traditional postsecondary programs for students who are deaf and hard of hearing and the numerous colleges and universities across the country who strive to provide quality services even though they might not offer a program specifically designed for deaf and hard of hearing students. Including service providers from vocational rehabilitation and related community agencies further enabled the development of networks and partnerships so that the needs of students could be better addressed.

As a result of this conference, we may feel more prepared as we look toward the future and deal with the changes as they occur. Surely one of the effects of the conference has been to more firmly establish collaborative efforts between professionals sharing a common goal: the most effective educational programs for students who are deaf and hard of hearing. Instead of operating in isolation, we can create opportunities to share knowledge and experiences to do so.

This conference would not have been possible without the involvement of many individuals and the support of their sponsoring institutions. The confidence shown by PEC Director Bill Woodrick and Associate Director Don Ashmore in the work of the planning committee is greatly appreciated. So much of the work behind the scenes would not have been successful without the hard work of the PEC Central Office staff members Melinda Kerr, Lisa McFall, Pat Tate, and Graduate Research Assistant Vicki Wolfe. Numerous volunteers from The University of Tennessee, affiliate programs, co-sponsoring programs, and "friends of

PEC" offered their services, making this a collaborative effort. Ongoing support from the U. S. Department of Education, Office of Special Education and Rehabilitative Services enabled us to continue outreach and technical assistance efforts and reach an even larger audience than in the past. Of course, the interest and enthusiasm of all of the presenters and participants made this conference a very meaningful event. To every one involved, thank you very much.

Marcia Kolvitz, In-Service Training Coordinator
Postsecondary Education Consortium

Considering Different Perspectives of Change

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of
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The Impact of the Current Political Climate Upon
Legislation for Persons with Disabilities

Robert Stodden
U.S. Senate Subcommittee on Disability Policy
Washington, D.C.

Thanks, Bill, for that introduction, and, actually, I do feel like a Southerner in a lot of ways. It's great to be in Tennessee. When Bill Woodrick made the request for a presention at this conference, it went through Senator Frist's office. One of the things that I learned when I first got to Washington was that when something comes from Tennessee, you respond to it immediately. We get 20 or 30 requests to speak every week in different places and, I have to be honest, the Tennessee requests go first. So it's great to be down here. In some ways, I am representing the Subcommittee on Disability Policy for the Senate, and also Senator Frist in this presentation. Basically, I have been a policy fellow in the U.S. Senate for the last year which has been a very interesting phenomenon. I was selected as a Kennedy Policy fellow through the Kennedy Foundation about a year and a half ago, so I'm on sabbatical from the University of Hawaii. The Kennedy family, as most of you know, are Democrats and as I was selected, the 104th Congress came in. The Senate turned over and became a Republican Senate, and the House became a Republican House. So I was faced with the dilemma when I was coming to Washington of being affiliated with a Democratic family and a Democratic foundation and being in the position where I was going to serve in a Republican committee for a Republican Senator. This created a very interesting situation which took about six months to work out before people began to figure out that I was really in a non-partisan role.

The other thing that kind of threw me when I first got to Washington -- I don't want to scare you with this -- is that most staff members are young kids. I'm by far the oldest person on staff in almost all of House and the Senate. Most of the staff members are young kids that graduate from college and affiliate with a Senator or a campaign. They look at working in the Senate as a way to work themselves up. So not only do you have young kids that have absolutely no life experiences or experience with the topic, but they also are not very interested in the topic because they're concerned about their next job. Most of them are very transient in nature, staying there for six months to a year with the hope of moving up to another staff level or to a law firm or something of that sort.

I would like to set a challenge in this presentation for you to become involved at the policy level. Before I went to DC to work in the Senate, I had been a university faculty member for about 20 years. I had very little interest in politics and very little interest in policy or legislation. What I have seen during the last year is that it is critical for people in the field to have something to do with policy and legislation.

In many cases, your careers depend on what happens in the U.S. Congress and in the White House. Most of the agendas and the initiatives that you work within are federally driven and federally funded. Since

you are the people who know what needs to be done, what the research is, what the answers are, what the best practices are, and what works for people with disabilities, it's critical that your input gets to the federal level where policies are developed. Currently, it doesn't happen frequently. Most of the decisions that are made have little or no basis in anything that happens beyond the beltway.

As I talk about things tonight, I would like to challenge you to become involved in policy as we consider local, state, and federal policies. Keep that in mind as you listen to some of the things that we're going to touch on tonight. I am leaving Washington in about a month when I finish this fellowship. Part of my job as a policy fellow was to work on the Work Force Development Act in the Senate, which is a piece of legislation that is realigning and consolidating all the major employment, training, and vocational training legislation at the federal level. Another major piece of legislation that I worked on is the Individuals with Disabilities Education Act (IDEA), with a focus on pieces related to elementary, secondary, and postsecondary education. At this time, none of these bills have gotten out of the Senate or the House. So I will save the bad news for the end. Not that it's bad news, but since many of you have listened to the media over the year, some of this news is rather disturbing and rightly so.

I'd like to touch on four different things over the next hour or so. One issue is how things work at the federal level because I think it is fairly important and it is very confusing to people. It still is confusing to me even after having worked in it for a year. Second, I'd like to talk about what people in Washington refer to as the new political climate that is affiliated with the 104th Congress. I will discuss how you address that climate and how you fit within that climate as well as how you work within it. I will spend a little bit of time updating the current status of legislation, particularly IDEA, and appropriations. We will discuss a little about upcoming legislation, particularly the Rehabilitation Act that will be coming up this next year for reauthorization, as well as a few comments regarding the future disability legislation.

How Things Work

As most of you know, there are three major bodies that participate in authorizing legislation at the federal level. Typically, legislation can be authorized in the House of Representatives or it can come from the Senate. It can also come from the administration, like the Department of Education or those representing the White House. Typically, for any major bill or any major act that is going to be reauthorized, it will be introduced by all three of those branches of government. So, typically, there are three bills that are in existence. An entirely different process occurs when appropriating funds for legislation. There is an authorization process and an appropriations process. The strange thing about this is that these two are completely disassociated with each other. Since they are in completely different committees, a bill may be authorized and have tremendous need and value, but it may never have any funds appropriated for it. In some cases, funds are appropriated for programs that have never been authorized. But in most cases, something that

is authorized goes to the appropriations committee, and a separate set of members who make up that committee decide the amount of money to be authorized.

Many of you are familiar with the appropriations process this past year. This has been one of the most disastrous years in the Congress in trying to pass an appropriations bill. Appropriations bills are passed as a whole package, like an omnibus, which is a large number of bills put together in a bundle. In this case, the major omnibus bill was all of the health, education, and welfare programs. While the bill still has not been passed, it's projected to be signed next Wednesday. I think President Clinton is looking forward to signing this bill that has been worked out in the last couple of months.

But over the course of this year, the appropriations process has been very messy and very political. Where the Republicans took a stand in one direction, the Democrats took a stand in another direction to maintain a hard line on certain programs that they each wanted to be sure were funded. It was a give-and-take process. Finally, in February and March, the Republicans more or less threw in the towel and most programs have been funded at the full level for which were authorized. As you can see, the processes of developing a bill and getting that bill passed and authorized in the Congress are totally separate.

Using IDEA as an example, the initial work for its reauthorization started in March of 1995. First there was an administration bill from the Democrats that came out during the summer. The Republicans presented a discussion draft in the fall. The Senate also presented a discussion draft in the fall. While there were three bills on the table in terms of authorization, only one bill, obviously, has to come out at the end. So there is a process of tremendous compromise that needs to happen for a bill to ever surface. It is much easier not to pass something than it is to pass something. It's much easier to kill a bill than it is to have one pass which is why so few bills are passed.

Political Climate

I would like to discuss climate of the 104th Congress that we have seen this past year. In November of 1994, the Republicans took over both the House and the Senate by a fairly large majority. This climate, I think, is not the climate that came with the selection of a Republican majority. The Republicans have had majorities in either the House or the Senate, as well as control of the White House, many times in the past, but we haven't necessarily seen this climate before. There are certain things about this climate that I think are good for people to know. Most of them have just come to the awareness of lobbyists, staff members, and other think tanks in Washington within the last three or four months, as the budget or the appropriations language has started to take form.

One of the characteristics of this climate is reflected very much in the attempt to limit terms of Congressional members. It is seen in terms of new people entering Congress, particularly this last time, who see themselves as citizen legislators. In other words, they do not see themselves being elected and being reelected and reelected and reelected until they retire. They do not see themselves as career politicians. In a lot

of cases, they see themselves coming in for one or two terms. They are coming to the Congress with agendas or issues that have a strong grass-roots focus. They are very targeted and very focused with these issues, and they want action. What they don't have is the political history that in the past many of the Representatives and Senators in the Congress have had with a long-term history with different pieces of legislation and close work with different lobbyists and lobbying groups. They've done favors for different people in the past, and there is a history to work against. Many of the Representatives, in particular, who came into the House recently were not interested in this type of interaction with lobbyists, staff members, or anyone. They brought with them agendas that they were interested in achieving. Now, this has stumped a lot of the people in Washington, particularly lobbyists, bureaucrats, and other people that work in the government who have had a hard time figuring this out. I think recently there has been quite a bit of thinking and studying about what effect this will have. It will also be very interesting to see if November brings another round of citizen-type legislators into the House and/or the Senate.

Another characteristic of this group of people making up this new climate in Washington is a real focus on grass-roots. Questions that are asked are very much asked from a grass-roots focus. People want to know things that are happening to the voters. I'm not saying this is necessarily new, but this is much more evident than it has been in the past. Often someone who has been in Congress for 20 years will typically respond to an agenda from a lobbyist position. People today are responding to agendas much more from a grass-roots, local voter position. Again, this makes it difficult for many people when they interact with members of the House and Senate or their staff.

The new climate in Washington includes a focus on the results or outcomes in terms of the questions that people are asking. People want to know if things are needed, if they work, and what the results have been of legislation. Those questions are asked very seriously, and over and over again. Many of the people that have worked in the past with the Congress are having difficulty responding to those questions or even being able to think in that context.

The new climate maintains the general sense of a need to down-size the federal role. The questions, "How do you work without this?" or "What would happen if you didn't have this?" are being asked which, in some sense, are logical ones to ask. While not many people are prepared to answer these, they are questions that are very much related to the general sense that the federal role is much larger than it should be or that the federal role is in many areas in which it was never intended to be. These are a number of things that make up this new climate that we have perceived now for almost a year and a half.

People have responded to this climate, and I would like to talk specifically to the disability community about some of the things that I have observed in terms of the response to this climate. I think there are critical lessons in these responses. One of the things that you observe in relation to this new climate is that people get into a "win-lose" mentality right away. As an example, consider last fall when the appropriations committee in the House zero-funded personnel preparation programs for institutions of higher education within IDEA.

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These were discretionary programs. Immediately, people began to ask why some got funded and others did not. How come Parent Information and Training Centers got funded? How come research or, in some cases, very specialized areas of research were funded? Immediately, people began to look at who won and who lost. Then they began to make up reasons why this was the case.

Now, the result of this was a divide-and-conquer type of strategy. In a lot of ways, the disability community fell into it. As people began to bicker a little bit, they picked out specific groups. How come parents are getting their money? How come programs for the seriously emotionally disturbed are getting their money? Why won't our program get its money? The division occurred within the general disability community itself.

This resulted in something that was very apparent, particularly last fall as the appropriation activities were going on. One of the things that was very noticeable was that people seemed to be under an aura of an inability to act. It was as if they were bickering with each other and could not take up the cause to say something that made any sense. So there was no action for a long time. There was a general panic that occurred that was reflected in presentations of worst-case scenarios. Terrible atrocities were predicted if particular programs were eliminated. Scenarios like these spread around the country. People became overly alarmed and increasingly unable to act. Now, people have kind of surfaced above this a little bit in the last six months or so. But as this new climate came into effect, this was response that accompanied it.

Initially, this was very problematic. There were several things that could have happened and needed to happen for the disability community to surface effectively. First, there was a real need to connect with the majority party. After about four months in DC, I began to think after that maybe there were no Republicans in the disability community. I thought that maybe there aren't any, or maybe there are very few. I also know that isn't true. However, it was impossible to find people in key states who knew Representatives and Senators on any kind of basis where they could make a difference. In other words, there was a need to call up their office or the staff director and say, "Hey, this program you're defunding, this is a critical program to my children, to the community, and I want you to fund it." We couldn't find anybody who could say that or who had the connection to make the call.

An example of where it did happen successfully was with the Parent Information and Training Centers. Representative Livingston, who was in charge of the committee that zeroed-out that program, received many phone calls from parents the day after that zero was reported. Those who knew him fairly well made calls to that office to let him know that the loss of this program would hurt children. That program was funded immediately and the zero changed to millions of dollars just like that. In our political system, there's an important need to be able to respond that way. It is also important for people in the disability community to be connected politically on both sides of the aisle in the Democratic and Republican parties.

It is also important in terms of the response to learn about the context and language of the current climate. We have this new climate that emerged in 1995, and is still there in 1996. New terms were being used

and there was a very different context. I will share an example of how people did not study this context, think about it, and respond appropriately within it. When the personnel preparation programs were zero-funded in IDEA last fall, a lot of lobbyists came to Washington. People from universities came to Washington to lobby for funding for those programs. However, their presentations focused on the fact that these programs have been around for more than twenty years. They emphasized that these programs have trained X thousands of special education and related services personnel in this country and what a tremendous difference they have made in this country.

The staff members listening to this nodded their heads, and when the supporters were done, they responded, "Well, sounds like this was a great program. Sounds like you guys trained a lot of people who made a difference. Why do we still need this program? If you did such a good job, why do we still need this program?" The supporters were dumb-founded that there would be a response like that. That is an example of the context currently in place in the Congress. I think people in the past have not been used to presenting, responding and answering and getting that type reaction, so they were shocked and speechless when that happened. They were also unable to be effective.

These are not necessarily things that apply only to this Congress. If you are going to interact at the federal and state policy level, these are things that you need to do with any group of people. There is a real need to connect at the local level to understand what is happening in your community and state what needs to be communicated at the federal level. The local level is made up of voters who are consumers of our services, training, and research programs. When they say something to someone who is elected in Washington, DC, it means much more than if any of us in higher education say something. What the consumer say or what the parent says mean far more than what you can say. So there is a real need to link yourself with the consumers, the community, and the families that are perceived as voters.

One of the things that I learned in one of my first meetings last year was that I could not advocate for programs in higher education because people knew my roots. To be self-serving and to speak for those programs would have been a major trap. My advocacy for those programs had to be through other people. There was no way that I could stand up for those programs and reflect my own interest. The same is true for many of you. There is a real need to get to the people that actually are the consumers of those services and have them represent the program.

The last thing that you might consider in terms of this new political climate is that you need to make the case for your program within the context of that climate. You cannot make the case externally. In other words, mailing a thousand letters or doing other kinds of things may have some effect. However, more than likely, they will not. There is a need to learn what the climate is as well as what its context is, then make your case within it.

Let me use some of these examples in terms of IDEA. I will talk a little about IDEA, some of the problems, and some of what has emerged. I will also discuss the discretionary programs, which are the

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programs that involve higher education. While my perspective will specifically be how the Senate works around these bills, keep in mind that the House of Representatives is doing the same thing. It may be from a completely different perspective. The White House is doing the same thing from, perhaps, a completely different perspective as well. I will touch on a few of those things because the process is not yet completed at this point.

Reauthorization of IDEA

IDEA was up for reauthorization September 30, 1995. This is when it expired. I started working on it in March and April, 1995 with the expectation that we would be done by the end of summer. The bill at this point has passed committee in the Senate. We've made that kind of progress, but it is still far from being passed. It hasn't gone through the Senate floor and the House has to surface their bill. It has to clear the committee in the House. Then the Senate and the House have to conference, come together with one bill, and then come to agreement with the White House on a bill that the President will sign. That will eventually be the reauthorization of IDEA. Many people have been following this and interpret this reauthorization as a very heavy struggle. I think a lot of people in Washington who are working on this, would agree that it has been a very brutal reauthorization. There are some reasons for this that I want to talk about because I think what has happened with IDEA is probably going to happen with all the other disability legislation as it comes up. If you are funded under the Rehabilitation Act, that bill is next in line to be reauthorized prior to September 30, 1997. All of these issues and points of view are probably going to present themselves again. The Developmental Disabilities Act and several other smaller pieces of legislation are facing the same types of issues.

The reauthorization this past year has been referred to by many as a comprehensive reauthorization. It is the first time since its authorization twenty years ago in 1975 that this bill has really been opened up and looked at. You might ask the question, "Given this climate and given the fact that this is a piece of legislation that works fairly well, why in the world would it be undergoing a comprehensive reauthorization? Why don't we just tack on five years and keep going?" Many people on Capitol Hill, I think, would have loved to have done a simple five-year extension of this bill. However, there are some factors in play that would not allow this to happen and are probably going to affect other pieces of legislation that come forth.

One of those factors is that within the Congress itself, there is a general interest in consolidating programs and minimizing the federal role. I mentioned this previously as one of the characteristics of this climate. That factor is very much there. It will continue to raise its head through the reauthorization of IDEA and most other pieces of legislation. You also hear about it in terms of discussions about Medicaid, Medicare, and welfare which are much larger programs than what we are discussing. So one of the reasons why this bill had to be opened up is that nobody would let it pass as it was.

Second, there was another major force that contributed to opening it up. For the first time in twenty years, the general education community and the general population have taken a strong interest in this

legislation. In the past, the American Federation of Teachers, the National School Boards Association and other groups that represent general education for the community at large had shown no interest at all in this bill. It was kind of like, "Well, these are kids with disabilities. These are people with disabilities. You have your programs. You do your thing. Leave us alone." One of the driving forces over the last five or ten years is obviously the inclusion movement coming out of special education and the general disability community. Inclusion has forced, or at least pushed, the hand of general education. The general education community has decided that they will take a very active interest in what this bill looks like. What they are saying in a very simple way is, "If you want to be in the classroom with us and you want our teachers teaching your kids, then how come you're going to have your own special law and your own rights and on and on and on, your own appropriation." That's the bottom line. It is not being said a lot, but it is behind the scenes in terms of all the discussions that have been going on with the general education community. Along with that is the whole issue of school violence and the perceived double standard by people in the general education community. There is a perception that children with disabilities are treated differently than other children when they are violent in educational settings.

These two factors have driven the general education community to be very active in this reauthorization and to have a very, very strong push to down-size this law or, in fact, to actually eliminate it. While this has not happened, there have been tremendous struggles with this group to attempt to maintain what this law does for children and individuals with disabilities.

While the rights that are protected for families and children with disabilities under the law are intact, some major shifts have occurred in the law. These are particularly evident in Part B, which is the service implementation part of the law. There has been a major shift from focusing on process to focusing on outcomes or results. In other words, for the last twenty years, the Department of Education and its funded programs have largely focused on the process of how something is done. An example is implementation of IEPs. When monitoring is done and questions are asked, they basically ask if there is an IEP with goals and objectives in the child's file. They also ask if the child shows up in the classroom. This is looking at the process of delivering a program. No one really looked to see 1) whether that IEP had anything to do with the services that were provided, and 2) whether those services had any effect on this individual's life in terms of an improved education, improved outcomes, or an improved quality of life after that person leaves school.

Now the focus is shifting. The law speaks broadly about focusing upon educational results during the school years as well as post-school results. There is discussion or a determination of what that individual should look like when children with disabilities leave the educational system, and accountability for what occurs. Now, in focusing on results, there has been flexibility provided in the process. The law has simplified things in a lot of ways in terms of the process related to IEPs and other documents. The new approach is that the school will figure out how to do an IEP or how to plan for a student with disabilities. The law will hold them responsible for the results. If one way is different than another way, that will be acceptable as long as the

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individual attains what was expected. This is a major shift and it is not just a major shift for local and state education agencies. It will also be a major shift for people in higher education not only in how teachers are trained, but also in being accountable for training those people to participate in this new structure. There will be a carryover of those results in the discretionary programs.

Another major shift is a focus on general education frameworks, or what is referred to in the legislation as generic frameworks. The legislation has quite a bit of language that speaks to referencing what children learn. To have a child in a program that has no point of reference or is going nowhere that can be defined is not acceptable. One of the points of reference that are referred to many times in the legislation is the general education curriculum frameworks. Generic programs are those programs in secondary and postsecondary programs that everyone else participates in. This is a shift that moves away from targeting special populations. There are provisions for that to happen in this legislation, but it is not central to the basic language in the bills.

A third area involves assessment, evaluation, or identification of people or children with disabilities. There is a major shift toward collecting and using instructionally relevant information. The question that will be asked extensively under this legislation will be how did assessment information contribute to the child's educational program and the improved functioning or the results of this program for that child. The interlinking of assessment and instruction -- what teachers do with kids and what is done in the classroom -- is going to be viewed as a major shift for many people.

As I mentioned earlier, most of these shifts are evident in Part B of the legislation, which addresses how children are served. There has been a carryover, though, of the shifts into the discretionary programs. In the House bill, the discretionary programs have pretty much wiped out. The bill talks about money that goes into the discretionary programs being blocked, consolidated, and sent to the states. At that point, the state education agencies have the authority to decide which, if any, of these programs should be funded. While some programs are targeted separately from them, the bulk of the programs, particularly the training, research, and technical assistance types of programs that we are used to under IDEA, would no longer have the structure that they currently have at the federal level.

In the Senate, there were a number of intents that drove what we wanted, or hoped, to do with the discretionary programs. One of those intents was to restructure the programs within some type of a logical framework so that they would offer technical assistance and information dissemination to support the services that states provide to children and individuals with disabilities. This had to happen. The discretionary programs are basically a collection of programs around targeted areas, such as the postsecondary deaf programs, the severely emotionally disturbed program, and the early intervention programs. There were fourteen of these programs that had been authorized over the last 20 years at different times. They had little or no relationship to each other in the way they were written up. What was apparent to me within three months of coming to Washington was that these programs would no longer be funded in their current structure. Some of

the targeted programs that had political advocacy would survive. Other programs, such as personal preparation, would never survive under the existing structure. We sought to restructure them as support programs, so they are tied very closely back to providing services in Part B. The primary intent behind this restructuring was to develop a defensible mechanism, a way to defend funding of these programs. Our intent from the start was to cut no programs out of the discretionary group. In other words, it was to take those programs, restructure them, catch all the programs at current funding levels, and restructure them in a way that would be defendable to the appropriations committee. The third intent was to maintain a federal role with these programs to develop a rationale as to why these programs needed to be maintained at the federal level and not be consolidated, blocked and sent to the states. We have pretty much done all three of those intents.

Discretionary Programs

The current fourteen discretionary programs in IDEA have been restructured into three parts. There are seven programs with seven funding authorizations in Parts C, D, and D of the law. Part A includes the definitions and the intent of the law. Part B is the service delivery part of the law that refers to IEPs, parents' rights, etc. Everything else in the law has various discretionary burdens.

Part C is a linkage between Part B and the rest of the discretionary programs. It has been referred to as the systems change authorization. The intent of Part C will be to competitively provide comprehensive systems change money to states so they can pull together a group of people and improve the system of special education services that are in their state. There are a number of things that will be mandated under Part C that I think are very beneficial to people in higher education. One of the requirements is that states will have to pull together a partnership of stakeholders and a partnership of supporters within the state. The stakeholders are families and consumers while the supporters are people in universities and other environments in the state who can provide improved services within that state. As states apply for the system change grants, there is a requirement to pull together a broad partnership within the state and seek to address comprehensive problems or issues within the state. Some of those issues have been identified in the past in other systems change authorizations, such as in the area of school-to-work transition. Those projects have typically identified these areas as comprehensive problems or barriers that they could not address, such as funding formulas within a state. Many states are talking about different ways to fund special education including funding it in the same way that general education is funded. Various placement and identification strategies are comprehensive or core problems. They also include things like looking at personnel training needs within the state as well as possible new roles for personnel. This is one reason that institutions of higher education are viable partners within this partnership. From this partnership will also be information regarding research, demonstration, and new practice needs. This is very much the role of higher education. Part C is seen as a linking part for areas such as personnel preparation, research innovation, technical assistance and dissemination activities, to the activities and needs in Part B.

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Part D combines research innovation and personnel preparation, two authorizations that were entirely separate in the past. The intent of combining these two is that when personnel preparation activities occur, the newest research should be reflected in that training. People being trained should also be participants who should be involved in state-of-the-art research. Although they will have separate budget authorizations, they are closely linked together. Research and innovation have been restructured in a way that incorporates the concept of research to practice. There will be three major sets of research activities. The first one is what is referred to as new knowledge production that will fund projects to generate new information and new knowledge in areas of need. The second activity is referred to as the integration of research and practice. As a new idea is produced and validated through research, a whole series of follow-through projects will look at integrating that research with practice. The third category is called the improvement in the use of professional knowledge. Projects are specifically funded to ensure that new ideas are used by teachers. This is almost a ten-year sequence of activity. A newly funded five-year project could easily be followed by two or three years of integrating this into the field as well as an additional two or three years to follow through and collect data to ensure that this new knowledge is being used.

The second part of Part D is personnel preparation. Personnel preparation has been restructured into four categories. These include high incidence disabilities for those training personnel in areas of mild handicapping conditions, leadership personnel or leadership preparation, and low incidence disabilities that addresses multiple and severe disabling conditions. The fourth area of personnel preparation is what is referred to as projects of national significance. This will be a category that considers innovative ways to conduct personnel preparation including restructuring colleges of education or looking at innovative ways outside of universities to conduct training. The intent of that authorization is to take a close look at personnel preparation in relation to the needs of the field in terms of working with children with disabilities.

Part E contains the rest of the discretionary programs. For many of you that are working in the area of deafness, this is where your programs are. I worked personally very closely with Bill Woodrick and the other postsecondary centers to ensure that there was language in Part E under technical assistance and training that addressed the needs of this population and the needs of the four centers. The difference in this authorization is that much of the language in Parts C, D, and E is functional, rather than categorical. In terms of speaking to specific populations, this was only done in certain instances and specific language was included to address those programs. Part E includes these kinds of things. All of the current technical assistance programs, including the parent training and information programs, the regional resource centers, and the deaf-blind centers, are in Part E. While there may be some changes in wording, it is specifically targeted to those current programs.

Part E also includes the technology and media section. There is an assortment of programs, including captioning and the National Theater for the Deaf, that have been authorized over the last twenty years that are sort of "tagged-on" programs. While we made a real effort not to lose any of those programs, I would like to

add a few words of caution. We will see this come up, I think, in a floor fight on this bill. IDEA focuses primarily on children with disabilities who are defined as 0-3 and 3-21 year old. Many of the programs that are in Part E, however, benefit adults with disabilities.

An example of this is the highly successful captioning program that has been funded for many years. As we were going to committee with this program, an amendment was proposed by Senator Gregg from New Hampshire to remove captioning from this law. His point of view was two-fold. First, captioning benefits primarily people who are not in school or of school age. It benefits adults with disabilities. Second, the programs that are typically captioned are typically not educational programs. Behind the scenes on this, too, was sort of a moralistic front that many of these programs being captioned and paid for were ones that he felt should not be captioned. There was a USA Today story about *Baywatch* being captioned. Senator Gregg, and particularly some of his staff, felt that government money should not be used in captioning a show like *Baywatch*. What is driving some of these discussions are values. He actually wanted to put a rider in the bill that would require the Department of Education to evaluate every show that was captioned for its educational value. The Department of Education indicated that this was an impossible task to do.

If this bill is reauthorized for the next five years, you will need to discuss how these programs fit or don't fit and how you might have to defend them either under this law or another law. That issue was brought out and discussed with Bill Woodrick and some of the people that I've talked to this year. We decided to keep this program in the bill. The subcommittee, the staff, and I fought hard to ensure that there was no tampering with those pieces of legislation.

As I mentioned when I started, none of these pieces of legislation have passed yet. I've been working on the Senate bill for about a year and last month it cleared the committee. This is where some of these amendments were introduced. The amendments were killed, and the bill remained pretty much intact. The bill will go to the Senate floor sometime this month. There have been two or three senators, including Senator Gordon from Washington State, Senator Gregg from New Hampshire, and Senator Ashcroft from Missouri, who have threatened to bring up amendments on the floor or filibuster this bill. It is hard to say whether those will materialize. On the House side, a bill still has to be introduced. The House has been discussing this bill for the last year and there is a possibility it will be introduced this week or next. The House is much more volatile than the Senate is, meaning there is a lot more disagreement. It may be much more difficult for them to get their bill passed so that it can be conferenced with the Senate.

There is something else that may happen which is probably the best scenario of what could happen. As you know, Senator Dole is running for President, and in doing so, he is attempting to make a good show, obviously, before he goes on the election trail. One of the ways that that could happen would be to have some bills pass, since very few have passed in this Congress. One of the possibilities is that Senator Dole will talk to Newt Gingrich as well as other senators and say, "Hey, these are X bills that I want to have pass before we recess for the year." Hopefully, the bills that deal with people with disabilities, such as IDEA, the Work Force

Development Act, some pieces of the Rehabilitation Act, and other bills related to Medicaid and Medicare, will be part of that package. Those bills will be swept through the Senate. There will be leverage or pressure placed on the House for those bills to be passed prior to adjournment. Everything will get through pretty much in the form that it currently is in. Probably one of the biggest contributors to legislation passing is running out of time and that seems to be what is happening with this Congress. Congress will adjourn soon and people will return home to run for re-election. That pressure in itself could be what brings some of these bills to fruition. My general sense is, given what was there when I started out last year, that all of these programs and the legislation that deals with them are in pretty good shape. The appropriations are in very good shape. All programs are pretty much funded at current levels. As I mentioned, I think President Clinton is scheduled to sign that bill. There were some programs that took a cut, but most programs, given where we were last October, have survived. Given the timing, people are coming out probably much better than what they initially thought.

To end, I would like to go back to where I started and challenge you to become informed on these issues and participate in policy development. My experience has been that there are light years and millions of miles of difference between what happens out in the community and what happens at the policy level. People that are typically working at the policy level have no idea what you are doing out here and they have no idea what works. They have no idea how to find out about it and it is the last thing that enters their mind when they're working for legislation. Therefore, it is critical that you become involved in these types of activities. It definitely cannot be left to staff members who have very little information on this and are driven by all kinds of other agendas.

I would like to wish you a good conference. The program looks terrific with a lot of good things on the agenda. Hopefully, some of the policy level information that we started out with tonight will help you think about many of the other program issues over the next couple of days. I would like to thank Bill for inviting me and hope you have a good conference.

Thank you.

The Challenge of Change:
Bringing the Federal Perspective to the Local Level

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Kentucky Commission on the Deaf and Hard of Hearing
Frankfort, Kentucky

Susan Queller
University of Arkansas at Little Rock
Little Rock, Arkansas

Edwin L. Barnes
New River Community College
Dublin, Virginia

Robert Morris
Tennessee Department of Labor
Nashville, Tennessee

Ramon Rodriguez
U.S. Department of Education
Washington, D.C.

Olga Welch, Moderator
The University of Tennessee
Knoxville, Tennessee

Olga Welch

Thank you. I have the very distinct pleasure of moderating the presentation for this very distinguished panel of educational leaders. We will move from the consumer perspective to the programmatic, to the institutional, to the state and finally to the federal level. In order of their presentations, we have Dr. Bobbie Beth Scoggins who is the Executive Director of the Kentucky Commission of the Deaf and Hard of Hearing. The next presenter will be Ms. Susan Queller, Director of Disability Support Services at University of Arkansas in Little Rock. Then Dr. Edwin Barnes, President of New River Community College in Dublin, Virginia will present, followed by Mr. Bob Morris, Assistant Commissioner, Tennessee Department of Labor. Mr. Ramon Rodriguez, a liaison leader for OSERS, U.S. Department of Education will be the final panelist.

During this conference, you are invited to examine the issues and challenges facing postsecondary education in the 21st century. It is some of these issues and challenges which this panel will address. Each brief presentation will address these questions.

1. Identify or describe three significant changes that you had to deal with recently or that you are going to have to deal with in the near future.

2. What is the impact of these changes within your organization?

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3. How much control you have over these, particularly within your organization?

Since this conference is organized to encourage dialogue, you are encouraged to enter the discussion with your questions and observations at the conclusion of the presentation.

Bobbie Beth Scoggins

I'll be speaking from the consumers' perspective on these questions. First, three significant changes that you had to deal with recently or that you are going to have to deal with in the near future.

Change. Change in the deaf environment from a consumer's perspective. The immediate reactive question that surfaces is: Is it deaf friendly or is it deaf resistant?

In 1987, Mervyn Garretson said "political activists and advocacy among deaf people in the 1980s was a product of a slow evolution. The communication obstacle was the single most important barrier that prohibits deaf people from effective political participation." How cogent that comment was. Perhaps, without realizing it, Dr. Garretson had stated an inherent truth: that deaf people and individuals and leaders had finally come to accept their deafness, to understand and be understood. The future of the deaf community in America was and is in the political arena. For the masses, government may be an impediment. It has, however, become the catalyst for change for the deaf community for our past, present and future.

From the consumer's perspective, change is first accepted as deaf friendly or deaf resistant. How deaf friendly is this system? Has it been deaf friendly in the past? How deaf friendly is it now? How deaf friendly will it be in the future? Federal funds have been a very positive influence in progress for the deaf community in the past. The federal government has put a lot of money into different organizations throughout the country resulting in accessibility and opportunity for the deaf community that has not before been available.

Obviously, a deaf friendly environment will receive the support of deaf and hard of hearing individuals. They will participate. If not, they will go to where it is deaf friendly. Is that so different from programs for the hearing?

Accessibility. Accessibility relates to the past and present. How flexible is it? This is a critical key. How flexible is that system in meeting the needs of the deaf and hard of hearing? Is there a proactive approach to the benefits of changes in technology which benefit the individual? Is it flexible to such quick changes, or do they just cling to the status quo?

Service Providers. There are three different categories. First, some service providers still cling to the old system. When I say "old system," I'm talking about what I call the "age of the machine". That is a system which is based on methods and approaches. Change is difficult. Change, however, in every aspect of services is rampant throughout all programs. At least, it should be. It is going to be extremely difficult for service providers to continue the old system in the face of such changes.

Changes. Technology. Curriculum. Programs. We have to be flexible and proactive. The future will be saturated with strategy sessions taking long looks at the short future. There are three different

categories to be examined and some do overlap. Some service providers use all three of these categories. It depends on what type of resources are available. Some are very limited. Some services are stuck in the old system. You can't change. And it may be too late for you. Believe me, the deaf individuals entering that kind of program will assess it immediately. Poor programming will be noticed immediately.

At the same time, we must recognize that service providers are restricted by federal, state, and local laws which inhibit change and flexibility. It is hard to be up-to-date, be up-to-speed. A good example is the employee merit system. We know the truth and fiction in this current system. If you work with the state, the merit system does not promote innovation and creativeness. Limits imposed upon us limit us in hiring practices and often we end up with unqualified, unimaginative employees.

Funding. Do we have adequate federal funding? I don't know. Some programs benefit from having qualified grant writers. They are very successful. Other programs are not so successful, resulting in inadequate funding. There is inequity in funding in many places, in many programs. Misunderstanding of the deaf culture results in programs that are deaf resistant and unsuccessful programs don't get funded. Of course, some people do not know how to provide services to deaf and hard of hearing people.

Studies can identify some very serious problems and make recommendations for improvement, but, there is a phase to these studies and reports that some miss. It is called the "implementation phase". Some recommendations die because some interested parties do not take ownership in the recommendations. I'm sure you are familiar with "turf issues". Turf issues are here to stay and they play a major role in the decision making process. Deaf individuals want to participate but they continue to struggle within a "hearing" culture that they do not understand and are not understood. They feel the struggle as a group and as individuals. We are not savvy enough to understand this system and how to change this system.

So the deaf consumer's view of these three (the system, the structure, and deaf friendliness) is actually very different than those who provide the service. It is as different as night and day. Some deaf and hard of hearing persons say, "Well, that's okay," and they're very passive about it. Some have a more militant attitude about it. They say, "Yes, we now have the ADA to support us and we have to have change." Some deaf and hard of hearing people are just totally burned out. They have been in the business of advocacy for many years with minuscule success and they've just given up. They've had enough. Some feel oppressed. And there's a lot of apathy. And some say, "Why bother. Hearing people do not listen to us. They run it. And they do it their way." A lack of involvement with deaf people in the decision making process for decades has produced this reaction. If any environment out there is very open and invites deaf people to participate, they must be "deaf friendly". Deaf people are very sensitive to a "deaf resistant" program and will have nothing to do with it. That is their view and they are entitled to it.

There are three essential changes from the past. The "Deaf President Now" revolt at Gallaudet University, Washington, D.C. resulted in the appointment of a deaf person as the President of the only liberal arts university for the deaf in America. Of course, that truly demonstrated an increased sense of ownership

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among the deaf. It had been repressed for decades. Since then there have been many more deaf and hard of hearing administrators named to positions of responsibility all over the United States.

The Americans with Disabilities Act of 1990. Yes! The ADA has increased the level of awareness, particularly to the obligations of service providers in institutions everywhere. Still, deaf children are graduating from high school with 3rd and 4th grade achievement levels. This has been the norm for the last 30 years. Clearly, this is status quo programming. It is like nothing has happened.

But now, currently, what's happening and what's taking place? Deaf people are becoming involved in the political process. They are becoming participants in government. Political activism, legal activism, and lawsuits are commonplace. More are coming. The deaf community is becoming more and more aware of their rights under the law and they are calling on services providers to follow that law. The local battle lines are being drawn. The deaf and hard of hearing are beginning to collaborate, talk, negotiate, and struggle with the system, seeking system change. This is happening now. The future will unfold only as it is forced to do so. Institutions, state agencies, and federal agencies, are all now becoming more and more sensitive, and they are becoming more responsive in supporting goals and issues of the deaf and hard of hearing. We will see more and more of this.

Because of the lack of educational achievement in the primary and secondary grades, high school graduates often become clients of Vocational Rehabilitation which is now utilized as a cure for this educational vacuum. Community colleges have absorbed some of our deaf students who are still struggling in remedial classes, their goal of becoming productive citizens thwarted. And still there is no progress in educational achievement. The future? Deaf and hard of hearing people may, someday, aspire to become senators, representatives, possibly presidents. When is "someday"? Way out there into the future.

And technology. Technology is a coming force in the lives of deaf and hard of hearing individuals. Technology will mature. The demand by the American culture for a practical use of English will require command of a second language for the deaf and hard of hearing. A competent command of English is required in the use of computers. Some day, soon perhaps, will come true voice recognition in computers. We will become more than deaf, we will become blind because we cannot speak to the computer. Then the deaf community will truly be isolated from the benefits of computers. Educational achievement, voice recognition, English as a second language is a true challenge for service providers in meeting the needs of the deaf and hard of hearing student

The Internet, e-mail. Service providers must focus on serving the deaf, not just getting them into the program. We must bring the deaf in as members of the team and be able to change quickly.

The future will see the eradication of those illnesses which result in loss of hearing. Look at the current trend. Medical research is showing surprising success in preventing diseases which cause deafness. There is no more Rubella. Fewer and fewer numbers of deaf people enter the educational system. Residential schools for the deaf may start closing thereby increasing the load on other institutions.

Additionally, there is a mind-set among educators that inclusion is the best educational environment for the deaf. Not so. The least restrictive environment for deaf children is wherever communication can occur. Interpreters are not the answer in a public school setting. Inclusion and technology seem to replace common sense.

A good look at residential schools is in order. They are invariably based on the old system. The residential schools have not kept up with contemporary trends. Empowerment of deaf individuals has begun. America offers the highest quality of life in the world. Deaf individuals must be provided the opportunity of accessibility in our programs and services.

Participation in the decision making process is a must. Deaf and hard of hearing persons must receive educational services accessible to everyone. The deaf must have the opportunity of filling positions within higher authority. We need to see more and more deaf and hard of hearing people in the decision making positions. Local participation in government and political affairs must happen. Deaf people must be involved. Deaf people need to be advocates.

The impact of these changes? How much control do I exercise over these changes? Immense and precious little. I fear the same is true for you.

I wish you well.

Susan Queller

I am going to talk about three changes we are going through from the perspective of a student services provider in a postsecondary setting. First, I will talk about changes in direct services, then in the awareness level of our students, and finally in finances.

Direct services

The students entering postsecondary institutions now are somewhat different than they were ten or fifteen years ago. Many who years ago would have been told that college wasn't a feasible alternative are now entering higher education in increasing numbers. In some cases we may be seeing the very same students that were not entering colleges and universities a decade or more ago. At the University of Arkansas at Little Rock we have a higher than average number of older students, and our students who are Deaf or Hard of Hearing have an even higher average age than the general student body--an average age of 35 for students who are Deaf or Hard of Hearing. Younger students exiting high schools are more likely to be encouraged to attend college by families, friends, and the vocational rehabilitation system, which often also provides financial support.

Another part of this change is that students are presented with more choices today. They are not all going to a few specialized federally funded programs. As a result, most of us are seeing more students who have a wider range of academic and language experiences. More students are reporting other disabilities in

addition to hearing loss. Over half of our Deaf or Hard of Hearing students also have documented visual, learning, mobility, medical or psychiatric disabilities.

Whether this is typical or not, I don't know, but we have served a number of students with dual sensory impairment in the last few years. At one point a couple of years ago we had as many as eight attending at the same time who had varying degrees of both hearing and vision loss, and we currently have a student who is deaf-blind in the sense that he has no usable vision or hearing.

In the past it was probably assumed that an interpreter and note-taker were all that students needed in order to be successful in college. For many of the Deaf students who attended college in the past, maybe that was true. Now we have a much wider variety of needs expressed, and we need to look at service delivery in a new light.

Awareness level of students

Students are much more aware of their rights today. Yes, Section 504 has been around a pretty long time now. But the ADA, while it did not have as huge an effect on most colleges and universities as it did on entities not covered by 504, did increase awareness of rights on our campuses. Many of us are trying to build this awareness so students understand how to exercise their rights in future employment settings. I think it is important to continue to educate students about the details involving their legal rights. They need to know what is reasonable under the law, what isn't, the differences between the employment and education settings, and understand the rationale behind these laws.

A little bit of knowledge can be dangerous here. Our students need to move from awareness to knowledge and understanding of the law. Maybe "dangerous" is too strong a word here, but I have seen a little bit of knowledge of rights be detrimental to the student. I can think of several examples, but will illustrate with just one.

A student who transferred to UALR from a postsecondary program in another state that had a well developed program for serving Deaf students was somewhat perplexed by the differences in service delivery models. In the program she came from she not only had interpreters in every class, she also had tutors in every class. In fact, she said the interpreter and the tutor were always the same person for a given class. UALR has interpreting and tutoring services, but they operate out of different departments. While interpreters may also be tutors if they are qualified in the subject, we do not require them to tutor. When she came to UALR she presented the service model she came from as what the law required all universities to do. She did adjust quickly to the new system, and eventually even discovered that she did not really need tutors for most of her classes, and recently graduated. But my point is that the way she presented her case actually weakened her argument because she didn't have the facts of the law. In order for students to become the best self-advocates that they can be, I believe we need to help them get a good basic understanding of disability law.

Financial changes

As the need for more specialized services is increasing, and as our students come to expect these services and they become better self-advocates, we are facing these potential radical changes in our funding sources. Rehabilitation Services funding for interpreters is no longer available in some states. In Arkansas, Rehabilitation Services has been wonderful to work with, and we still get financial support for interpreters for students who are their clients. But we know that we may not be able to count on that funding forever.

I would like to offer some suggestions on dealing with budget changes:

• Work to maintain your level of funding -- whether through the same or different sources. Go for state funding.

• Work within your institutions as an advocates and educators about the issues. Educate your administrators, other student service programs, the development office, and the communications office about the challenges students who are Deaf or Hard of Hearing face.

• Work within your institutions and communities to foster collaboration. Utilize all the resources you have. In Arkansas, we are very rich in creative people with knowledge and experience in Deafness. We will continue to use their brain power in an advisory capacity and any other appropriate capacities to help solve any problems that we have. At my institution we are rich in people who want to help within their own programs or in cooperation with us. We recently had a PEC peer evaluation, and the nicest thing that was said at the end of the three days was that people at UALR seemed to be accommodating not because they were required to by law but because they considered it right. We all need to foster that spirit of accommodation that I think is there in most postsecondary service providers and faculty. Sometimes individuals you work with may not know that it is there within themselves, but I see it as part of my job to see that spirit of accommodation wherever it might possibly be, and to help bring it out in those particular individuals.

• Work within your own departments. Brainstorm with your staff, engage in long-term planning, assess the best use of staff time (e.g., what full time interpreters might do when not interpreting).

• Last but not least, work with your students and others from your Deaf or Hard of Hearing communities. As Dr. Stodden said last night, consumers are our key players.

I want to end on a positive note. We and our students are going to get through this. We will survive change. We will try to shape the future in any way we can, and we may not be able to do everything we would like and consider important to do, but I know we are not ready to throw in the towel yet.

Ed Barnes

It's a real pleasure for me to be here this morning. Our institution has been working with this consortium for many years. The topic I'll discuss this morning is a very complex topic. New River Community College is a two-year public institution that has been state-funded since 1990. From 1990-93, we experienced budget reductions of 24% that will certainly bring change. We are greatly influenced by the actions of the

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Virginia state government. Virginia, as some of you might know or not know, is a relatively conservative state. So we manage our money well, what we have. We are an institution that's honestly driven by a set of beliefs. Our mission is extremely important to us. One of those beliefs -- perhaps maybe even the most important belief -- is that access is absolutely a top priority in our institution. New River Community College has been widely recognized throughout the nation in the past five years. It's been ranked as one of the top five community colleges in Virginia in service to students with disabilities. Now, I will tell you that we have not earned that reputation simply because ADA or 504 legislation says that we have to do it. It's been done because we believe in access and we believe that access should apply across the board.

I want to share with you some issues related to change. There's change and then there's restructuring. I will talk with you about three changes that took place at our institution, as well about restructuring that covers a whole number of changes.

We have been told that change is inevitable. I can tell you if it's state-funded, it's inevitable. It will be changing all the time. I want you to think about this: the coffee break just ended. Somewhere right now, there are hundreds of folks putting down their coffee cups and writing new regulations. They're doing it right now. All of these regulations are going to cause you to have to do something that you weren't doing yesterday. Now, let me really ruin your day. These people work full-time. That's all they do. And then let me ruin it still further. Somewhere there is a politician that is trying to find an issue on which to get elected and who is going to get elected. That politician is going to go straight to those folks that write this stuff, and you'll have more changes.

Let me talk with you about restructuring and the changes that it brings about. Fear of restructuring is huge. You should just assume this. You mention restructuring, and people are going to become concerned about job security. They read in the papers about layoffs and people being demoted. These are pretty common things in restructuring. There are some, no matter how honest you are, who believe that you are doing the restructuring simply to get rid of them. If you have an insecure person in your organization, they believe that you are going through all of this trouble to fire 20 people. Then there are those who fear that their new responsibilities are going to be too heavy, their work will be doubled, or they will not have the skills to perform the job.

In this type of change, the level of trust is absolutely critical. Even then, no matter how good it is or how much you trust each other, the best intentions are likely to be misperceived. It is extremely important to proceed in ways to maintain that trust. When we have to go through major change, we have at least two alternatives. We can go through mandated changes to meet the level of law. You do what you have to do. If you've been in this game for a long time, you know how to do what you need to do, don't you? We all know that. Or we can use the opportunity to really improve the organization. We can use it to pursue a better alignment of resources, enrollment, and personnel. If we take the time to identify the needs of our college at that particular time, we can get the right people in the right places to address those needs.

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Our strategy was to comprehensively re-think the entire organization. We had several planning precepts, and we used these precepts to guide us through this change. We tested every single action against these precepts to address the fears and the insecurities that we knew would be there. One of the things we wanted to do was to reassure our people that we were going to use our existing personnel to go through the restructuring. That is exactly what we did. We did not want anyone to feel that they would lose a job or be demoted, but we had a number of different things we were going to address. We also decided that we were going to cut administrative costs, not the cost of services directly to students, and we did that, too. Since this time, the attrition and retirements have reduced our work force by eleven people and $400,000 in salary and benefits.

But we did something that was rather profound, and this is one of the major changes. We did away with our Continuing Education office. We changed it and integrated it into the Academic Divisions so that a Division Chair would have both credit and non-credit instruction under their supervision. With this model, if we are contacted by industry for a training program, the Continuing Education Director will not have to work it out with the Division Chair. The Continuing Education director had no faculty; and one of the greatest concerns was getting instructors to teach for them. So there are a lot of other reasons. Primarily, we wanted to accomplish three things. We wanted to cut administrative costs, integrate continuing education to improve responsiveness to the community, and involve the professional experiences of our managers.

I want to tell you about the impact of our actions. First, when you cut out $400,000 in personnel, it means that you have fewer full-time people and more part-time people. You have people do transitional things. Another impact is that we had an advisory committee. There's very little difference between a good advisory one, and a meddling one. We had one committee that didn't want us to integrate Continuing Education, and they have since been disgruntled. But other than that, we've done pretty well.

As far as control is concerned, we have no control over the state saying that we have to restructure. But once you define your ballgame, which we did, we have all the control in the world regarding the process itself. The restructuring plans required approval of the Chancellor and the State Council of Higher Education in Virginia; so from that standpoint, we gave up some control there. As a result of the changes, our executive management has been reduced by 20%. We increased our first level management by 25%. We developed a Division of Distance Education and Learning Resources, and we have solved a lot of problems there. We have actually increased the number of our Continuing Education offerings, and the physical campus of New River Community College has experienced more improvement in the last eighteen months than any other time in the history of the college.

So what could be done? I would say that the college needs to continue to refine things. We need to try to make that advisory commission happier than it is. We need to keep on trucking, but respecting our people and making sure that their experience at New River Community College is a positive one and that restructuring is a positive experience. And we think that by and large it has been.

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Thank you very much.

Bob Morris

I am delighted to be here today. I think the theme of the conference is a challenging one. When you talk about change, we can look at the state as a model and have fifty models around the country. I think change is a key operative word in describing what is happening at the state level today. My responsibility in Tennessee is the discipline of employment and training, so I will approach the discussion here today from that perspective. I will, however, deviate from the questions addressed by the others.

Like it or not, we are living in a new global economy. There is a vast change in the environment. A lot of folks are very unhappy with change and they're getting unhappier as we go along. I would like to share with you some numbers and some ideas concerning the changing work place and current trends that are affecting our lives. I put this material together a while back for an economic development conference and the information is fascinating to me.

In 1991 for the first time, U.S. companies spent more money on computing and communications equipment than they spent on industrial, mining, farm and construction equipment combined. This new pattern gives evidence to the fact that we have entered a new era. Quite simply, the industrial age has given way to the information age. As recently as 1960s, almost half of all workers in industrialized countries were involved in making or helping to make things. By the year 2000, however, no country will have more than one sixth to one eighth of its work force in the traditional role of moving and making goods. Already an estimated two thirds of U.S. employees work in the service sector, and knowledge is becoming our most important product. This caused a need for different organizations as well as different kinds of workers. During the early 1900s, 85% of American workers worked in agriculture. Now agriculture involves less than 3% of the work force. In 1950, 73% of U.S. employees worked in production or manufacturing. Now production and manufacturing jobs are less than 15% of American employees. The U.S. Department of Labor estimates that by the year 2000, at least 44% of all workers will be in data services. That is gathering, processing, retrieving or analyzing information.

Careers come and go. This is nothing new. What is new is the speed of these changes and the need to adapt quickly and communicate effectively. Today, people change jobs more frequently than in the past. In 1991, nearly one out of three American workers had been with their employer for less than a year and almost two out of three for less than five years. The United States contingent work force consisting of roughly 45 million temporary workers self-employed people, part-timers or consultants has grown 57% since 1980. Going, if not gone, are the five-day work weeks, lifetime jobs, and corporate and cultural security blankets. For a large and growing sector of the work force, the work place is being replaced by cybernetic work space. Career changes will become the norm. We live in a world where in order to compete in the global market, we must generate a labor force that is committed to dealing with change.

Since 1983, the U.S. has worked with 25 million consumers. The number the cellular telephone users jumped. Nearly 19 million people carry pagers, and almost 12 billion messages were left in voice mailboxes in 1993 alone. Communication technology is radically changing the speed and direction of information flow in our world. I shared this information with you since I thought it might set the stage for change.

There are some trends taking place at the state level that I will share with you. They are not in any order of importance. States are now looking at the possibility of block grants. There is legislation that has passed in both the House and the Senate that sets up block grants to the various states and territories. One of the good points is that in the legislation that is under debate in Washington, Vocational Rehabilitation is kept as a separate funding track for both the House and the Senate.

One of the hot topics facing the state in the forming of training, is that of a one-stop shop. Everyone is trying to figure out how to develop a seamless delivery system. It can be electronic or on location, but it varies by community. It will be very interesting to see how one-stop shops develop and how community colleges can fit into it.

One of the hot topics right now facing us is the school-to-work issue. This began several years ago as a state initiative, but is now being pushed actively at the national level. It is an integration of career and occupational education that spans from kindergarten through high school. It ties the education community to the private sector. It is a very interesting marriage there. In the last year or so, I find that although educators, trainers, and private sector folks all speak English, somehow it doesn't quite mesh. We have to teach each other how to speak together. In the past, I think that vocational education has been relegated to second-class citizenship. One interesting note that I ran across not long ago is that, by the year 2005, 80% of jobs will require less than a bachelor's degree, but more than a high school diploma.

Another trend coming at us very quickly is in the area of technical improvements and better electronics. Although it may initially sound superficial, it will give us access to better labor market information so trends can be validated by what we need to do in the private sector or by the employing community. There will be better tracking and there will be better qualitative feedback if all of those things occur.

There is an increasing emphasis on customer satisfaction. Initially this effort has been focused on the participant or the client. We are moving to, at least in most of the states, an equal awareness of employer satisfaction as well. There will be localization of services. Someone finally realized that labor markets are, in fact, local in nature and we need to have local folks involved. There is a lot of emphasis currently on capacity-builders. The feds are giving us money to build our capacity at the state level, and I think you will see that the state ought to be improving its ability to plan and deliver programs and services. There will be heavy private sector involvement as we move more into work force development.

There will be several limitations. One is that there will be an increased emphasis on coordination of services. There will be less protection and we will have to do more with less.

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As we mentioned earlier, there will be more services available to the disabled. In addition to Vocational Rehabilitation, you will have the other seamless delivery system so that even with decreased funding of services available for the disabled, I think there will be higher group accountability. I think every sector in our society demands accountability: folks receiving the services, the business community, the taxpayers, the legislators and our governors. You will see more of that.

You will have a technology-driven labor market. While high school diplomas are required for many jobs, many companies are now asking for computer literacy. An article in one of the Memphis newspapers cited 600 openings for computer repair people. One company is moving to another location because they can't find people to fill the jobs. With continued economic expansion, I think employers will be looking more and more at abilities and not disabilities. Life-long learning with increased emphasis on literacy, mathematical skills and computer literacy will become the norm. I think that the final thing is the changes will continue to accelerate and move faster.

Thank you.

Ramon Rodriguez

I am in the Office of Special Institutions, Office of the Assistant Secretary, the Office of Special Education and Rehabilitation Services. Last night, Dr. Stodden talked about some major changes taking place in Washington, D.C. As I talk about this, I will also touch on how much control we have, and how much control you have. We often discuss the discrepancy of being here in the local area and being in Washington, D.C. But there are a lot of things that you can do, and I will refer to them as we move on.

You probably have heard a lot about Vice President Gore's concept of reinventing government that involves reorganizing and restructuring. While I have only been in OSERS for five years, most of the people that I work with have been there many more years. Many things that were new to me were very, very old to them. When the notion of restructuring or reinvention came out, my coworkers said, "Nothing's going to happen. We have seen this come through at every administration. " That is not true this time. Changes have already taken place.

I would like to outline for you the structure of the office that provides services to you, to special education. This is OSERS, the Office of Special Education and Rehabilitation Services. I have worked there for about two years; before that, I was in the Office of Special Education Programs. There are two other components: RSA, the Rehabilitation Services Agency, and NIDRR, the National Institute on Disability Rehabilitative Research. While I had friends in the other two divisions, the divisions had no relationships. We got together for lunch occasionally, and I began to ask questions about programs and services. I noticed that RSA has an interpreter training program. My friends in RSA said, "Yeah. This is one of our long-standing programs, one of our most effective programs." Well, the Office of Special Education Programs also has an

educational interpreter training program that have funded around thirty programs; ongoing, there are eighteen. RSA has twelve programs, but the two divisions do not talk to each other about interpreter training.

This is the reason for reinvention: to remove the barriers between components. For the first time ever, senior staff members asked individual specialists in deafness about programs serving deaf and hard of hearing people. Together, Dick Johnson and Vic Galloway from RSA, Ernie Hairston from OSEP, and I all met with them and were asked how to best manage all of these programs across components. We were very surprised. For the first time ever, we met in a room where we actually discussed programs that are serving deaf and hard of hearing people. The outcome of this is probably the notice of proposed priorities for technical assistance in postsecondary programs that you have been hearing about. As Robert Stodden mentioned yesterday, the focus is on technical assistance with an emphasis on outcomes. This is exactly what this internal review and restructuring would like to accomplish. As we review our programs, we find that there are many funded programs that do not appear to be related and we wonder how this happens. It may be due to political reasons or pressures with little or no relation to the needs of the consumer. For the first time now, we are reviewing these programs to see what they do and what the results or outcomes of these programs are. Then we will go to the consumers, show them what we have and ask them what we need.

For the first time, in a very systematic, structured way, this will come about. The walls between these three components are coming down. Instead of having both programs, there will be functions. All programs related to deafness will in some way be organized by a group or teams. There will be team leaders for specific functions within that group, and for other functions, there will be other individuals leading this team. I think for the first time, even in the face of downsizing, we will find ways to provide for them and continue to serve.

Thank you very much.

Olga Welch

I want to ask that you join me in acknowledging this wonderful panel. Thank you very much. To the panelists, I want to say how very much I appreciate your staying within your time limits. Having been a panelist, I know how very difficult that can be when you have so much information to share, and I invite all of you to engage in many conversations with these individuals, because, as you can see by their biographies in your program materials, they have a great deal of very important information to share with you.

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Understanding Each Other

Steve Larew
ADARA
Sycamore, Illinois

I am happy to be here in Knoxville again. I have been fortunate to speak to the Orientation to Deafness program here several times. I want to tell Marcia that we are going to change the wording of her introduction in the future. Instead of saying we met in graduate school, we will say we went to school together. No years or dates. We just went to school together and have known each other for a long time.

I am a strong believer in communication access and that is part of what I plan to talk about tonight. I plan to sign for myself and I am wearing microphones for the assistive listening systems. I am also going to ask that the interpreters stay and interpret. I use Signed English and I know that some Deaf people prefer American Sign Language (ASL). I also tend to move around while the interpreter stays in the same place and is easier to follow. So with the captions on the large screen, assistive listening systems, interpreters, and my own voice and signs, I think we will be fine.

Let me start by sharing some of my life story. Why am I here? How did I become President of ADARA? How did I become a past president of the Association of Late-Deafened Adults (ALDA)? A friend of mine has a word to describe people who serve as the president of two national organizations at almost the same time. It is "FOOL". Maybe I am or may I am not. I will let you decide that at the end of the evening.

I am a person who became deaf when I was 18 years old. I grew up on an Iowa farm near a small town whose high school had 200 students. While growing up as a hearing person, I did not have any contact with people with disabilities. None! The first time I met someone with a disability was my grandfather who walked with a cane. I had no contact with people who were deaf. No contact with persons who were blind. I have no recollection of even seeing a person who was deaf. Not only was I not exposed to persons with disabilities, I had not met people of color either. I had no exposure to other cultures until I went away to college.

During my first semester in college, I became sick with a bad cold. I noticed I could not hear very well. I had a cold, cough, earache, sore throat, sneezing, the whole works. Of course, I did not go to a doctor. I hate going to doctors! I still hate going to doctors! So, 10 days later when my cold disappeared, I thought everything was fine. I went to class and I noticed I still could not hear or understand what people were saying in the classroom.

I could not hear, but you have to understand that it was not my fault. I did not believe I was becoming deaf. I could not accept that I was deaf or losing my hearing. It had to be someone else's fault. It had to be that there was a problem with the television. The volume control was broken. I could not understand the teacher because the teacher was mumbling. Other students in the classroom were talking and making it difficult to

hear. My friends were whispering because they did not want me to understand what they were saying. That was my experience. I will not go into depth about all the feelings at this time.

The reason I am here today is to talk about the different groups of people with hearing loss and to help develop an understanding of these groups. For persons who are Deaf, the National Association of the Deaf (NAD) has been around for a long time. It was established in approximately 1880. Self Help for Hard of Hearing (SHHH) has also been around for several years. What happens when a person becomes deaf? I knew nothing about those groups. There was nothing for me. I had never before met a person who was deaf. I did not know what to do. It was a very frustrating experience but I somehow managed to live through it. Tonight, as President of ADARA, I plan to discuss these different groups and hopefully, I will be able to help professionals in the field develop a better understanding of the different needs of these groups. That is my goal.

It was almost two years before anyone told me about any kind of services for persons who are deaf. I spent the first two years with no effective method of receptive communication. I now call those two years "communication hell", and I do not wish that type of problem on anyone. One of the most frustrating experiences you can have is to be living in a world where you know what is happening, but you can not understand. You see something happen, but you are only guessing at what people are saying.

Changes were forced on me. My old hobbies included listening to the radio. I could not do it any more. Throw the radio out of my life. Also throw out television, music, telephone, and talking with my parents. This was back in 1971; if they had TTYs, they were the big models, but I knew nothing about them.

I want to talk about the different populations and give you my definition or explanation of them. First is Hearing people, but I do not think I need to explain them to you. I have done deaf awareness training for professionals in other agencies. When I do that training, it is the first time they have ever been labeled as hearing. People who work with persons who are deaf or hard of hearing use that term all the time but outsiders have never heard it. I love putting labels on those people.

I describe Hard of Hearing people as those who are able to benefit from assistive listening devices or lipreading skills so that they are able to communicate through speech. They are able to benefit from assistive devices in some way.

I describe Deaf, or culturally Deaf people, as persons to be fluent in sign language, most often ASL. They are involved in Deaf groups and accept that they are deaf. They are proud to be deaf and do not see deafness as pathological. Communication is the issue for them.

For deafened, I will use two terms - deafened and late-deafened. I sign late-deafened using the signs "become deaf". People become deaf in different ways. It is not always sudden or traumatic like my hearing loss. I became deaf or acquired a severe hearing loss in 10 days. I was not ready for it and I did not know what was happening. Other people grow up with a mild hearing loss, and are able to function as hard of hearing. As the hearing loss continues to decline, they become audiologically deaf, and they are no longer able to function as a hard of hearing person. Assistive devices no longer benefit them for understanding speech or assisting with

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lipreading. There are also people who start with normal hearing, become hard of hearing, and then deaf. It is a more gradual process.

I have described Deaf people as being able to communicate in some form of sign language. I have described Hard of Hearing people as being able to communicate with assistive devices. I like to say that deafened people do not have receptive communication and cannot communicate. They can not understand anything. Sometimes I feel that is really true, especially in the beginning stages of deafness. Most of the time, their only effective method of communication is writing and reading. That is why I am happy that technology has allowed the development of realtime captioning because without it, most deafened people would be lost. They could not function and could not be involved.

You may be aware of the different groups I have mentioned that provide support to persons with hearing loss - National Association of the Deaf (NAD), Self Help for Hard of Hearing (SHHH) and Association of Late-Deafened Adults (ALDA). Support groups are a very important issue. These groups were established to allow people to meet their peers, people with similar conditions. That is very important. One of the best healers is to meet someone else that has the same situation you do. Whether it is women's groups, Black groups, Hispanic groups, or deafened groups, it is important. People having something in common appreciate the opportunity to get together and discuss it. Compare notes, so to speak. With deafened adults, ALDA is the new kid on the block. It started in 1987 as a group that was set up to be a self-help support group. I was not involved in that initial group. I believe I was invited but I had come to accept myself as deaf and did not see the need for this type of group. I realized several years later how wrong I was.

To better explain this perception, allow me to give more details about my personal history. I believe my perception, at that time, of ALDA and becoming deaf is very similar to that of many professionals working with persons who are deaf.

I mentioned that I spent two years with no receptive communication. I went for what seems like 100 hearing tests and it took almost two years before someone told me about Vocational Rehabilitation (VR). Finally! A social worker at the hospital where my ears were being examined made the referral to VR. I was fortunate to have a good counselor. He did not blow me off. I had no receptive communication skills, but he was able to deal with me. He would write for me and provided me with the information I needed. He gave me information about this place called Gallaudet College. He also gave me information about National Technical Institute for the Deaf (NTID), and all the different postsecondary programs that were established back in the early 1970's for persons who were deaf or hard of hearing. The term deafened was not frequently used back then. Someone just told me that deafened is not a word. They do not like it. I don't know if it is a word or not but I use it.

I decided that Gallaudet College best met my needs but I would need to learn sign language. I took one six-week class before I went to Gallaudet. I was very proud of myself and I could sign "My name is S-T-E-V-E". I was proud that I could sign that. I had no idea what was involved at Gallaudet. I will just tell you that I

had a real culture shock when I arrived at the Gallaudet campus. I was totally lost trying to understand the other students.

Something else happened that you need to be aware of, as maybe it happens with other people who have become deaf. I had grown up as a hearing person and, for some reason, I had developed a patronizing attitude toward persons who were deaf. The word deaf bothered me. I did not like it. I said I was hard of hearing because that term did not bother me. I could not make myself use the word "deaf" to describe myself at that time.

I am not sure why, maybe because I had grown up without exposure to persons with disabilities, I had developed a general attitude that people with disabilities were inferior to able-bodied people. When I was planning to go to Gallaudet, I had big plans for myself. I was going to be BMOC! Big Man on Campus. Because I had grown up hearing, I was better than all those people who grew up deaf. I was going to join the football team and become an All-American. All it took was one day on the football practice field to find out that if the other person weighs 250 pounds, runs fast and hits you, it hurts. Believe me, I did not do that well at football. I played some but I was not wonderful. I was lucky to get into the game and was nowhere close to being an all-American.

It is important for people working with the deafened population to understand that maybe they have this attitude. Perhaps they are not looking down on people who are deaf, but they are not comfortable with the term deaf. A recently deafened person may be especially uncomfortable with the term. It is very easy for them to withdraw, sit at home alone, and do nothing.

Another experience I want to share is related to assistive devices. For three to four months, I probably was able to function as a hard of hearing person. I really do not remember that time well as I was busy denying I was deaf. I look at my old audiograms that show a moderate hearing loss so maybe I was hard of hearing. I remember going to the store to buy a hearing aid. I had the belief that, if you become deaf, the cure is to buy a hearing aid. A hearing aid will solve all your problems so I decided to buy a hearing aid. My parents and I went to the store about five blocks from campus. The man gave me a hearing aid and let me test it. Now, understand that this was a very small store and he turned on the volume and talked to me. I could understand him and that was wonderful. The hearing aid works!

The salesman gave me a telephone and dialed the time. I picked it up and could understand the time. This hearing aid was going to solve all my problems. I walked back to campus feeling really good. But, when I arrived on campus, I found out I still could not hear the television. I still could not understand my friends in the dorm. The hearing aid broke on the way back to the dorm. I was not aware that environment plays a key role in the use of hearing aids. That a hearing aid is a cure for hearing loss is what I call a communication myth. The general public tends to accept this myth but it is not true.

Sometimes people who are deaf take the perspective that being hard of hearing is not a problem. Their hearing loss is mild so they do not have the problems that deaf people may face. That is not really true. Hard of

hearing people do have special needs. They may need assistive listening devices. Before you assess the issues a hard of hearing person may have to face, it is important that you understand their situation. Maybe they are working as a salesclerk where everyday communication is required with customers. That requires a lot of communication and sometimes, no matter how good your hearing aid may be or how good your lipreading skills may be, you are going to have a hard time communicating. It is important that professionals in rehabilitation understand that is probably a stressful situation for persons who are hard of hearing.

I have a 110 decibel hearing loss. I am more deaf than many culturally deaf people. After I quit attending a hearing college due to poor grades, I worked on a farm. The only person I had to communicate with was my uncle who knew I could not hear very well. I spent most of my day cleaning pig pens. You don't have to have receptive communications skills for that, just visual skills to avoid any angry animals..

In comparing my situation with that of the hard of hearing sales clerk, my hearing loss is more severe but who needs the most support or assistance? Probably the hard of hearing person because their work environment in the store is more stressful than working on the farm.

Because of all the time I spent cleaning pig pens, it is obvious why I wanted to attend Gallaudet. I wanted something better than going home smelling of manure everyday. I loved living on the farm and the work was helpful, but I did not have the aptitude to do it the rest of my life.

I was very fortunate to have support from my parents. They did not learn sign language immediately. They wanted to know why I became deaf and then checked out programs that would be helpful to me as a deaf person. I would not be here today if it were not for the support of my parents. It has been 25 years since I became deaf. They have taken two or three sign language classes. They still do not sign well but they have made the effort to learn. My four brothers have also taken at least one sign language class so I am fortunate that I had family support. I consider myself to be more fortunate than other people who have become deaf.

Now, let me return and talk more about ALDA. The organization started as a small group of 13 people who got together for beer and pizza in Chicago. It is still a tradition that when ALDA people get together, we drink beer. It is a requirement! Well, not really, but the idea is for ALDA to serve as a social outlet, helping people to get out of their homes, going out and enjoying themselves. I was not involved in the original self-help group because I did not realize the importance of peer interaction at that time. After graduating from Gallaudet, I worked for two years and then chose to enter Northern Illinois University to pursue a master's degree in Deafness Rehabilitation Counseling.

It was at that time I began to accept myself as a deaf person. People who knew me at Gallaudet would be very surprised to see that I am now involved in the field of deafness. When I took classes in deafness rehabilitation, I started to understand what had happened to me. I was able to relate many of my personal experiences to what was being taught in the classroom. I began to understand why I had felt so angry and why I did not want to talk with anyone during that time when I was losing my hearing. But... I did not learn that about myself until ten years later. And I only learned it because I happened to go to graduate school to receive

special training in this area. Otherwise I would still be in the dark, not understanding why I felt different, why I was deaf and what was happening to me. I also began to understand why people who grow up deaf do some of the things they do. Why they may have a hard time with English. I remember when I first arrived at Gallaudet, I could not understand why people would always pound on the table and then sign. It took me a long time to figure out that it is necessary to get attention from people before you sign or talk. Having grown up in a hearing culture, I was not used to that behavior but it is a necessary part of Deaf culture. I now do the same thing myself and love it!!

I have come to more or less accept myself as a deaf person. When I heard that people were starting up a self help group for deafened people, I thought, "Why bother? Just accept that you are deaf." I was not really interested. I was also in the process of moving out of state at that time so I had a good excuse for not attending.

A friend of mine from graduate school was the leader of that self help group. Did you ever have seven or eight deafened people in the same room and have to figure out a way to communicate? The people had varying degrees of lipreading skills and hearing aids that were not really helpful. No one could really understand each other for group communication. I was not there but I have heard the story that how they communicated was through the use of a ditto machine. A person would write something, make copies, and pass the paper around for people to read. Another person would write something and the process would be repeated. I assume that was a true story.

I tend to believe the story because, after moving back to Illinois, the one thing that impressed me most about ALDA groups was the effort the individuals made to communicate with each other. I have never seen so many people be patient with each other. The ALDA communication philosophy is "whatever works". Whatever is successful. Many times that meant writing notes. Realtime captioning was not as well-developed as it is today. Fortunately a person involved with ALDA was a computer expert and he happened on to the idea of using computers for "ALDA Crude". ALDA Crude involved using a computer program with large print and hiring a typist who would type what was being said in the group. This was much more effective than the ditto machine but still had limitations because very few people can type as fast as people can speak. How many people do you know who can type 150 words per minute? People in ALDA groups using ALDA Crude would learn to speak for a short time and then stop to allow the typist to catch up. It is fortunate that court reporters later became involved and realtime captioning has advanced to the levels you are seeing here tonight.

As President of ADARA, it is important for ADARA to recognize the different groups involved. If you are a member of ADARA, you know that instead of calling ourselves the American Deafness and Rehabilitation Association, we are now known as *ADARA, an Organization of Professionals Networking for Excellence in Service Delivery to Persons Who are Deaf or Hard of Hearing*. One reason we modified it is because we want ADARA to be open to professionals in social services, human services, independent living, mental health and education working with person who are deaf or hard of hearing. People would previously see the word rehabilitation in the title and think it does not relate to them.

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It used to be acceptable to use the term deaf alone. Hard of hearing people felt this term was not recognizing them so we have changed to deaf and hard of hearing. The term hearing impaired was also used but deaf people do not find the term "impaired" to be acceptable. Deaf and Hard of Hearing is supposed to be more politically correct. One of the first persons to see the new title was a fellow ALDA board member and the first thing she said to me is "Why didn't you include deafened in the tag line?". Being politically correct is a pain but hopefully people will understand we are referring to all persons with hearing loss. I do not have an answer on how we can satisfy everyone but we will try.

To return to speaking about some differences in the three groups. I recently started teaching a class in Deaf Culture and the term "think hearing" was discussed. For a long time my friends would refer to me as a person who "thinks hearing". I accepted that description because many of my behaviors, actions and responses are based on how a hearing person would react. When I use the sign doorbell, I automatically sign pushing a doorbell. A Deaf person may use the sign flashing light. Perhaps this is an example of different perceptions based on different experiences.

When I started teaching the Deaf Culture class, I learned of other meanings for the sign "think hearing". Some Deaf people use this sign to indicate a person who is opposed to ASL and prefers the created Signing Exact English systems. I am not opposed to ASL so I do not feel that meaning applies to me. It does not apply to many deafened adults. Deafened adults are not opposed to ASL although they often choose to learn Signed English rather than ASL since it is easier for them.

Deaf, Hard of Hearing, and Deafened individuals have many similar goals. One of these goals is communication access. I do not think there is person in this room who is opposed to communication access. I doubt any of you want me to take off the microphones, shut down the captioning and stop signing. While we all have the same goal, the methods of providing communication access for all these groups, however, are not always compatible.

Most Deaf people prefer the interpreter to be near the speaker, if the speaker is not signing. I know I do as I like to be able to see both at the same time. Most Hard of Hearing people prefer that the interpreter be away from the speaker because it is a distraction. They need to focus on lipreading and hearing. Now, when you set up realtime captioning, you do not always have a sophisticated video system so you need an overhead projector with a screen. Deafened people prefer a darkened area so they can read the captions easier and also want to see the speaker. Deaf people need the light to see the interpreter. Hard of Hearing people need the light to lipread. How do you satisfy everyone and still have communication access?

We are fortunate that access seems to be successful tonight. We have the advantage of sophisticated equipment and a large room but it is not always easy to do. I can remember speaking to an SHHH group in Nebraska. They asked me to hold the microphone that was linked up to their assistive listening system. I always sign and talk at the same time. They told me I did not need to use sign language but I could not stop signing. It

is my normal way. But how do you sign well with a microphone in your hand? I did it for that group but there were no people there who were dependent on sign language for communication.

I am happy to see that PEC is using realtime captioning for the plenary sessions. I am happy to see that other organizations have also started to use more realtime captioning. However, I believe ALDA and ALDA conventions are still the only sites where realtime captioning is used for every meeting and every workshop. ALDA could not be successful without realtime captioning. Reading captions is less stressful than lipreading or trying to hear. I think many hard of hearing people prefer captioning too. Many deafened people have not had exposure to sign language. Many people who have become deaf at 40-50 years of age grew up in a time where sign language was not considered appropriate, so they are reluctant to start learning sign language. If deafened people do learn sign language, it is more often a form of conceptually accurate signed English rather than ASL.

I would like to share with you an example of deafened people using signs that are not conceptually accurate. When ALDA was first set up, people started to sign the full name, Association of Late-Deafened Adults. How did they sign late? Most often it was the sign with your forearm pointing down from elbow. This means late or not yet so people were often signing "Association of Not Yet Deafened Adults". That was wonderful! That is why I explained the signs I was using involve *become deaf* rather than *late deaf.* However, I have seen the "late" sign used by prominent Deaf professionals so it is not only deafened people who use this inaccurate sign.

Recently, the Research and Training Center on Persons who are Deaf or Hard of Hearing at the University of Arkansas did a study on ALDA members and the communication strategies they use on the job. Approximately 350 people replied and it was found that 65-70% use lipreading for communication. Only 20% stated they use sign language or feel comfortable using sign language. Only 5% of those responding said they were not interested in learning sign language.

Many deafened adults are not fluent in sign language. Personally, I have seen more deafened people become interested in learning sign language after they have had exposure to it. I have seen them start to use it with other deafened adults because they see that it can work. It is easier than trying to write to each other. However, at work or at home, they depend on lipreading and other methods of communication. I feel that 20% response is very good because that is a larger percentage than I observed at my first ALDA convention in 1990.

It is important to remember, that while more deafened individuals are learning sign language, sign language is NOT THE ANSWER. I repeat, for a person who has become deaf, sign language is NOT THE ANSWER. The same is true for persons who are hard of hearing. Learning sign language is not the answer. Learning sign language may be helpful, but professionals have to realize there are other issues the individuals must address. They need support and adjustment counseling. What any person who has gone through acquired hearing loss needs is appropriate, realistic information. Many of these people have dealt with what I call the "communication myths". They have tried hearing aids. The have read the ads that say "If you can hear sounds

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but not understand speech, this hearing aid is for you." That is part of the problem. I know it was part of my problem. Not being able to understand speech is the problem for many persons with hearing loss. You get a hearing aid and you still can not understand speech. Your comprehension score may improve but not enough to allow you to function in all situations.

People need to understand that hearing aids are assistive devices, not corrective devices. You buy glasses and most of the time the glasses help you see more clearly. Glasses work for me. Hearing aids never worked for me as far as speech comprehension was concerned. I was more aware of my environment with a hearing aid but my comprehension scores showed minimal increases.

The second communication myth is that if the hearing aid does not work, it doesn't matter because all deaf people can lipread. The general public believes that. People who become deaf or acquire hearing loss believe that lipreading is the answer. Now, really, it is not. You can only see about 33% of the sounds that are said.

Most people believe these myths about hearing aids and lipreading. I know I believed them. Hearing aids did not help me and I volunteer myself as one of the worst lipreaders ever. The only sentence I can lipread is "Can you read lips?" and that is because I have been asked that question a thousand times in the last 25 years. Practice makes perfect.

If you fail with a hearing aid and you fail at lipreading, what is left? People tend to emphasize the negatives of deafness. They focus on the things they can not do. I felt many emotions personally. I love sports. I spent all my free time listening to baseball, football and basketball games on the radio. After I became deaf, I could not do that any more. The social adjustments and trying to tell my friends I was deaf were very stressful. What are they going to think when I do not understand them? I did not admit that I was deaf. I was good at faking it, laughing when they laughed and playing the game. I am still very good at faking it. Not all my high school and hometown friends know that I am deaf.

Professionals need to be aware of these emotions and the need for assistance in adjusting to deafness. All persons with hearing loss, Deaf, Deafened or Hard of Hearing, have to start being more assertive and saying we do not understand. Professionals need to be prepared to provide the necessary assistance in teaching this skill. I admit I do not practice what I preach and do not admit when I do not understand. I have more or less developed an attitude that I don't care that I don't understand. As long as I do not get a strange look, I know my bluff answers are accepted.

People with hearing loss also need to learn to deal with hearing people who say "bye bye" or "sorry" and leave you after you tell them you are deaf. That has happened to me often. I have good speech so many people do not believe me when I say I am deaf. I guess deaf people are not supposed to speak well.

Professionals need to recognize the benefits persons with hearing loss can receive from meeting their peers. I have already talked about ALDA, SHHH, and NAD. There are also other groups such as the Alexander Graham Bell Association. You have to select the group or groups that may be most appropriate. Most of the

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time, people with recently acquired hearing loss will have no information about these groups. They need assistance and I believe that contact with peers is one of the best remedies. That was my personal experience and I think other people agree with me. I know that I felt much better about myself when I went to Gallaudet and saw 1,000 other deaf people. I realized that I was not the only person who is deaf. I am not the only person who uses sign language. Of course, I did not understand 900 of them because they were using ASL, but they were still using sign language.

For some reason, I was never embarrassed about using sign language. Some people who become deaf or hard of hearing do not want to learn sign language. It is my feeling that it is their choice. They need to know what their options are. If they want to rely on lipreading and hearing aids, that is fine, but there may be limitations with these choices. Of course, beginning signers will not understand everything either. If the person learns sign language, where will he or she use it? Where will they be able to practice? There are not Deaf clubs in every city.

There is also the issue of comfort. What will happen to a beginning signer, if deafened or hard of hearing, who goes to a Deaf Club? Because the person will not be fluent in sign language, it is very likely he or she will not feel comfortable. Most of the Deaf people there will be polite but they will not always sign slowly or repeat themselves for the newcomer. This creates a feeling of discomfort. Similar situations will occur to the deafened person who socializes with hearing friends. To some degree, people will speak slower, but not all the time. Group conversations are difficult to follow and it is awkward to ask people to repeat themselves more than once.

Those are the situations I was facing when I discovered ALDA. It is hard to describe the feeling I had when I first became involved with an ALDA group. Something clicked and I knew I would fit in. I had become comfortable with Deaf people but I was more comfortable with deafened people. We had the same experiences. We had families who did not sign well, husbands or wives who did not sign, parents who did not sign, and other common frustrations. I do not think anyone has done a comparative study but I am willing to bet that the situation with deafened adults and their families is very similar to born-deaf children and their parents. I feel the family responses would be similar in regard to communication. Other adjustments would be different but I feel communication results would be similar.

People who become deaf or hard of hearing need support from their peers. They need support from the professionals working with them. They need information. The big problem we have is the time gap between acquiring hearing loss and receiving appropriate services. That is a large problem and I do not have a solution for you tonight. One suggestion would be to train all the audiologists. Train them to give information about vocational rehabilitation, ALDA, NAD, and SHHH. I have tried that and had limited success. The joke is that audiologists only listen to other audiologists and we are still trying to figure out who the ear doctors listen to.

There is a need for more court reporters skilled in providing realtime captioning. The technology has been developed but court reporters have not yet been trained to use it. They do not always have the right

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software or hardware that will allow them to do this. The demand for realtime captioning is increasing, in part due to requests from deafened and hard of hearing consumers. The National Court Reporters Association has developed a certification test for realtime captioners. There are only about 400 certified realtime reporters in the United States. We think we have a shortage of sign language interpreters but the situation is more severe with certified realtime reporters. The cost of providing realtime captioning is expensive. The normal rates fall in the $100-125/hour range but the overall cost must be weighed against the benefits of having a transcript of meetings.

State agencies need to develop policies for providing realtime captioning that is similar to the provision of sign language interpreters. I found out at this conference that California State University at Northridge has a full time captioning coordinator and 11 hourly captioners. I think that is great. It is wonderful to see a university providing that type of communication access. We need more programs to do that.

The important item I am trying to emphasize tonight is to understand the people you are working with. Use the "whatever works" communication philosophy. It is very difficult to provide counseling services to a person with no receptive communication skills. I cannot give you the best answer on how to do that because it will vary according to individual and the resources available. You may want to write everything. You may want to use a computer in your office and type for the person. If you are skilled at sign language, writing and typing requires more effort but you need to use a system that works.

Become aware of the support groups that are available in your area and provide information on the national organizations as well. As I said earlier, SHHH, ALDA, and NAD can provide invaluable personal support for individuals and are available at national as well as local levels.

My presentation tonight has been a bit slanted in providing the deafened person's perspective. I have received substantial benefit from my involvement with ALDA. We are starting to establish our own ALDA culture. Anyone who wants to observe this culture should attend ALDAcon, an ALDA convention. The idea is to put deafened people in a situation where they can meet each other and communicate comfortably. We show them they can do the things they used to do before becoming deaf. They can still dance. They can still sing. ALDAcon features a karaoke party and it becomes wild. We have captioned songs from the 1960's and 70's. It is wonderful. The advantage is that most of the people there are deaf so when you start to sing, it doesn't matter because people can't hear you. I can remember singing "California Girls" and blowing off steam. People who are deaf, deafened or hard of hearing can have fun. It is important for them to have positive views of life.

It is important to understand each other. That is the goal of ADARA. That is the goal of ALDA. It should be the goal of any group that is working with persons who are deaf, deafened or hard of hearing.

Thank you.

The Impact of Change on Student Services

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Good afternoon, everyone. I would like to start by telling you a story that I first heard from my nephew several years ago when I attended his graduation from high school. He was the valedictorian of his graduating class and therefore gave the commencement address. He started out by telling a story about a gentleman who bought a new, very flashy, sports car and decided to take it out and test it on the road and see what it could do. He's out tooling around at high speeds on some country roads, and as he approaches a blind curve, a woman comes careening around the corner, swerves into his lane and back out again. As she passes him, she rolls down her window and yells "pig."

The man is taken aback. He thinks, "How dare she! I've never seen her before. Besides, she was in my lane, I wasn't in hers!" So he rolls down the window and shouts, "Cow." He is feeling very good for having gotten off this stinging retort in time. He then goes around the corner -- and hits the pig!!!

Now, my nephew's question to his fellow graduates was, "Will you recognize an opportunity when it presents itself?" My question to you here today is, "Will you recognize a warning when you hear it?" I would like to talk today about some danger signs that I see coming up on the horizon for students with disabilities in general, in higher education, and specifically for deaf and hard of hearing students.

The First "Pig in the Road"

As I look down the road at where we are going with services for students with disabilities in higher education, the first pig that I see in the road looks, at first glance, very militant. When you get a little closer, he looks a little bit war torn and a little worse for wear. I think the danger here lies in trying to find a balance between fostering a good self-image for students who are deaf and hard of hearing and endangering the protections that they have available to them in the process.

More and more, I hear a discussion of deafness as a culture and sign language as a language different from, not inferior to, standard English. I believe that. I agree. But I also believe that deafness is a disability. I believe that people who are deaf have a significant limitation, as opposed to their hearing peers, in communicating and interacting with the world around them. I don't believe that deafness represents an impenetrable barrier. I don't believe that it is the fault of the person who is deaf. I don't believe that it is the sole responsibility of the deaf community to bridge the gap to the hearing world that is created by their deafness any more than it is the responsibility of those in wheelchairs to build their own ramps.

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I do believe, however, that deafness is a disability in our society, and that in the process of building Deaf Pride, we may move the perception of deafness out of the realm of disability and into the realm of cultural diversity. And I believe that might be to the detriment of deaf students.

Culturally diverse populations are not protected by law. People with disabilities are. International students for whom English is a Second Language are not entitled to be presented classroom information in their native language. Deaf students can demand that information be provided in their first language because they are disabled, and thus legally entitled to equal access. Non-native speakers of English cannot demand that signage be in their native language or that telephone operators be multilingual, but deaf individuals can demand the presence of alternative delivery systems and full access, often at some expense to the provider, because they are disabled and therefore legally entitled to equal access. I worry that if the deaf community chooses to discard their affiliation with the disability community, they will lose the protections that go with it.

Look at what is happening on college campuses today. . . threats to Affirmative Action laws and programs, challenges being made to the issues of cultural diversity and inclusion, the resurgence of racism and prejudice. If we drift too far from the civil rights nature of legislation that protects people with disabilities and, under that umbrella, protects people who are deaf and hard of hearing, we run the risk of losing the protection that was granted in that process.

I think we need to remember that the reason the ADA got passed is because for the first time in the history of this country, people with disabilities came together as a group and said, "None of us are well served unless all of us are well served." Only because the 57 million people with disabilities in this country and their families came together and put pressure on Congress to get the law passed, did it get passed. If we pull out of that to any extent, if we lose that sense of community that put the whole thing together, we could lose a lot more.

The Second "Pig"

The second pig in the road is wearing a sign that says, "Credibility," with a great big question mark after it. The ADA and 504 are both civil rights statutes--nothing more and nothing less. They promise non-discrimination on the basis of disability. Yesterday I was in Kansas speaking to a group of service providers, and their major concerns centered around learning disabilities. I talked for some time to that group about the fact that when they start thinking about providing services, they need to remember that there is a difference between documenting that someone has a disability and documenting that someone has a need for accommodation. They are two different things.

By law there is a definition established for "a person with a disability". If you fall under that category, if you are part of that protected class, what you are entitled to--and all that you are entitled to--is not to be discriminated against. We do not provide accommodations for students at the postsecondary level because they are disabled. We do not provide the accommodations because they carry the label of being a person with a

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disability. We do not provide accommodations because the laws we operate under are a continuation in some way of the special education laws and regulations. We do not provide accommodation because we feel sorry for them or want to give them an advantage. We provide accommodation only if *not* providing the accommodation would be discriminatory--that is, only if not providing the accommodation would set up a situation in which that individual did not have equal access to the educational setting.

It is not discriminatory to deny accommodations to persons with disabilities who don't need them. We do it all the time. I don't know of a single college or university that provides sign language interpreters for their blind students. Blind students are clearly persons with disabilities and sign language interpreters are something that we know is our responsibility to provide. But we don't provide sign language interpreters for blind students because they don't need them, can't use them, and would not have any better access to the educational system or setting if they were there!

With that having been said, recognize that, in truth, we have traditionally provided accommodations for deaf and hard of hearing students because they are deaf and hard of hearing. We have established that they are deaf or hard of hearing by visual inspection, by conversation or, in some cases, from audiograms. We have established their hearing loss and we have then guessed at what kind of accommodation they should have or is appropriate. We have no documentation that says, "If this is the profile in terms of the individual's disability, then this is an accommodation that is appropriate in order to equalize the playing field." We have made assumptions and thus far those assumptions have, for the most part, served us well, but it's not going to go on forever.

Right now the people who are serving students with invisible disabilities are under a lot of fire from the academic community to show that the accommodations they are setting up and insisting on for students with those disabilities are justifiable. "Show us that this accommodation, in fact, equalizes the playing field and does not give the student an advantage, does not interfere in some way with what else is going on. Show us that there's a legitimate reason for asking for these accommodations." Thus far we have not dealt with that kind of skepticism for deaf or hard of hearing students because the disability is so much more evident in terms of interaction. Because of communication problems, or the presence of an interpreter, or the presence of a hearing aid, the academic community is more accepting of the reality of this disability, so they have been more willing to accept our statements about what kinds of accommodations are appropriate. Sooner or later, however, there will come a time when they start looking at what we are doing for those students as well.

What we have to examine at this point in time is whether we have any information that will allow us to answer the hard questions when they start getting asked. Let's use notetakers as an example. It's pretty obvious that you can't write notes and watch somebody at the same time. Since our deaf and hard of hearing students are, at least to some extent, listening by watching, we generally can justify the need for a notetaker without a lot of problem. But can you justify the need for a notetaker with certain kinds of training? Can you justify that any old notetaker is going to be good enough for this particular student? On what basis do we make

the decisions about what kind of training should be provided or what kinds of skills are necessary in order for the accommodation to do what we say it's going to do--which is to provide a level playing field.

Interpreters. I have had numerous calls from service providers who say, "I have a deaf student who is requesting an interpreter. This is an individual who has never used an interpreter before (either a newly deaf adult or someone who came through an oral program in school). We'll provide the interpreter if it's appropriate, but how do I know if it's appropriate? How do I know if this person can really make good use of that interpreter? My answer is, "I don't know!" At this point in time, I don't know that we have any way of establishing for whom that is a reasonable request and for whom it is not.

Extra time. This is a particularly interesting accommodation to discuss in this context. It is not uncommon for us to request extra time on tests for students who are deaf or hard of hearing. As service providers, we know why it is necessary. It is necessary because often these students are dealing with English as a Second Language. They need the extra time to sort through the language issues, to understand fully what is being asked, and to be able to create a response that is appropriate. However, that is certainly not the argument I would want to make to faculty in this day and age. As noted, students for whom English is a Second Language and who have language differences are not necessarily entitled to extra time on tests because of their language difference. I do know some institutions where they have instituted such a policy. They have said, "Non-native speakers of English will get extra time on their tests. We are more concerned about what they have learned of the subject matter than their English competency." However, if you are not fortunate enough to be housed at such an enlightened institution (is that an oxymoron?), then to ask for extended time because English is not the student's native language is to ask for an accommodation based <u>not</u> on disability, but on difference. The student is not legally entitled to that. However, a student <u>is</u> entitled to ask for the accommodation of extended time if the disability interferes with their ability to follow standard English in the typical fashion. That is why we ask for extra time for learning disabled students--because their disability interferes with their ability to process standard English in the typical amount of time. Sometimes we may be dealing with nothing more than how to phrase the requests and the documentation, but that phrasing may be important in providing justification and credibility for the accommodations we believe are important for students.

Assistive listening devices. Perhaps you know of studies that I don't, but I am not aware of any information that tells us what the audiological profile is of the individual who can successfully make use of an ALD versus those that cannot. I know that it is not just a question of how much you hear, but also a question of your language competency and what other cues are available within the environment, and so on. I am not sure that just looking at the audiograms is going to give us the justification we need. . . but what is going to do it? How do we justify saying this individual needs and should have an ALD but this individual really is not in a position to benefit from one?

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I think justification of accommodation requests will become a big issue quickly when we start dealing regularly with students who are requesting real-time captioning. The price tag that is involved with real-time captioning is very high in most of the areas around the country. As we have more students making the request, the question that is going to be asked--it's already being asked-- will be, "Is this justified? Is this a reasonable accommodation?" When we consider the rather frightening statistics about the average reading level of many students who are deaf and hard of hearing in higher education and listen to the concerns expressed by people working with deaf students at the postsecondary level about getting them through basic English competency tests, how will we answer questions about whether it is appropriate to provide a very expensive accommodation that demands a high level of proficiency in both reading and language? How do we show them that this is justifiable and appropriate? We don't have the documentation. We don't have any way of justifying what we ask for regularly. Thus far nobody's looking closely. They are too busy picking on people who are easier targets, because they think they can argue the existence of some disabilities. But as money gets tighter, and, possibly, as some of the disability backlash continues to surface, sooner or later there will come a point in time when we need to be concerned about whether we can provide credible evidence that the accommodations that we request for students are, in fact, justifiable in establishing the aim of accommodation--nondiscrimination, a level playing field. I don't think at the moment we have that kind of information available to us.

The Third "Pig"

The third pig in the road is wearing a sign that says, "Who's going to pay for all this?" Let's talk about the situation between the postsecondary setting and the Vocational Rehabilitation system in this country and deal very specifically with the issue of whose responsibility it is to pay for interpreters because that is the issue that has been raised.

Let me digress for a quick history lesson. In Subpart E of Section 504 of the Rehabilitation Act of 1973, it was established that among the accommodations, auxiliary aids, and services that must be provided for an individual with a disability in postsecondary education, is alternate forms of accessing material, including interpreter services. If you read the implementation guidelines regarding Subpart E, and Section 504, there is specific reference (dating from the initial guidelines in 1977) to the fact that sign language interpreters must be available for those who have need of them and that it is assumed that colleges and universities will access other agencies such as the Vocational Rehabilitation system, in helping to mitigate the costs involved whenever possible. In other words, Congress assumed that other existing agencies could be looked to as a means of holding down the cost involved in providing this service to students with disabilities in higher education.

In 1978, the case hit the courts that has been our case law precedent since that time. In Jones *v.* the Illinois Institute of Technology (IIT) and the Illinois Department of Rehabilitation Services, the question came down to, "Who's going to pay for the interpreters?" The answer was very clear at that point in time. If the student is a client of the Vocational Rehabilitation system, then VR will pay for the interpreter. If the student is

not a client of the Vocational Rehabilitation system, then the institution must see to it that the interpreter is there at no cost to the student. If you go back to the IIT decision, you will find that it does not say that the institution must pay for the interpreter out of a line item in its budget. It does not say that the institution must make arrangements within their system to have a pot of money set aside to pay for interpreters. It says if the student is not a client of VR, the institution must see to it that the interpreter is there at no cost to the student. If they want to do that through a regular line item in their budget, that's fine. If they want to do that through a special appropriation as needed, that's fine. If they want to hold pancake breakfasts on Sunday morning and put the money into a pot to be used for interpreters, that's fine. Essentially, the court said, "We don't care where it comes from as long as it doesn't come out of the hide and out of the pocket of the student who is deaf." We operated comfortably under that rule for a long time. If a student was a client of Vocational Rehabilitation, VR paid for the interpreter. If not, it was the responsibility of the institution to see that the interpreter was there.

In 1994, the CSAVR, the Council of State Administrators of Vocational Rehabilitation, sent a letter to the Department of Justice (DOJ), referred to in the inner circles as "the Janet Reno letter." The letter asked Janet Reno, as Attorney General of the United States and, therefore, the head of the Justice Department, for a reading on relative responsibilities between the Vocational Rehabilitation system and the postsecondary institutions regarding the issue of auxiliary aids and services--specifically, interpreters.

I was cautioned at this point to tell you that what I am about to give you is AHEAD's reading on the situation. Please consider this is kind of the disclaimer! This is not the reading of the management. They will disclaim any knowledge of . . . ----Okay, you get the picture!

In the Janet Reno letter, the authors attempted to make a case for the fact that now that the ADA is in place, and ADA clearly says that postsecondary institutions will be responsible for providing auxiliary aids and services, it is no longer appropriate to look to the Vocational Rehabilitation system to supply sign language interpreters for deaf students at the postsecondary level. AHEAD has opposed this argument on two different bases. First, the specific language referred to in that letter regarding the enhanced responsibility for providing auxiliary aids and services appears in Title II of the ADA. Not all colleges and universities out there are covered under Title II of the ADA; it only applies to public institutions. Private institutions are not covered under Title II, and there are deaf students at private institutions as well as public institutions. Clearly, the argument has some gaps in it because it is based largely on something that doesn't cover the full range of students and institutions that are potentially impacted by the case being made.

Beyond that, it is true that within Title II, there is discussion of making sure that auxiliary aids and services are there so that an individual is not discriminated against by virtue of those aids and services not being present. It does NOT say, in Title II that the institution must provide such services--it says the institution must see to it that the aids and services are there. It is reminiscent of the earlier statement, regarding Section 504, that indicates such aids and services must be present at no cost to the individual. As with previous

compliance decisions, the statement could well be interpreted to mean that if you can find another way of seeing to it the necessary services are present, that's fine--just make sure the student doesn't get left out as a result.

Moreover, I have some problems with the idea that because of the coming of the ADA, interpreters are no longer the responsibility of Vocational Rehabilitation because the VR system, as a federally-funded entity, is not covered under ADA. VR is covered under the Rehabilitation Act and Section 504, and those regulations-- and obligations--are still in place. I don't understand how the coming of the ADA should alter VR's responsibility under an existing and ongoing statute and case law regarding relative responsibilities under 504.

Regardless of my view on the whole thing, the letter was sent (I believe it was dated late May of 1994)! In the months that followed, we saw and heard more and more reports from institutions across the country, and from state systems across the country, about Vocational Rehabilitation systems who were either taking a wait and see approach ("We're going to wait until we hear back on this letter we've sent before we fund any more interpreters"), or who were saying, "Oh, VR is no longer responsible for funding interpreters because we've sent this letter to the Department of Justice." The assumption was that, because the question had been raised, the case had been established.

When the ADA was implemented in 1992, the Department of Justice looked around and said, "We are going to have our hands full dealing with issues that arise for entities that have never been covered before under previously existing statutes. Section 504 is alive and well and, Department of Education (DOE), you still have enforcement authority over Section 504 as it applies to colleges and universities. Since anything that is in the ADA is, for the most part, also in Section 504, we will give you authority to investigate any 504 complaint as an ADA complaint on our behalf as well, as long as you investigate it under our slightly more stringent standards." My understanding is that there is something called an "inner agency agreement" in place between DOJ and DOE that says if a question of services and support for persons with disabilities arises in colleges and universities, the Department of Education will be the one to respond first to such questions. In this case, the letter was sent to Janet Reno as the head of the Justice Department because the Justice Department has enforcement authority over Titles II and III by Congressional mandate. But because the letter was sent to DOJ and DOJ has passed off on those responsibilities, there has never been a response to the letter!

Because there has never been a response to that letter, we have seen Vocational Rehabilitation agencies take a stronger and stronger stance in the intervening time. Many state agencies seem to be saying, "The Department of Justice hasn't contradicted what we said, so we have to assume that they agree with us that it is not our responsibility anymore!" We are seeing more and more state agencies pull back from provision of interpreters. I could give you example from across the country, but the most recent one I saw came from the State of Washington. The Vocational Rehabilitation agency there has announced within the last month that beginning in July of 1997, they will no longer be providing interpreter services for any of their deaf clients.

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In October of 1995, there was another letter that got circulated widely within the community. This one that is referred to as "the Norma Cantu letter." I believe Ms. Cantu is Director of Rehabilitation Services either regionally or for some specific area here in the southeast. Ms. Cantu had posed some specific questions to the Department of Justice regarding responsibility and interpreter services at the postsecondary level. The questions that were asked specifically were: (1) is it legitimate for colleges and universities to require students to apply for funding through Vocational Rehabilitation before they provide interpreter services? and (2) is it legitimate for colleges and universities to deny provision of interpreter services to deaf students until such a time as they have been through the process?

In the October, 1995 response, both questions were answered clearly, "No!" The Justice Department said, "No, colleges and universities may not require students to apply to the VR system," and "No, colleges and universities have no right to deny students access to interpreter services until they have gone through the system."

The letter went on to say, however, it is not illegal or inappropriate for colleges and universities to encourage deaf students to look into the availability of services and support through other agencies, including Vocational Rehabilitation. There is something in that paragraph to the effect that any expenses not picked up by the Vocational Rehabilitation agency would be the responsibility of the college to provide. Now, that says to me that the Justice Department thought that there would be some expenses that would be picked up by the Vocational Rehabilitation agencies if they took them on as clients.

In policy statements like the one I mentioned from the State of Washington, the reasoning is that since the Norma Cantu letter says that colleges and universities may not require students to go through VR for services, we are no longer going to provide these services. They are, in fact, threatening to withdraw services from students who are already clients of the Vocational Rehabilitation system because the letter says you cannot force students to go through VR if they are not clients of the system. I don't think that's what the letter intended.

It is important to understand that what we are really in the middle of is a standoff that is logically, and not inappropriately, motivated by concerns about spreading your resources as far as possible. Those of you who are working at colleges and universities know that money is tight these days. Colleges and universities are not looking forward to assuming the financial responsibility for interpreter services

On the other hand, the Vocational Rehabilitation system only has enough money, as I understand it, to serve about 20% of the individuals who are, in fact, disabled and therefore potentially part of their eligible population. VR would like to garner those resources and hang onto that money to be used for as many people as possible. If they weren't picking up these sometimes costly tabs for interpreter services, they would have more money to spend on other clients.

I am not faulting the reason that either side is looking to someone else to cover the costs. My concern is that students who are deaf and hard of hearing will be caught in the middle and will potentially be denied

services either for a short time or for a longer period of time while we get in a spitting match with each other about who's going to pay the tab!

It has been made very clear that institutions may not require a student to go back to VR. You may not withhold services until you've said see if there is somebody else out there you can get to pay for it and only then agree to pick up the tab. Colleges and universities have been told in no uncertain terms that this is their responsibility. But by the same token, I have seen nothing that indicates to me that the case law precedent set in Jones v. IIT back in 1978 has been changed. If the student is a client of Vocational Rehabilitation, then I think Vocational Rehabilitation has the responsibility for paying for the interpreters. If VR wants to get out of the business of funding interpreters for higher education, it may be that the only way they can do that is by not taking those students on as clients of the VR system--if they are not clients of VR, it is clear that VR has no responsibility for them. The deaf students are still going to get their interpreter services. They will get them from the colleges and universities, but they will be missing out on all of the other services that could be theirs if they were clients of the VR system--the career counseling, the advising, the tuition, the money for books, and the support that goes with it. VR does not provide just interpreter services for their clients. That is only a piece of what is available in support of such individuals. If, in order to resolve this issue, VR agencies decide that "if we don't take them on as clients, then it's clear who's got the responsibility for paying for interpreters," our deaf students run the risk of losing out on a lot more availability of support services.

Now let me play the devil's advocate. The reason that it was necessary for the Norma Cantu letter to be written and then disseminated is because there were colleges and universities across the country who had traditionally perceived their best course of action to be, "Stall as long as you can, try and get the student to go through some other route, and if you can get someone else to pay for it, better still. In other words, don't pay for it unless you have to!" I think there were students who were being left out and who were missing out on appropriate services because institutions did not have clear direction in this matter. There was not a clear statement on record that said, "This is not a choice. This is an obligation." The Norma Cantu letter has put that statement on record, hopefully to the benefit of deaf students in higher education.

Perhaps the resolution of the "Who should pay for interpreters" debate lies somewhere in between "us" and "them". Maybe the two parties--Vocational Rehabilitation and higher education--should be talking to each other about what pieces are appropriate for one group to pay and what pieces are appropriate for the other group to pay. When Vocational Rehabilitation supports a student to attend college, they are supporting the student in receiving the training needed to pursue an occupation; that way the student can get a job and will eventually become a tax-paying member of our society. Anything that has to do with access to the classroom and the educational opportunities are, in my mind, part of the training that is moving them towards VR's goal. On the other hand, when the student attends an institution, that student is a full participant within that institution, and has the right to all of the other opportunities and privileges that go with it, including the extracurricular activities, the graduation ceremonies, and so on. Perhaps Vocational Rehabilitation has a good

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point in saying, "Those things are not part of the education that we are funding the student to get." Perhaps the cost of interpreters for those activities should be the college's responsibility. Maybe what we need to do is stop arguing about whose job it is and start discussing who is going to do what. Until we get to the point where we open up that kind of dialogue, the potential for students to be left out, or to get less than they should, is all too real.

The Fourth "Pig"

Once you get past the roadblock created by concerns about money, the fourth pig in the road seems to be focusing our attention on the issue of backlash against special populations. When college administrators talk about students with disabilities these days, they see increasing numbers and, therefore, increasing costs and then, all too often, they see red! There is also the potential for some backlash philosophically regarding equal access for people with disabilities. I started out by trying to make a strong pitch for saying people who are deaf need to be part of the disability community as a whole because it offers them protection. It also offers them a certain amount of danger. There is danger in being part of a group that is open to slings and arrows from a variety of circumstances. The situation that arose regarding students with learning disabilities at Boston University earlier this Spring poses a very real threat to the credibility of our students and the legal protections we maintain are theirs. On the other hand, the recent decision by the Department of Justice against the NCAA lends credence to the idea that students with learning disabilities are clearly included in the protections provided by the law. I think we need to be proactive and make sure that we are facing the criticism and the concerns that are raised not in an aggressive stance, but rather in an assertive stance. We need to be prepared to say, "These laws are all about civil rights, and equal access for people who are full citizens in the U.S. We will settle for nothing less than equal access. The reason we make accommodations is because not to do so would be discriminatory." In this day and age you would not find Boston University advocating that African-Americans not be allowed to sign up for certain courses because they didn't think they were smart enough to participate. But, in effect, what the Provost at B.U. said was that he didn't think that these people with disabilities were smart enough to have really gotten into B.U. on their own merit--it was only because they used their special status to skirt the rules. We wouldn't allow that kind of attack on any other group protected under our civil rights statutes. We can't allow it to happen to individuals with disabilities.

I think as we face the future, if you are concerned about students who are deaf and hard of hearing, you need to be concerned about all students with disabilities at the postsecondary level and what is happening for them and to them. In the end impact on all of us. If they pick off the LD students today, and those others who are easy targets, sooner or later they'll get down to the rest of us.

I started out with a barnyard analogy. I want to finish with a similar one. The story is about the barnyard animals who were sitting around one morning having a very high level discussion about philosophical concepts, like freedom and independence, involvement and commitment, and so on. In the end, the pig put an

end to the discussion when he turned to the chicken and said, "When Farmer Brown has bacon and eggs for breakfast, you're involved—I'm committed." By virtue of being here today and sitting in these seats, you have declared yourself as being involved and concerned about the future of students who are deaf and hard of hearing in higher education. The question that you need to ask yourselves is, "How committed am I to seeing to it that we don't lose the gains we've made and that we continue to move forward?" I believe each of us can make a difference.

Thank you.

Transitioning from High School to College

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of Hearing, April 17-20, 1996, Knoxville, TN

Conference Sponsors:
Postsecondary Education Consortium
at the University of Tennessee, Knoxville

PEC Affiliate Programs

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125 Claxton Addition
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Transitioning Collaboration with High Schools and Vocational Rehabilitation

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Morganton, North Carolina

The Individuals with Disabilities Education Act (IDEA), PL 101-476, states that an Individual Education Plan (IEP) for deaf and hard of hearing students must include a statement of needed transition services beginning no later than age 16 and annually thereafter. When determined appropriate for the student, transition services should begin at fourteen or younger. Transition services means a coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities including postsecondary education, vocational training, employment, acquisition of daily living skills, and/or community participation. Both the student and parent must be invited to participate in the IEP if the meeting includes transition planning.

Transition services are an integral part of the Individualized Education Plan and not an add-on. Therefore, the transition plan cannot be dealt with separately from the IEP. Since the transition plan is part of the IEP, students and parents are covered by the legal rights and guarantees of the IEP. The inclusion of the transition plan makes the IEP a plan to achieve desired post-school outcomes in employment, education, etc. The goals and objectives of the IEP should be written with the intention of aiding the student in accomplishing his or her identified post-school goals. If transition services are not needed in a particular area, then it is required that this be stated on the plan.

There are various ways of approaching the implementation and identification of the transition services plan. At the North Carolina Schools for the Deaf (NCSD) we have designed a Transition Plan form to state the needed transition services. This plan identifies the student's post-school goals, the activities requested to assist in their accomplishment, the responsible agency or person, and the targeted completion date.

If a state or local agency is responsible for providing or paying for transition services following the student's graduation from high school, this must be indicated on the transition plan. The school/interagency transition team, which meets with the student and parent to plan transition services, should include involved agencies, school staff members, postsecondary representatives, and others responsible for the programming and planning. To facilitate the establishment of this interagency team for students in regional schools for the deaf, these team meetings may be held in the community. Suggested team members are representatives from community resource centers, colleges, training centers, interpreter providers, vocational rehabilitation, etc.

The participating agency is defined as a state or local agency, other than the public agency responsible for the student's education, that is financially and legally responsible for providing transition services to the student. If a participating agency fails to provide agreed upon transition services indicated in the IEP of a student with a disability, a meeting for the purpose of identifying alternative strategies to meet the transition objectives is required. Once a post-school commitment has been made by the deaf or hard of hearing student, the exit interagency team meeting can be held whereupon agency responsibility can be identified.

Our primary state agency collaboration at this time is with Vocational Rehabilitation (VR). The VR counselors' offices are situated on the campus of the North Carolina School for the Deaf. This easy accessibility facilitates communication, coordination, and planning. Another asset to the working relationship we have with Vocational Rehabilitation is that their regional training and assessment facility is located approximately two miles from our campus. Because of these factors, VR is an important working member of our transition team. They are constantly working with us in assuring the provision of transition services to our students in employment, training, postsecondary education, and independent living.

As part of our transition services to fourteen year olds, most of whom are in the eighth grade, an eighth grade career profile is compiled. This booklet contains results of interest testing, learning style evaluation, achievement testing, transition planning, and aptitude testing. Even at this early stage of transition planning, a Vocational Rehabilitation evaluator administers the General Aptitude Test Battery to our eighth graders. The results are interpreted to the eighth graders along with the provision of the above mentioned information. This, in turn, assists the student in filling out a transition plan along with the required Department of Public Instruction's four year education plan. During the eighth grade orientation the students are advised of VR's role in their transition plans as well as how to contact the counselors on our campus.

Since this is only the second year that a transition school counselor has been assigned to coordinate transition services to NCSD students and the state has not designated specific forms and guidelines to follow other than those stated by the law, we are constantly designing and updating our forms. Rather than using the IEP objective sheets to indicate student transition goals, we designed a transition plan form to complete. This gives a unified picture of how the student intends to make his or her transition from school to the community. As you can see on the North Carolina School for the Deaf Transition Plan, Vocational Rehabilitation plays a very important role in our students' transition.

In three out of the four postsecondary outcomes indicated on this transition plan, Vocational Rehabilitation has offered their services. In the employment transition action plan section, VR provides services in assessment, job shadowing, job skills development, and pre-employment training. Not only do our VR counselors provide aptitude testing in the eighth grade, they also provide an in-depth vocational assessment profile for our juniors. This assessment is used by the transition team to guide the student in finalizing career plans and establishing an IWRP (Individual Written Rehabilitation Plan). VR also assists us in planning and directing job shadowing opportunities for our students.

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In the education section of the transition action plan, Vocational Rehabilitation works closely with the school transition team and the students in empowering them in selecting the appropriate vocational training or college or university. The Vocational Rehabilitation counselor, transition school counselor, job developer, student, and parents meet regularly to provide financial information, arrange college tours, and discuss any questions that may arise.

Regional Vocational Rehabilitation counselors are present at our annual Transition Fair to meet our students and their families. The Transition Fair evolved from what we once referred to as *College Day*. Along with Vocational Rehabilitation representatives, regional agency representatives staff a booth from which they explain their services to our students, staff, and parents. Agencies represented include the Community Regional Resource Centers, Regional Mental Health Counselors for the Deaf and Hard of Hearing, Assisted Living Programs, Services for the Blind as well as representatives from nine colleges. As our program and collaboration develop, the Transition Fair is only part of what may eventually be called *Transition Day* where agencies, colleges, and training facilities can schedule workshops, individual sessions, and such with students, their parents, and staff to better educate all of us in transition services.

Vocational Rehabilitation also works very closely with the school transition team in the Residential/Independent Living section of the action plan. VR, along with the Single Portal of Entry community coordinator, facilitates transition for multiply impaired students by aiding in the locating and placement in group homes, sheltered workshops, adult day activity programs, and the like. VR also assists multiply disabled students transition by obtaining job time based measures and other needed measurements of their ability.

Last, but not least, Vocational Rehabilitation also assists the transition team in completing an annual graduation survey. Since VR has frequent contact with our graduates who seem to be quite mobile in jobs and college attendance, they are able to help us in obtaining addresses and telephone numbers to facilitate our contact attempts. As you can see, Vocational Rehabilitation plays a very important role in the transition planning and action plan implementation for North Carolina School for the Deaf's student population.

Transition Planning: A High School - Postsecondary Connection

Theresa Smythe
St. Louis Community College
St. Louis, Missouri

Cheryl Hibbett
Missouri School for the Deaf
Fulton, Missouri

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St. Louis Community College
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Education is functionally different at each level, from infancy to postsecondary instruction. Approaches to quality education and challenges faced by educators are, therefore, unique to each level. Early childhood educators, elementary, high school and postsecondary teachers are independently supported by their own professional associations which address their specific challenges. These organizations give opportunities for sharing common experiences, concerns and ideas that ultimately benefit students at particular levels.

While this camaraderie is extremely important to education, it is also important for educators across all levels to come together. It is a well-established fact that an essential aspect of every educational program is providing transition to and from that program level. In order to do that, there has to be a clear understanding of what came before and what lies ahead. While teachers are ultimately playing a part in preparing students for independent and fruitful adult life, a more immediate goal is preparing students to simply acquire the skills necessary to take the next step. It is an unfortunate reality that in many cases, the only exposure a teacher has to that next step might be the memory of their own experience--for instance, remembering "when I was in high school." Obviously, that isn't enough understanding to provide long-term quality transitional experiences for students. Teachers of varied levels of instruction need to get to know and understand one another's goals and expectations. They first need to connect with one another.

Making a Connection and Identifying a Common Goal

A prevailing theme of the 1994 PEC Regional Conference was partnership. An aim of partnership is developing mutual recognition and understanding in order to attain creative, workable and effective solutions. In 1994, as now, educators and services providers in secondary and postsecondary education were given an opportunity to connect. As a direct result, elementary, high school and college educators from Missouri were linked, quite by chance, and began talking about transition for deaf students in our state. As we got to know one another during the course of the conference, we found ourselves discussing our concerns and sharing

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strengths and weaknesses of our individual programs. We learned that we faced many similar challenges and that perhaps it was possible to face some of them together.

Transition education for Missouri students was a common concern. Our most animated discussions were inspired by a particular presentation made by staff from Hinds Community College and Jacksonville State University called "Deaf and Hard of Hearing Students from High School to Postsecondary Education: A Proposed Curriculum to Facilitate the Process." A comprehensive curriculum for a Freshman orientation class was described which included creative strategies for addressing transition issues. Providing effective transition experiences in Missouri soon became our goal. Developing a partnership between the Missouri School for the Deaf and St. Louis Community College would be a means to that end. And so, a friendly partnership developed and our dialogue about transition began to take shape.

Identifying Challenges

It was important for us to recognize the challenges and barriers we would face when creating transition experiences for deaf students statewide. The major challenges we identified were:

I. Diversity

    A. Students come from a wide variety of educational experiences.

        1. One state residential/day facility for the deaf

        2. Two private residential/day facilities

        3. Five large local school districts with programming for deaf students

        4. Numerous smaller districts with specialized programming

        5. Many local education (LEAs) providing services

    B. Methods, philosophies, and evaluation strategies differ greatly among the educational programs.

    C. Students' personal backgrounds vary widely.

        1. They represent a range of economic and cultural environments.

        2. The levels of familial stability and support are all-encompassing.

        3. There are students from hearing families as well as deaf families.

        4. Language use ranges from ASL to oral English; some have minimal use of language in any form.

    D. The levels of hearing loss vary from hard of hearing to profoundly deaf.

    E. Options for future achievement include:

        1. Vocational education

        2. Community college

        3. University

        4. Immediate entry into the world of work

F. There are a variety of organizations and agencies providing services for deaf adults, including interpreting, counseling, and job training. All have a stake in the transition process.

II. Critical Mass Issues

A. There are large concentrations of deaf/hard of hearing people in some areas of the state.

B. There are scatterings of deaf/hard of hearing people in small or singular numbers throughout the state.

1. These individuals often do not know their options.

2. They have limited to no contact with the deaf community.

3. They have difficulty accessing services.

4. They often remain unrecognized.

C. In postsecondary settings, a deaf person is often one in a class/department or one of few with specific needs. Therefore, it is difficult to justify the cost and effort of specialized services and instruction.

III. Curriculum

A. As we strive to accommodate diversity in our curricula, time, space, and creativity are often at a premium.

IV. Finances

A. New and improved transition curricula are not likely to receive top budgeting priority.

B. The time and expertise needed to acquire funding for a new or improved program is prohibitive to the realization of a good idea.

Choosing a Path

It is no easy task to realize a goal. There are so many possibilities for action that it is difficult to know just where to begin. Brainstorming is the first step; getting all the possibilities before you and then choosing the one that best fits. We wanted a high school - postsecondary transition experience that would be: inclusive (in spite of the diversity); inexpensive (anticipating financial constraints); collaborative (fostering partnership); and effective (giving practical and useful information to students about how to make a transition from high school to adult life). Such a transition experience could be anything from the development of a full-fledged year-long curriculum to a half-day seminar for students. Recognizing all of the challenges, we decided to start relatively small. We would work together to provide a 2-day workshop for high school juniors and seniors across Missouri who were deaf or hard of hearing.

What kind of information could we provide during the two days? Our primary tool in planning topics for the workshop was the curriculum guide developed by Hinds Community College for their freshman orientation course. Essentials of College Living presents nine topics considered to be crucial for beginning postsecondary students who are deaf and hard of hearing. We focused on six of these topics and related

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activities as we planned our statewide workshop. Our goal was to give useful information and to provide students with an opportunity to get their own individual questions addressed. The topics we included were: the college structure, rules and resources; self-esteem; healthy lifestyle; personal finance; time management; and stress management. In order to meet our needs, we added interpreter services to the list. These particular topics were chosen based on what we saw as the most crucial to our students at the time. In limiting ourselves to just those areas, we were able to present more comprehensive and effective information and activities in the short amount of time available.

How did we organize this kind of workshop and get all the support we needed? When individuals from more than one organization are trying to plan an event together, it can be confusing. We took the "divide and conquer" approach and each individual was involved in the planning. This included making contacts within the sponsoring organizations as well as with community collaborators; designing workshop activities; advertising; and accomplishing the tremendous number of incidental tasks such as typing itineraries, getting refreshments, and planning social activities and meals. Obviously, someone had to take the lead in seeing the plans to their fruition. In our case, the host school, Missouri School for the Deaf, became the core organizer.

Communication is always a challenge and "the left arm doesn't always know what the right arm is doing." We developed a simple organizer that, when used in an effective manner, can be a big help in keeping everyone aware of what has been accomplished and lined up so far. That organizer is included in Appendix A.

The Workshop

After several planning meetings between the Missouri School for the Deaf and St. Louis Community College, presentations and activities were arranged for the transition workshop. The two-day agenda is included in Appendix B.

How was it inclusive? Students from all over the state were invited to spend two days at the Missouri School for the Deaf. Letters describing the event were sent to all of the school districts and programs that identified deaf or hard of hearing students. Teen clubs were also sent fliers. This workshop included students that were college-bound as well as those who were not. Parallel programming was planned that would encompass nearly all of the same topics. Students who attended represented all program types and all communication styles.

How was it collaborative? Representatives from a variety of state agencies, colleges, and local organizations made presentations to small groups. While these speakers focused on particular topics, they also had the opportunity to give information on the particular services they had to offer to individuals who are deaf or hard of hearing. Interpreters-in-training from a local college were present to provide interpreting services. The interpreter coordinator from St. Louis Community College provided "coaching" to both the students and the interpreters-in-training.

How was it inexpensive? No speakers received stipends for their participation. All of the agencies and organizations that sent representatives routinely provide those kinds of outreach services at no cost. In cases where speakers came in from out of town, accommodations were paid for by their respective agencies. Students were housed at the state school and additional costs for food and increased supervisory staff were nominal. Those costs were absorbed by the state program and students were not asked to pay a fee for the workshop. Interpreting services were provided by practicum students and collaborating colleges, so there was no cost involved. Incidental costs, such as advertising, copying, and refreshments were minimal.

Was the workshop effective? We accomplished what we set out to do which was to provide practical and important information for students in transition to postsecondary settings. Students were active participants in activities and discussions. They interacted with one another in spite of diversity and they seemed to genuinely enjoy their experience. Their evaluations of the workshop indicated that they had learned some valuable lessons. Naturally, they still had many questions and concerns that more extensive transition activities could address.

College representatives at a subsequent annual college fair indicated that students seemed to be more informed than in previous years. They asked more pertinent questions and appeared to have a better understanding of college terminology. So, a fairly immediate positive difference was perceived. Realistically, this single two-day workshop alone could not be expected to fully prepare students to make their transitions. But from the perspective of the planning committee, this event was a positive step taken toward the greater goal of increased awareness and preparedness for all Missouri students who are deaf.

Transition Workshop Organizer

Workshop dates:

Location:

Audience *(note communication modes/assistive devices and special health needs)*:

Advertising *(how will you find and attract this audience)*:

Organizational Support *(identify persons within your organization from whom support/input is needed)*:

Person	Contact	Commitment/ Input	Written Update

Goals:

Interagency Support:

Agency/Contact Person	Phone Number	Role	Written Follow-Up	Address

Interpreters:

Name/ Address	Phone Number	Role	Written Follow-Up

Site Support *(teachers, office personnel, supervisors, etc.)*:

Name/Location	Phone Number	Role	Written Follow-Up

Schedule *(attach)*:

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Transition Workshop Agenda

__Day One__

7:30   Breakfast

8:15-9:00   Welcome
                Performance presented by M.S.D. Drama Club

9:00-9:40   **Breakout Sessions**

Group 1:   "Everything" You Need to Know About College
                Presenter: Theresa Smythe, St. Louis Community College

Group 2:   "Everything" You Need to Know About On-the-Job Training
                Presenter: Toni Scrivner, Callaway County Special Services

Group 3:   "Everything" You Need to Know About On-the-Job Training/Shadowing
                Presenters: C.J. Prather, Advent and Diane Ludden, Missouri School for the Deaf

Group 4:   Financial Planning
                Presenter: Sherri Andrews-Lammert, Department of Vocational Rehabilitation

9:45-10:30   Using Interpreter Services
                Presenter: Loretto Durham, St. Louis Community College

10:30-11:00   Role-Play: Use of Interpreters
                Interpreters: William Woods University

11:00-12:00   Self-Advocacy
                Presenter: Jerry Covell, Missouri Commission for the Deaf

12:00-12:45   Lunch

12:45-2:00   **Breakout Sessions Repeated**

2:00-3:15   Self-Esteem
                Presenter: Steve Hamerdinger, Department of Mental Health

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Day Two

7:30   Breakfast

8:15-11:45   Breakout Activities

Group 1:   Field Trip to William Woods University

                8:30-9:00   Introduction to Scavenger Hunt
                9:00-10:00   Scavenger Hunt
                10:00-10:45   Regroup and Discuss Scavenger Hunt Experiences
                10:45-11:45   Surviving Postsecondary Classes
                                 Presenter: Paula King, St. Louis Community College

Group 2:   Activities for Students Entering the Workforce
                Coordinators: Joan Carrington, Cheryl Hibbett, Susan Anderson, Missouri
                                School for the Deaf and Eric Driskill, St. Louis Community College

                8:15-9:15   Future Dreams
                9:15-10:15   Stress Release/Leisure Skills
                10:15-11:15   Job Vocabulary Scavenger Hunt
                11:15-12:10   Healthy Lifestyles

12:00-12:45   Lunch

12:45-2:00   Deaf Adult Panel Discussion
                Panelists: Jessica, Calvin, Angela, and Katie

2:00   Wrap-up, Evaluation, Dismissal

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Your Parents Are Not With You Anymore!

Charlotte O. Kirby

Tris Ottolino
Program for Hearing Impaired
Northern Illinois University
DeKalb, Illinois

For years parents have been cautioned, "It's time to cut the apron strings." As a provider of services to Deaf adolescents, we see more and more of our students either cut loose without the tools to be independent, or overprotected and smothered by parents who mean well but don't understand that becoming independent is one of the first steps in turning dreams into reality.

At this conference two years ago, one of the presentations emphasized that too many Deaf adolescents were not being prepared to take advantage of the opportunities available to them. While the presenter was concentrating mainly on academic programs, it is believed that this lack of preparation also applies to employment and community involvement.

It is mandatory that we as service providers, assist our students or clients in accumulating the tools that will empower them to cope with the transition and change from dependence to independence thus enabling them to be ready for opportunities as they arise.

Program For Hearing Impaired Description

The Program for Hearing Impaired (PHI) is a one year, transitional program which takes place following high school graduation. The program is based on a work-study concept and enrolls approximately 50 students annually. Since its establishment in 1960, the focus of PHI has always been to enable Deaf and Hard of Hearing young adults the opportunity to realistically evaluate and improve their academic, vocational, social and independent living skills. Admission to the program is based on the following criteria:

Disability: Hearing impairment sufficiently severe enough to affect the development of academic, vocational, or social achievement;

Age: 17-24;

I.Q.: Minimum of 80 on the Performance section of the Wechsler Adult Intelligence Scale; and

Marital Status: Single.

The Program is divided into the *Six Week Summer Program* followed by the *Nine Month Program.* The purpose of the summer program is to provide an intensive diagnostic evaluation which will assist students, referring agencies, and parents in establishing future vocational, academic, and personal plans. The Nine

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Month Program is divided into three separate tracks. The *Pre-Vocational Track* serves about 75% of our students. The students in this track are enrolled in classes for half a day and work the other half day. The remaining 25% of the students either fall into the *College Preparatory Program* or the *Cooperative Alternative Secondary Program (CASP)*. The College Prep Program is designed to provide the necessary academic skills for those students who are realistically planning to continue their education at the postsecondary level. CASP is for the one or two students each year who have not completed their senior year of high school, but for one reason or another prefer to complete the requirements for graduation by attending PHI. The students in all three tracks are required to maintain a part-time work experience. All of the students are housed in one of the university residence halls. Most of the classes are self-contained and taught by one of our state certified instructors or by one of the two counselors employed by PHI. The Program also employs its own residence hall staff to live on the floor with the students. The program director, secretary and coordinator complete the official staff. The staff is, however, fortunate enough to be able to draw on the expertise of a large auxiliary staff which includes university faculty, graduate and undergraduate students from Audiology, Rehabilitative Counseling for the Deaf, Deaf Education, and Speech Language and Pathology.

During the Six Week Summer Program, the students are exposed to various part-time jobs that exist in the local community as well as on campus. The job description for the Program Coordinator lists job development and placement as one of the primary job roles. Job tours to these sites are scheduled and job interviews are arranged for each student's first work preference. It is important to be honest and up front about the work experience. Part-time employment is seldom one's career goal. Whenever possible, personal preferences and individual abilities are considered. However, it is important for the student to be flexible since part-time employment is usually based on job availability and availability of time in one's schedule. A part-time job helps foster good work habits, develop self confidence, and provides spending money.

PHI stresses classes, work, and independent living skills throughout the nine months. These skills are evaluated with a mini-report midway through both first and second semesters. Comprehensive reports are written at the end of each semester and mailed to the students' counselors from the Department of Rehabilitation Services (DORS). During the final month of the second semester, DORS counselors from the students' home areas are strongly encouraged to meet with their clients at PHI for a half day staffing. This helps to reintroduce the student and their DORS counselor, and outlines the future plans and decisions of the student.

Tools for Success

It has been stated that most working people change jobs between 5 and 7 times in their lifetime. Many of these job changes will require additional academic classes and re-training. That is the reason for this presentation. The presentation will focus on two areas that are emphasized in the Program curriculum. The first is a required one-year class for all students that incorporates career exploration, consumer economics, and

the development of independent living skills. As each unit is completed, the information is placed in a file folder. At the conclusion of the Program, the students have well organized files that contain both personal and useful information that will assist them in not only seeking future employment but in functioning independently as productive members of their communities. These 'tools' not only give the student a more positive self-concept but a feeling of control, knowing that they do not have to rely on mom and dad totally.

It would be prudent to explain to your students or clients that as their circumstances change and they become more established in a permanent location, some of these items would best be kept in a safety deposit box.

File Box Information

Employment
- Pay stubs for current year
- Identification: Social Security card, birth certificate, passport or alien registration card
- Resume, list of personal references, pocket resume
- *Looking for a Job* handouts

Financial
- Savings/investments records
- Bank statements, canceled checks
- Credit card account numbers

Medical
- Immunization records
- Audiograms

Insurance
- Health insurance brochure and policy
- Car insurance policy
- Property insurance policy or tenant insurance policy

Education/Training
- Copies of completed Financial Aid Form (FAF)
- IWRP (Individualized Written Rehabilitation Plan) from Vocational Rehabilitation
- High school diploma
- Training certificates, licenses

Income Tax
- Tax returns (previously filed)

Housing/Property
- *Tips for Renting an Apartment* handouts

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- Written inventory of property
- Receipts for large purchases, vehicle title
- Service contracts, warranties and manuals

Community Resources
- Centers for Independent Living
- Social Security office
- Department of Transportation

Choosing Post-Secondary Education

This past year, *USA Today* published information on what teachers thought students should know to be successful. The following are the results of that survey:
- 95% cited the need for problem solving skills
- 67% said informational technology was important
- 63% commented on the need for advanced math and science classes
- 42% felt the mastery of a second language correlated with success.

How do you measure success? Are we talking about a degree from one of the top 10 universities in the United States? Or are we talking about a million dollar paycheck? In order to encompass all aspects of success, we can choose to look at a more broad definition. A person is a success if they are able to turn their dream into reality.

There are many reasons for obtaining post-secondary training. It might permit a learner to be at an advantage in the job market or it could help advance them in their current job. Post-secondary training could allow a person to be more mobile and therefore enable them to change career paths if necessary. By receiving training, a learner is able to keep up-to-date with technological advances and is more prepared for relocating if his/her job becomes streamlined or omitted from the company. "The more education an individual has, the more likely they are to find employment" (Rawlings, 1994).

Based on 1991 U.S. Census Bureau information, there was clearly a positive relationship between years completed in school and employment rates (Lam, 1994). The following are the results of the census:
- A person with 4 years of college had an unemployment rate of 2.4%.
- A person with 1 to 3 years of college had a 3.2% unemployment rate.
- A person with a high school degree had a 4.5% unemployment rate.

When considering post-secondary training, an individual has many options today. In the 1800s, there was really only one option for individuals who are Deaf and Hard of Hearing. Gallaudet College (now Gallaudet University) was the option for about 100 years (Rawlings, 1994). Today there are many more options available for learners that are Deaf and Hard of Hearing. These options include colleges, universities, technical/vocational schools, community colleges, on-the-job training, training programs, and workshops.

With the implementation of the Americans with Disabilities Act, more and more options are becoming available each year.

In order to help learners become more prepared for the educational choices they may face, the following areas are covered:

- Listening skills
- Note taking techniques
- Preparing for and participating in class discussions
- Scheduling study time
- Preparing for and taking exams

Listening Skills

Listening is the most common way learners learn. For the persons who are Deaf, this would mean listening with their eyes. Listening is, however, the most difficult skill to master. Although many learners appear to be listening, they are not actually doing so.

In order to be a successful listener, learners must be able to identify the purpose of the lecture. Once the purpose of the lecture is identified, the main points and supporting details for the lecture need to be identified. By keeping the points organized in some kind of structure, the learners will be able to evaluate what they have seen or heard.

Throughout the lecture, the instructor may use a variety of clues to indicate important facts. It is up to the learner to become familiar with the style of the instructor. The following are some of the more common clues used by instructors: change in voice/expression; change in rate of speech/signing; listing and numbering points; using media equipment; writing on the board; direct announcements; and non-verbal clues (i.e. pointing, using fingers to count, etc.).

By identifying and using these techniques, learners will be able to listen and question more critically. They will also be more actively involved in the discussion.

Note Taking Techniques

The purpose of teaching note taking to the learners is to help them to become more skilled at deciding which information is important enough to write down and remember and which information is not. Second, it is important that notes are taken in an organized way so that they become a useful tool to use later. Each learner has his or her own style for taking notes. It is, however, important to be thorough and effective when taking notes. Whether the notes are from in-class lectures or from the textbook, they should not be lengthy or unfocused.

There are three important reasons notes are taken. The first reason is because it is impossible to remember everything that is presented during the semester; memory tends to fade and pushes less important

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facts out. Next, the instructor is sure to test on the material discussed at a later date. Finally, good note taking skills can help to ensure good grades. Listed below are ways that will make note taking easier.

- Use ink.
- Use regular size paper.
- Keep separate note books for each class.
- Date all notes.
- Leave large margins or lines between notes for additions later.
- Mark ideas that are confusing.
- Sit as close to the front as possible.
- Use abbreviations.

By using a more structured method such as outlining or concept mapping, the notes will be more organized and easier to use. Finally, in order to prepare for a lecture, become familiar with the main topic and read ahead.

Participating In Discussions

Many instructors prefer to lecture when conducting class while others handle class in a more informal way by using a discussion method. A lecture class provides more factual information whereas a discussion class allows the learner to react, evaluate, and think critically about controversial issues.

Preparing for a discussion takes more time than preparing for a lecture style class. Before a discussion, the learner will need to have read the required materials, reviewed and taken notes on the concepts that are unclear, and analyze what was read by making comments about concepts that provide poor examples or examples that include weak arguments. Finally, having questions ready will keep the discussion moving smoothly and prevent it from becoming a lecture.

During the actual discussion, the learner will have as much responsibility as the instructor to keep the discussion moving. The learner must assume an active role by participating. Participation requires that the learner ask good questions, make suggestions that can add to the previous responses of peers, and correct comments made by others that may be incorrect. While the discussion is taking place, it is important to take summary notes that include key points. Studying for tests after a discussion-type class will take less time. It is, however, important to review notes, review reading assignments, try to guess possible test questions for exams based on the class discussion and notes taken during discussion, and read assignments.

Studying

"Studying is defined as the process that is used to decide what will be learned and how to remember and recall information" (Shepard, 1987). Many learners dislike schedules; they would prefer to just be free to do what they want, when they want. They fear that they won't be spontaneous if they are restricted to a set time

for everything. In the end, however, a schedule for studying will free up time simply because the activities that must be done will get done without procrastination. A study schedule essentially helps to balance time. It is important to remember that a schedule is flexible and adjustments can easily be made. The primary purpose of a schedule is to provide a framework for using time efficiently. Doing one's best in each course requires knowing the instructor's requirements, attending class regularly, taking a note book to class, taking good notes, keeping up-to-date with assignments, and being prepared for tests.

The steps for scheduling study time depend on how much there is to study, how much time there is for studying, what needs to be studied, and when and where the studying will take place. Before scheduling study time, it is necessary to know all of the activities for the day. Finally, using visual aids such as weekly schedules, a schedule book, or monthly calendars will help to keep all activities organized.

Preparing For And Taking Tests

Most learners are given three types of tests throughout the time they attend formal education: teacher-made, textbook or publisher-made, and standardized tests. Having discussions about the testing situations can help both the learner and the instructor. Learners often have anxieties about testing and they should be encouraged to ask questions to make them feel more comfortable. When the instructor helps the learner to feel more at ease and secure about testing situations, the learner can focus on the test more fully. The following are some suggestions for helping the learner.

- Let the learner know the purpose of the test.
- Inform the learner as to how the test will be scored.
- Provide information about how the test will affect the grades.
- Let the learner know what will happen with the results of the test.

When questions such as these are answered, test anxiety decreases and the learner may feel more confident about test-taking abilities.

Learning is made easier by drawing together the information at hand. Having a general idea or goal of the class, knowing how topics are connected, looking for patterns and preparing charts or outlines are other ways to ease anxiety. The information and how it is remembered depends on the type of test that will be given.

There are two basic type of tests: objective and subjective tests. Objective tests require that the learner know exactly the right answers. Tests such as true/false, multiple choice and matching are examples of objective tests. Subjective tests require more complete recall, organization of information from the memory, and being able to express the information in an acceptable written form such as an essay.

While Deaf and Hard of Hearing young adults are often prepared to meet the requirements of high school, many are unprepared to meet the challenges of what will follow high school graduation. When goals are defined, an important sense of direction is provided for the student. The student is then sure of a direction and becomes more sure of the path to take to be successful. The curriculum that has been developed and

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implemented at the Program for Hearing Impaired assists the students in addressing the challenges of life and, in addition, helps them move into the next phase of adulthood.

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Perspective on Liberal Arts Learning: First Year Seminar

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The first year at college is often the time of greatest attrition (Noel, et al., 1985; Tinto, 1987). As a result, most retention programs focus on the first year student. "Virtually all students come with two objectives: to achieve academically and to succeed socially" (Erickson & Strommer, 1991). It is precisely these two objectives (academic achievement and social connection to a friend(s) and the institution) that shape a student's decision whether or not he or she will remain in college (Astin, 1972)

Over the past few years, colleges and universities throughout the country have created First Year Seminars to address these objectives as well as wide variety of needs including:

- helping students from all ability levels succeed by explicitly teaching them skills necessary for academic success (reading, writing, time management, study skills, bibliographic instruction, etc.);

- orienting students to the culture of the academy - its special vocabulary and concepts, the nature of the disciplines, etc.;

- helping students form relationships with one another and with a supportive faculty member around a common intellectual challenge; and

- providing a forum for information essential to student success but absent from the explicit curricular requirements of the institution.

While the retention literature in higher education considers students with particular characteristics to be "high risk" students, reality suggests that ALL first year students are, to some extent, "high risk." If students can successfully complete their first year in college, the odds improve considerably that they will persist to graduation. For this reason, many First Year Seminars function as extended "new student orientation" programs. On many campuses, these classes have become a special support system for new students and a first line of defense against student attrition.

Deaf and hard of hearing students in mainstream college situations pose an extremely high risk of withdrawing from college. Most do not graduate. Stinson and Walter (1992) report that two and four-year colleges with programs for deaf students graduate an average of five deaf students for every sixteen they admit,

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resulting in a retention rate of only 31%. This compares with a 42% rate among hearing students in two-year colleges and 70% in four-year college (Tinto, 1987).

In the fall of 1995, students new to Gallaudet (freshmen or transfer students) had the opportunity to enroll in a three-credit First Year Seminar. This Seminar was based on the University 101 model at The University of South Carolina (USC). A faculty curriculum development team met with John Gardner from USC to outline specific student needs and spent the spring and early summer writing and organizing course materials and establishing relationships with different programs (academic programs, residence hall programs, Library, Counseling Center, and Communications Center). The course was designed to meet the varying needs of students and makes use of innovative teaching strategies such as cooperative and problem-based learning. The course was based on the premise that if students were able to make academic progress and feel connected to other students and the institution, their chances of remaining at Gallaudet would be improved. Students learned to make connections between and among their various courses. Upper class students served as "teaching assistants." Faculty from all schools taught this course.

The course included three major content units. Unit One focused on study skills and time management, and introduced the students to an array of-out-of class workshops offered by the Student Life program. Students also began to develop academic computing skills, through in- and out-of-classroom training developed by the University's Academic Computing program. In the second unit, students explored a wide range of campus resources available to them--such as using the library for both traditional and computer-assisted research, finding appropriate help for personal problems, and investigating the range of scholarships and loans available through Office of Financial Aid. The third and final unit introduced students to the societal functions of institutions of higher learning, the historical and philosophical underpinnings of the liberal arts and how universities in general and Gallaudet in particular attempt to use their general education curricula to expose students to the liberal arts. Through interviews with key faculty members and upper class students, first-year students explored the dozens of major fields of study available to them. This last activity gave the students practice in interviewing and reporting, and also served as a tangible recognition of the often replicated finding that students who learn about and commit themselves to a major field of study are more likely to persist to graduation than those who delay in making such decisions. Each and every activity was designed to actively involve the student in meeting the two objectives for a successful college experience: making academic progress and social/institution connections.

In addition to the actual course content, students in the First Year Seminars explored several specific areas outside of class. One crucial out-of-class activity was involving students in community service activities. For example, students assisted older alumni during Homecoming Week, and participated in a campus clean-up project. Off campus activities included work with sick children, the homeless and AIDS patients. In each case, the students worked together, felt a sense of purpose and in some situations began asking questions about the kinds of majors that might be needed to work in such programs. These off campus experiences often lead to

broader discussion related to the value of liberal arts education, i.e. homelessness from economic, social, and medical points of view.

First year students are often hesitant to make use of campus resources. While students are exposed to support services and encouraged to use them, the services themselves must match the needs of the students. If not, students will quickly decide "they don't help me." Services must be more than accessible, they must be "user friendly" to make a difference. Campus tutoring services can be crucial. Students who are struggling must make academic progress if they are to succeed. For students with special needs, the tutor must create user-specific programs. For example, when students in Gallaudet's First Year Seminar were encouraged to attend tutoring sessions, the Tutoring Center was ready with specific programs for specific needs. Whether it be a specific approach on how to solve a math problem using different colors to outline steps, or tutors trained to modify materials for use with students who have specific learning disabilities, those providing the service must take into account student learning styles and needs. Students who have initial success with these kinds of academic services are more likely to use them in the future.

At the end of the first semester, an evaluation of the First Year Seminar was conducted. Results indicated that students who were enrolled in the First Year Seminar withdrew from school at a rate of 11% during the fall semester compared to students not enrolled in the First Year Seminar who withdrew at a rate of 24%. Clearly, the two objectives were met for most students enrolled. That is, when explicit opportunities were made for students to become involved, make friends and be supported in academics, retention increased. In the future, the First Year Studies program will work cooperatively with departments to ensure common academic goals for all first year students. These will include, for example, the reinforcement of study and thinking skills, and reading and writing. This year, the coordinator is working closely with the English Department and sharing information about the Seminar with all departments. We anticipate the retention will be even greater in the future.

The needs of deaf and hard of hearing students are similar regardless of setting. Faculty and staff working with deaf and hard of hearing students in mainstream post-secondary institutions can take advantage of existing First Year Seminars on campus to meet the objectives of academic progress and social/institution connections. Institutions can organize a section of the First Year Seminar for all deaf and hard of hearing students. Students might, for example, investigate resources on campus that answer specific questions related to serving them. If a First Year Seminar is not available, support workshops could be designed to accomplish the same tasks. Clearly, the retention rate for deaf and hard of hearing students in the mainstream must be improved. When institutions structure support for deaf and hard of hearing students keeping in mind that when students make academic progress, and feel connected to others and the institution, they tend to stay, higher percentages of deaf and hard of hearing students will receive their degrees.

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Examining Academic Issues

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of
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Exploring Assessment Alternatives for Deaf Students[*]

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At a time of growing concern about assessment and increasing need to prove successful learning outcomes, professional educators who work with deaf and hard of hearing students may find themselves in a quandary. For many students who are deaf, as well as for hearing children who learn English as a Second Language (ESL), traditional, standardized English-based tests often do not adequately reflect their potential. Yet no other institutionally accepted form of educational assessment is currently available.

As a teacher working with deaf adults who are making the transition from high school to college, I continually face the challenge of locating assessment tools that accurately diagnose their strengths as well as their weaknesses. Talking to colleagues who work with ESL students, I discovered that we share similar challenges; the non-traditional learners we serve, no matter how impressive their classroom performance, tend to struggle with standardized assessment methods.

While these tests may offer neat, clean statistics, they seldom provide adequate information about the students involved. Standardized tests serve one primary institutional purpose; they are considered a quick way to predict a student's ability to succeed in the college or university environment. But as we have repeatedly seen, standardized tests do not provide an accurate gauge with regard to students who are deaf. For these and other nontraditional learners, such tests seem only a way to reduce their achievements to a neat, numerical score, which is then used to determine their future educational placement.

The Search for a New System

A more accurate and equitable system of educational assessment is clearly needed, one that will measure a student's actual skills and knowledge without strict reliance on English, usually the student's second language. Two things are essential: a) students must feel that they are active participants in the evaluation process; and, b) tests need to provide more reliable measures of actual student learning experiences.

A search for innovative, realistic assessment strategies is taking place on several campuses in the state of Washington. The emphasis is shifting toward an assessment approach that empowers students to develop decision-making skills and that evaluates critical thinking and lifelong learning. That approach may take the form of written self-assessments, applied critical thinking, and portfolios of student-generated work. Rather

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than reinforcing passive behavior, these methods encourage active student participation in the learning and evaluation process.

While the students I teach are high school seniors and graduates, I believe that the assessment tools we have developed can be used with equal effectiveness for junior high and high school age students. With some adjustments in content material, these methods can be adapted to fit a great variety of educational settings, subject areas, and ability levels.

Worthwhile assessment strategies should include the goals of encouraging critical thinking and the development of lifelong learning skills. The assessment examples that follow can help students reflect on what they are learning and develop connections among concepts and principles, applying them to their lives and the larger society. These methods can be used with students of a variety of ages and grade levels, with teaching materials tailored for the target audience. They can be used successfully for the collection of pre- and post-test data, as well as for evaluation of unit-specific learning.

Student Self-Assessments

Written self-assessments require students to critically analyze what they have learned and its application in their lives. In teaching transitional courses for deaf students about to enter college, written self-assessments encourage them to evaluate and synthesize important information they have learned.

For example, Seattle Central Community College offers a college transition program for deaf students called "Orientation to College Success." Among other things, it encourages students to think critically about a variety of health matters, including HIV and AIDS awareness. After participating in several concept building sessions about the issues of HIV/AIDS and personal responsibility, students take part in a directed group activity that includes a model for making decisions. They learn that they must think about the topic, seek additional information as necessary, and formulate their responses to the problem. They then develop ideas of how and why they can support their responses, as in the following example:

> You have been dating someone for about four months. Both you and your partner were tested for HIV, and you both tested negative. Now your partner refuses to use condoms during sexual contact, claiming there is no risk.

> Based on what you have learned about HIV and AIDS, how would you respond to this situation? Why? What would influence your decision? Why?

A modified written self-assessment would encourage young adults to think critically about how they might respond in a similar situation, while providing teachers with a method for evaluating their grasp of key concepts. This kind of exercise gives students an opportunity to relate new concepts to their own lives and to envision how they might cope with similar situations.

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Critical Thinking Analyses

Teachers can assess critical thinking skills through a variety of nontraditional methods. Videotaped scenarios can be used to illustrate key concepts, encouraging students to analyze what they see, and to apply newly learned concepts. Dr. George Bridges, a University of Washington Sociology professor, has developed the following method of using videotaped material to collect pre- and post-test data for an introductory sociology course.

On the first day of class, students watch a racial confrontation in a film clip from Spike Lee's film, *Do the Right Thing*. Dr. Bridges asks them to respond to the clip through written analysis, incorporating appropriate sociological principles. At the end of the quarter, Bridges repeats the clip and asks students to evaluate the scenario again. Comparing pre- and post-test analyses provides valuable information about student learning and achievement.

My course, "Orientation to College Success," uses a limited version of this assessment technique. I introduce a portion of the course that deals with date or acquaintance rape with a segment from *The Grey Area: His Date/Her Rape*—an educational video tape developed for deaf high school and college students by the National Technical Institute for the Deaf. The segment depicts a dating situation that leads to rape. I do not describe the material before showing it; I simply ask students to pay attention to the behavior of the people involved.

After watching the scene, students write what they noticed about the behavior of the characters. I ask whether they think the woman in the scenario was actually raped, or was a willing participant in a sexual situation. Students discuss their observations as a group.

Then I present information about date and acquaintance rape, and introduce a workshop about date rape presented by an educator from the Abused Deaf Women's Advocacy Services agency (a local service for abused deaf women and men). Students complete a variety of relevant reading and writing assignments. At the end of the unit, students watch the initial video segment again for assessment purposes. After the second showing, students think critically about what they have learned and reapply those ideas to the situation they have seen.

Analyzing Communication

Another example of critical thinking assessment involves consumer responses to mass media. It can be used in reading, writing and language arts classes. This teaching unit encourages students to look beyond slick television and magazine advertisements and to analyze the techniques of manipulation advertisers use to sell products and services. Students begin by bringing samples of magazine advertisements to class. I provide videotapes of television commercials and overheads or copies of print advertisements for class discussions. Students learn about the various propaganda methods advertisers use to appeal to consumers and pinpoint examples of these techniques in actual advertisements.

One classroom activity might be to analyze an ad that shows a group of people having a good time together, seemingly enjoying the use of a particular product. The actual function of the product may have little or nothing to do with the fun and excitement portrayed in the advertisement. But lonely consumers may be struck by the fact that the people in the ad seem to be having a good time -- a situation infinitely more appealing than feeling alone and left out.

After discussing and reviewing these concepts, students -- either individually or in groups--prepare presentations for the class and submit written analyses of a variety of advertisements. This is an effective way to get students involved in critical thinking as well as in reading, writing, and presenting their ideas.

Students and Their Portfolios

Another popular assessment approach is the student-generated portfolio. Creating a portfolio gets students personally involved in the assessment process, as they evaluate and select their own best work for revision and re-submission.

Student portfolios can document progress and growth in virtually any area of academic or technical study. They can be used to highlight student achievement in a variety of skill areas, from reading and writing to the development of mathematics and technical skills, including word processing, desktop publishing, photography, and apparel design. Students can also use portfolios to provide clear evidence of their ability to evaluate and improve their own work, thus indicating self-monitoring and self-correcting skills that are invaluable in personal life and the world of work. Portfolios offer an added benefit during the search for a job, giving potential employers a realistic way to evaluate the abilities of prospective employees.

Teaching students about the kinds of materials to be included in a portfolio begins the process. They should begin the school term by creating a folder to hold most of their work for the coming quarter. As assignments are completed and evaluated, they are placed in the folder, culminating with a final critical thinking, skills-based evaluation. I give students my evaluative criteria, which may be course specific or oriented to general competency, before they select items to include in their final portfolios.

As part of the basic criteria for item selection, students examine all of their work for the class and include materials that will demonstrate progress over time, and items that can be revised to indicate mastery of concepts or skills. After they make their selections and revisions, students write reflective papers, summarizing what they liked about the process and what they have learned. Students then present their final portfolios to the class and submit them for evaluation.

Personal Involvement

These innovative approaches have the virtue of minimizing the cultural and linguistic biases of traditional assessment. They get students involved in the assessment process, taking responsibility for their own education and their own future. Clearly, having a personal stake in the outcome is great motivation.

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When students play an important role in the evaluation process, the appropriate techniques can spotlight learning and achievement. Rather than simply a way to constrict and evaluate performance, assessment becomes a useful tool for growth and learning.

As teachers become increasingly responsible for teaching to and monitoring achievement of educational goals and objectives, it seems likely that creative assessment approaches will be more widely accepted. At Seattle Central Community College, instructors in the Regional Education Center for Deaf Students and the Adult Basic Education Program (ABE) use portfolios to aid in making decisions for student placement.

At this time, most colleges continue to rely on standardized tests for student placement in English and mathematics courses. But as we continue to collect data and empirical evidence that supports the use of non-standardized assessments, I believe we can make a strong case for that approach.

As teachers, it is helpful for all of us, to the extent that is feasible, to keep data on the assessment techniques we find useful in our classrooms. Only through clear evidence of their validity will alternative assessment methods gain the widespread respect and acceptance they--and our students--deserve.

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Classroom Assessment of Writing: Purpose, Issues, and Strategies*

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Freedom is feeling easy in your harness.
-- Robert Frost

Purpose of Classroom Assessment

As teachers of writing we are expected to assess and evaluate students' writing and to help colleagues in other departments do the same. Whatever our approach to the teaching of writing, we must assign grades and prepare students for programmatic assessment. As Peter Elbow (1993) has noted, "Much of what we do in the classroom is determined by the assessment structures we work under" (p.187). In the field of second language writing assessment, the return to the direct assessment of writing, as seen as an attempt to make the assessment structures we work under more valid. In some school districts and colleges (see for example, Brand, 1992 and Weiser, 1992), portfolio assessment is being used as an alternative to testing, Here, I argue that the best assessment of writing in the classroom is an on-going, descriptive documentation of behavior and attitude, and that conscientious assessment at this level will allow us to move more freely in the harnesses of program-level evaluation.

The assessment strategies considered here are both valid and manageable at the classroom level; that is, they reflect real writing behaviors and strategies that teachers already use for instructional purposes. To assess writing, teacher becomes researcher and observes, records, collects, categorizes and evaluates data. The data includes documentation of changes in attitude and knowledge of oneself as a writer as well as the acquisition of skill. Because we want the student to become involved in the assessment process, the strategies go beyond observation by the teacher and include collaboration with and reflection by the student. Finally, it is important to note that assessment activities may be conducted in more than one language, and the data itself may be recorded in written or videotaped form.

Assessment and Evaluation

When I ask teachers what they remember about evaluation of their own writing, they recall corrections in red ink, marginal comments, and no comments at all. They recall feelings of surprise, when, daring to take a risk, they are penalized for doing so. They also recall critical but encouraging comments from some instructors and not wanting others to lay a finger on their writing. Along with a shift in emphasis from product

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to process in composition instruction (Hairston, 1982), has come the point of view that not all writing should be evaluated; and, following Weaver (1990, p. 182), it may be useful to distinguish between everyday documentation and periodic judgment. Here, I take assessment to mean an analysis and interpretation of that data for the purposes of grading or placement. Traditionally, we have graded and corrected students' writing. Recent experience and research suggest that we should also consider rating their writing holistically and responding without evaluation.

Grading versus Rating

Grading is the practice of assigning points or letter grades to an essay according to certain criteria. We assign a grade to indicate how much of a certain criterion is present in the writing. Assuming we have the same criterion for all our students, a grade of "B" should mean the same thing from essay to essay. Grading involves a scale composed of intervals; and the intervals or units on this scale may be added and subtracted.

Rating (or "ranking") involves a different kind of scale. Here, judges rate the quality or relative "goodness" of writing samples along an ordinal scale (Hatch & Farhady, 1982). Examples of such scales are holistic rating scales with values ranging from 1 to 6 points, 0- to 100-points, or "poor" to "excellent." Holistic ratings of writing samples are now preferred over indirect, multiple-choice assessments of writing skill for students who are deaf or hard of hearing as well as hearing students of English as a second language (Albertini et al., 1986; Berent et al., 1994; Jacobs et al., 1981).

At NTID, holistic ratings are used to place new students in developmental writing courses (Bochner et al., 1992) and to admit students into degree-prerequisite composition courses at RIT. For the former, students are given thirty minutes to write a short essay about first impressions of NTID. Each essay is rated on a scale of 0-100 points by three experienced raters (English instructors), and the three ratings are averaged to yield a single score. The scoring procedure directs raters' attention to four categories--content, organization, language and vocabulary--and is thus a "modified holistic" rating procedure. Training and the practice of averaging raters' scores increase the reliability of the score. For instructors interested in improving the reliability of classroom ratings, such a procedure is feasible. It only requires collaboration and some consensus among instructors.

When a colleague in civil technology asks for advice about grading deaf students' lab reports and is overwhelmed by the report's grammatical anomalies and departures from the expected format, we suggest that the colleague not assign a single letter grade to the report. Rather, we advise grading content, organization, language, and mechanics separately. At NTID, a concern for the improvement of lab reports has led to cross disciplinary collaboration among English and technical faculty (Shannon, Keifer, & Senior, personal communication).

Correcting versus Responding

The efficacy of correcting students' writing continues to be debated. One report from the University of Minnesota (Semke, 1984) indicates that accuracy, fluency, and general language proficiency in the writing of students of German was enhanced by practice, not error correction. In a study of home and school influences on low-income children's literacy, researchers report that

> instructional techniques that rely heavily on teacher corrections, that stress producing mechanically perfect texts, and that fail to provide an appreciative audience for even the poorest writers' efforts, may be especially frustrating to children who confront the writing task with little confidence in their ability to say something of interest to others (Snow et al., 1991).

Anecdotal reports from adult deaf writers indicate that the sight of school papers "bleeding with red pencil" adversely affected their motivation to write (Gustason, 1992, p.64). On the other hand, teachers of writing to hearing second language learners (for example, Reid, 1994) argue that, as editors, mentors, and surrogate audiences for academic writing, they cannot abrogate the responsibility to correct unsubstantiated conclusions or departures from standard form and acceptable usage.

With adult students, negotiating an appropriate time and context for correction is one solution. Also, selective correction of only those errors related to the main objective of an assignment will reduce student frustration and increase learning. In the civil technology lab report, the steps of a particular test must be reported accurately. Clear description of grammatical errors related to clarity and intelligibility was suggested several years ago by Burt and Kiparsky (1974). They categorized sentence level grammatical errors as either "global" or "local" mistakes; and claimed that missing or inappropriate clausal connectors and tense inflections were "global" in that they affected overall intelligibility more than missing noun inflections and articles ("local" mistakes). *Figure 1* includes a list of the major error types according to their definitions.

Figure 1

I. Global Mistakes - Those that confuse the relationship among clauses, such as:
    A. Use of connectors
        correction: change conjunctions, relative pronouns
    B. Distinction between coordinate and relative clause constructions, or the order of constituents
        correction: put relative clause immediately after its antecedent head noun
    C. Parallel structure in reduced co-ordinate
        correction: add missing subject
    D. Tense continuity across clauses
        correction: change endings

II. Local Mistakes
    A. Articles
    B. Inflections
    C. Auxiliaries
    D. Prepositions
    E. Vocabulary

Burt & Kiparsky, 1974

What to correct is one question; another is, when. For several years now, advocates of the writing-as-process approach have suggested that we reserve grammatical correction to final, "pre-publication" stages of writing. A new writer, they argue, should be allowed to focus first on content and arrangement, then on style and mechanics. An instructor and other readers can promote continued writing and revision by reflecting what is seen, heard or felt in the piece. Such feedback may be simply the reiteration of striking works, phrases or ideas and is decidedly non-evaluative. Comments such as "I like ...," "I don't like...," and "You should...," are withheld. Responding without correction in teacher-student conferences and in writer groups may be particularly effective with writers whose concern for correctness interferes with concept formation and fluency. Peter Elbow (1993) reports that the creation of "evaluation-free zones" at the beginning of each semester improves both students' writing and his own attitude towards it. He reports "liking" students' writing better and, as a consequence, being more able to criticize it constructively.

Non-evaluative response establishes a connection between writer and reader. A student writes to satisfy a requirement; a writer writes to connect with a reader. Responding to a student's text with experiences of our own shows a personal connection to that text. Such connections should motivate a student to continue writing. I once asked a colleague to comment on a personal piece of writing concerning a student's violence at home. My colleague's response began, "I remember when I was so angry that I ..."

Strategies

Classroom assessment of writing begins with the instructor but involves the student as soon as possible. The instructor may use logs, checklists or grids. Logs and checklists document work completed but also milestones and problems along the way. A grid, which is a list of criteria plus a simple rating, is a useful way of summarizing an assessment of one piece or a collection of pieces in student-teacher conferences. Peter Elbow (1993) uses an analytic grid (shown in *Figure 2*) to comment on student papers and to provide evaluation.

Figure 2

Analytic Grid

Strong	OK	Weak	
			Content, Insights, Thinking, Grappling with Topic
			Genuine Revision, Substantive Changes, Not Just Editing
			Organization, Structure, Guiding the Reader
			Language: Syntax, Sentences, Wording, Voice
			Mechanics: Spelling, Grammar, Punctuation, Proofreading
			Overall (Note: this is not a sum of the other scores)

Elbow, 1993

Students are drawn into the assessment of their own writing through conferences and interviews. Donald Murray (1985) suggests that instructors begin individual conferences by asking students to write about

the pieces under consideration. The student should describe what was attempted, what was achieved, and what the next step will be. A dialogue journal is an interactive context where writing may be discussed in writing. Three ground rules for dialogue journal writing are that 1) teacher and student are partners, 2) that the content of the journal is negotiated, and 3) that the writing is never corrected. In this context, the teacher responds on a personal level to what the student has written. In writing classes a dialogue journal may become a writer's notebook where experiences are traded, past writing experiences are recalled, and view of writing are discussed. This interactive writing may be used to seed other, more formal pieces of writing outside of the journal. For some students, the journal context helps trigger recall of experience and reflection on the writing process. If students are willing to comment regularly on their strengths and weaknesses as writers, a longitudinal self-assessment is compiled by the end of the course.

Self-assessment and reflection are our ultimate goals. Questionnaires, student logs and journals will prompt students to consider their strengths and weaknesses as writers. The writing portfolio is another context where reflection is appropriate. According to Yancey (1992), the inclusion of written reflection is what distinguishes writing portfolios from art or investment portfolios. Like these others, writing portfolios are longitudinal in nature, diverse in content, and collaborative in ownership and composition (assuming that the student has received feedback on various drafts from instructor and classmates). Unlike artists or investors, however, the writer is asked to reflect on content and process and to provide some sort of introduction to the pieces. Such commentary may take the form of a "letter to the reader" or short process descriptions preceding each piece. Inviting students to narrate the contents of their portfolios should elicit evaluative comments like, "One of my strengths in writing is ..." and "My writing style has changed so much within the last year or so!"

In practice, writing portfolios combine several forms of documentation and evaluation. A writing portfolio can include product, process and reflection. Inclusion of product and process allows others to evaluate the acquisition of skill or strategy; reflection reveals the writer's attitude and point of view. As an assessment tool, the writing portfolio compares favorably with standardized indirect measures of writing with regard to validity. Given the complexity and variety of real writing tasks, a collection of final drafts written on different topics at different times is more valid than a single sample of writing as well. To the extent that the creation of a portfolio mirrors the writing process followed in other college courses, it is a valid and relevant assessment of a student's academic writing ability (Hamp-Lyons, 1991, p. 263).

On the other hand, the individuality and variety inherent in this method make it difficult to estimate the reliability of portfolio assessment. Comparability and replicability of the evaluations of the portfolios is the issue. Ratings across portfolios become more stable to the extent that we can elicit the ratings of colleagues who read the final drafts with the same criteria as we do. One additional rating greatly improves the reliability of a final evaluation; and an additional set of comments provides the student with objective feedback in the sense it is a response from someone who has not been involved in the process of writing the pieces.

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Teachers who use portfolios generally have a preference for process writing approaches and their use is more common in social science and humanities courses than in natural science courses (Johns, 1991). Instructors who use portfolios as an assessment tool report that they have had a salutary effect on their teaching (Yancey, 1992). In writing courses, they proved both a focus of study and a record of growth. For students (and teachers) unfamiliar with the method, it is advisable to conduct periodic portfolio checks and even to assign preliminary grades based on quantity and quality. A working portfolio implies but does not ensure genuine revision. Portfolios may include a variety of languages and media. Graphics may add to appearance and interest, and depending on the readership, bilingual pieces and reflection on the writing process may add depth. If we ask colleagues to rate and comment on our students' portfolios, we need to provide explicit rating guidelines and a reasonable number of portfolios to read. On a rating scale of 1 to 5, for example, what does a "5" mean? Suitable for publication in a campus literary magazine?

Conclusion

The techniques described here are simply ways of recording observations and gathering samples. Their use serves a dual purpose: to document learning and to foster writer maturity. Use of these techniques will make students ware of the process and problems, solutions and changes in their own writing. It will also help us loosen the reins without losing sight of the goals. We can encourage risk-taking and also teach editing. Most importantly, when the time comes for evaluation, we can provide students and supervisors with multiple assessments of performance and documentation of change.

Descriptive methods may be used by the instructor, by instructor and student together, and by the student alone. In using descriptive modes of assessment versus standardized tests, we trade uniformity, balance and sometimes breadth for variety, individuality, and depth. Descriptive assessments can augment the reliable but shallow information we get from standardized test scores. Used alone, standardized tests become blinders, fixing our gaze on a narrow path, a limited characterization of a student's abilities. Some have suggested that the use of portfolios may provide the desired link between classroom assessment and large-scale testing (Freedman, 1991) or that placement essays be used in conjunction with portfolio assessment (Brand, 1992). Thus, if we use longitudinal assessment of student writing we may be able to work more easily within institutional structures or ultimately, we may be able to change them.

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Teaching ESL to ASL Users

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Abstract

Historically, it has been the practice of colleges, universities, and other institutions that have English as a Second Language programs to place deaf students who are having problems in composition classes in those programs. At the University of Arkansas at Little Rock (UALR), this has been an occasional practice since 1980, near the beginning of the Intensive English Language Program (IELP). Reasoning behind this was that educators had discovered that many deaf students share similar problems with some of the foreign students learning English: no articles; lack of the verb "to be;" and few, if any, prepositions.

As the 10th and newest affiliate of the Postsecondary Education Consortium (PEC), UALR is committed to expanding and improving services for students who are deaf or hard of hearing. One area of increased focus since the inception of UALR's PEC affiliation has been the need for additional English instruction to students who are deaf and non-native English users or who have deficits in their English education backgrounds. With a task such as this one, each university must examine its own resources in order to develop programs that offer the best available options for its particular situation. At UALR, we chose to collaborate efforts between the Disability Support Services/PEC affiliate program for students who are deaf or hard of hearing and the Intensive English Language Program in order to develop an English as a Second (Foreign) Language class for American Sign Language (ASL) users – ESL for ASL Users.

PROGRAM COORDINATOR'S PERSPECTIVE

Affiliation with the Postsecondary Education Consortium at the University of Tennessee, Knoxville has allowed UALR and Disability Support Services (DSS) to enhance services to students who are Deaf or Hard of Hearing. These expanded services range from purchasing new assistive listening systems to a summer orientation program to professional development for interpreters and notetakers to the development of a two-tiered English language instruction program for deaf students who are non-native English users or who have deficits in their English education backgrounds. As stated in the UALR-PEC goals and objectives,

> . . . the program will involve coursework geared specifically toward students who are Deaf or
> Hard of Hearing. The coursework will be developed during the first year of PEC funding.
> The course will utilize materials and instruction methods from the UALR Intensive English

Language Program (IELP), in conjunction with components used successfully by other PEC affiliates. The course will be developed jointly by the PEC Program Coordinator and IELP consulting staff. Course credit through IELP will be offered.

Preparation and Curriculum Development

Combining the efforts and expertise of our DSS/PEC program staff (and PEC advisory council members) with the Intensive English Language Program allowed us to approach this class in a unique way. Much of the initial preparation involved constant collaboration between myself and the IELP instructor, Anna Vammen, who would teach this course. Although Anna was an experienced ESL teacher and had a vast knowledge of language and the instruction of English to non-native English users, she was not knowledgeable in the field of deafness. Her commitment and desire to teach deaf students the reading, writing, and grammar skills they would need to be successful in their postsecondary career required an extreme amount of studying and learning on her part. This included gaining an understanding of Deaf culture, ASL grammar and syntax, common problems deaf students face in learning English, and basic differences in ASL and English. At the same time, I gained a greater knowledge of the teaching strategies related to English as a second language and English as a foreign language. Together, we were able to outline the initial goals and objectives for this course.

It is important here to clarify our main objective for this course. All students entering UALR who do not possess the skills (as determined by their ACT/SAT scores) to enroll in Composition I are first placed in two developmental courses, College Reading and Composition Fundamentals. Most deaf students entering UALR will follow the developmental track before enrolling in Composition I & II. Over the years, it has been discovered that, although deaf students are passing the developmental courses and possibly the Composition I course, they may still lack the appropriate skills to successfully meet the challenges of the reading and writing required on the postsecondary level. Therefore, our main objective in creating this class became the following:

> To teach students whose native language is ASL to successfully communicate in English through writing, with emphasis also on improving reading skills.

Role as consultant

My biggest part in the creation of this course came during the initial design, preparation, curriculum development, and implementation phases. With the understanding that this is a pilot course and is a 'first-time' experience for all those involved, a continuation of discussion and support concerning the class has been vital. Anna, John West, the interpreter, and I meet periodically during each semester to discuss strengths and weaknesses of the class, any changes that need to be made, and to brainstorm ways we can improve future classes. As the primary consultant for this course, my role during the first two semesters has been three-fold: (1) to act as a support for the instructor by providing additional information on deafness and/or ASL related issues, (2) to communicate with the instructor and interpreter as well as the students in order to assess the course and future changes needed, and (3) to target and recruit students who could benefit from the class.

The Future

Each semester, UALR has approximately 15 deaf students whose primary mode of communication is sign language (including ASL, PSE, and English sign systems). The target size for this class is five to seven students with no more than ten. We would like a small enough class to be able to address the individual needs of the students, yet large enough to engage in group discussion and activities. It is our hope that as this class continues and the number of deaf students entering UALR increases, the popularity and credibility of this course will attract deaf students who desire to learn the English skills necessary to meet their academic and career goals.

INSTRUCTOR'S PERSPECTIVE

ESL and EFL

Two terms that need to be explained are ESL and EFL. ESL stands for English as a Second Language. Teaching ESL involves teaching English to non-native speakers who are living in a country where English is the native language. EFL is English as a Foreign Language, and it is the teaching of English to non-native speakers where, outside of the classroom, the students are in their native language cultures. Teaching ESL or EFL is more closely related to the field of teaching Foreign Languages than that of teaching "English" in the traditional sense, i.e., to native speakers of English.

Most ESL/EFL teachers have studied, speak, or even teach a foreign language. Many have lived in other countries and are, therefore, quite familiar with dealing with other cultures.

There are as many different techniques for teaching ESL as there are in any other education field. Also, there are as many, if not more, different kinds of programs where ESL is taught. This includes everything from kindergarten to university to Adult Education; from the class that meets once a week for an hour to an intensive, all day/everyday class to a friend teaching a friend. Perhaps, though, the biggest thing that sets ESL teachers apart from mainstream English teachers is that every student they teach has a specific goal for learning English -- from being able to play better with kids at recess to studying medicine to being able to go to the grocery store. The teacher is there for the sole purpose of helping the students achieve those goals.

The ESL program at UALR is an intensive English program that works on an eight-week, 9:00 a.m. to 3:30 p.m., five-day-a-week schedule. It is designed to provide foreign students with English classes before they enter the university. It was set up as an intensive program to facilitate the students' learning as quickly as possible before they started college classes. There are four subject areas and classes to fit each of six levels: Grammar, Reading, Writing, and Listening/Speaking.

Incorporating Deaf Students in IELP

As was mentioned earlier, deaf students have been occasionally sent to the program for grammar or writing instruction with varying degrees of success. One of the biggest problems, though, was that IELP's class

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schedule did not correspond to the university's schedule, and, since most of the deaf students were already university students, it was hard for them and their interpreters to adjust to the intensive schedule.

In 1994, Susan Queller, the Director of Disability Support Services, made the suggestion that instead of putting the deaf students in an ESL class, why not take an ESL teacher out and put him/her with an all-deaf class. In April of 1995, everything was set in motion and planning of the class began.

One of the first things that was looked at was the strategy of designing the class as an ESL class rather than as a composition class. The most prevalent reason was simply because of what the students needed. Most deaf students have similar problems -- at least superficially -- as most foreign students do with English: lack of or very different uses of key grammatical points, such as articles and the verb "to be"; problems with the irregular verb patterns and uses of the past tense; unfamiliarity with the rigidity of English word/sentence order; and a need for more vocabulary.

Another key in approaching this as English as a Second Language was that in an ESL classroom, the instructor is experienced in teaching the target language to people who do not know it, which sounds like foreign language teaching, but with a twist. The instructor usually does not know the native language(s) of the students, and, therefore, does not use the students' native languages in class. Only the target language is spoken by the teacher. This in itself becomes almost more art than skill because the teacher has to be able to explain the language being learned in the language being learned. If that sounds confusing, try being in a beginning class of 7 students from 7 different languages whose only knowledge of English is "Hello," "Good-bye," and "chicken salad sandwich." Most ESL instructors accomplish this mainly through a lot of patience, knowledge of English, and an understanding of the syntax (if not the language itself) of key elements of the students' languages and the cultures of the students. This is accomplished many ways, but primarily through experience and calling on more experienced teachers for guidance. Talking with others from those cultures is also immensely helpful.

Collaborating Efforts

As an ESL and a foreign language instructor (I also teach Spanish), these were the strategies I intended to bring to the teaching of this class. However, as I progressed in my learning of ASL syntax and Deaf culture during the summer before the class was to start, I realized that what we were actually going to be teaching was EFL -- English as a *Foreign* Language. While the grammar, etc., instruction would not necessarily change, the fact that the students -- outside of class -- would be functioning in their native language and culture, and that the native language would be used in the class as a vehicle of presenting the target language, made this class closer to an EFL class than an ESL class.

Once my colleague, Christy Owen, and I had come to terms with all these methodologies and had learned each other's techniques and idiosyncrasies, we were able to sit down and hammer out our main

objective, which was easy, and the methodology, which was hard and went through several changes before it reached the stage it is in the handouts of the syllabus you have received.

Course Objectives

The next procedure was to decide on the course objectives. These had to be much more specific than the main objective, of course, and tied tighter to the actual course material that would be taught since that material would be chosen specifically to reach these particular goals or objectives.

This, too, was a team effort based on my experience of teaching ESL and new knowledge of ASL syntax and Deaf culture, and Christy's experience and knowledge of the latter two and what particular problems deaf college students have with English learning. Three objectives made it to the final list. In the order they appear on the syllabus, these include:

1. <u>Communicate ideas in written English form</u>. This is basically the grammar and writing part of the class. It stemmed mainly from instructors in other classes having trouble being able to understand the answers that deaf students wrote to essay questions on tests. Two sub-objectives were written to further explain this one:

   - Write standard English sentences.

   - Communicate ideas in paragraph form allowing readability without confusion.

For this section, we decided that we would need a text that would have grammar in it, yet allow for a lot of practice in writing.

2. <u>Use equivalent English synonyms for ASL vocabulary</u>. The two sub-objectives to this one explain it best:

   - Use English vocabulary that expresses concepts of "feeling" on different levels
     (e.g., the ideas of *great* to *wonderful* to *marvelous*).

   - Use English metaphors, idioms, and colloquialisms when writing, and to recognize
     them in reading.

We felt that this section would be best taught in context with what the students were reading in the class.

3. <u>Demonstrate improved reading skills in English</u>. This last course objective really encompasses the one before it, but it was written separately to stress the fact that the students would not only be learning new vocabulary and idioms, but would be expected to carry that knowledge into reading. Emphasis would be on them learning to:

   - Analyze reading for grammar, vocabulary meaning, and content.

   - Write a brief summary of the reading.

To accomplish this objective, I decided on two materials: an ESL reader (a story or novel reduced to a particular word level) and a newspaper.

However, before I could finally choose the best texts and materials for the class, we needed to have a good idea of what level the students were reading and writing on. We decided to give the students the placement exams in grammar, reading, and writing used by IELP for three reasons:

1. I would be choosing my materials from available ESL texts;

2. Deaf students have many of the same English-learning problems as foreign students; and

3. IELP already had in place a tried and proven battery of placement exams.

IELP uses the standardized English ALFA exam for grammar placement and in-house generated exams for reading and writing. The program is divided into six levels:

Level 1 - Zero to Beginning English proficiency

Level 2 - Beginning English proficiency

Level 3 - Lower Intermediate English proficiency

Level 4 - High Intermediate English proficiency

Level 5 - Advanced English proficiency

Level 6 - College Preparation

As shown above, a student who places in levels 1 - 5 is considered to have an English proficiency level below what is necessary to successfully enter into college level coursework. A student placing in level 6 may still need some fine tuning but is otherwise ready to begin at least some college level coursework. *Figure 1* shows how students are placed in each level according to their scores on the ALFA English test and IELP Reading test.

Figure 1

Placement Test Guidelines
(ALFA English & IELP Reading)

ALFA		READING	
Items	Score	LEVEL	Total
1 - 50	0 - 15	0	0 - 220
	10 - 25	1	230 - 280
	26 - 40	2	290 - 340
	40 +		
1 - 75	45 - 60	3	350 - 400
	61 +		
1 - 100	65 - 85	4	410 - 460
	85 - 95	5	470 - 500
	96 - 100	6	

* Students must pass the reading level 3, 4, and 5 at 80% to move to the next level regardless of overall score.

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The IELP writing placement test uses three prompts to elicit a writing sample from its new students. The prompts ask the students to (1) describe their family, (2) describe a trip in the past, and (3) describe what the student has done since arriving in the U. S. [*Note:* This third prompt was changed to "describe what the student has done since graduating from high school" to accommodate the American deaf students.] The students are given one hour to complete all three paragraphs.

The paragraphs are holistically analyzed for three salient features: control of grammatical structures, especially verb forms; organization; and vocabulary usage. The most important feature to analyze is the student's control of grammar. The most basic grammar point to check is that the student can form correct sentences with Subject-Verb- and Objective/Predicate. *Figure 2* shows how students are placed within the IELP levels.

Figure 2

IELP Writing Exam
Level 1   cannot write complete sentences/confused about basic sentence structure
Level 2   can write simple sentences with S-V-O constructions but repeat the same words with only minor variations of nouns
Level 3   know difference between and use simple present tense, present progressive tense, past tense, and future tense verbs
Level 4   able to use the present perfect tenses and use some compound sentence combinations -- using and, but, or, & so. Not able to use many complex sentence forms
Level 5   use complex sentences containing independent and dependent clauses (use subordinators, e.g. when, while, as soon as, because, since, and transitionals, e.g. therefore, however, on the other hand).
Level 6   able to do all that Level 5 can with higher levels of vocabulary knowledge and organization of the paragraphs

* Section on evaluating the IELP Writing Exam written by Philip Less, Academic Coordinator, IELP.
(Revised and edited for this report.)

The two deaf students tested came out as being generally in the equivalent of Level 4 on all three placement tests (*see Figure 3 below*).

Since this was not to be an intensive class set up as the IELP classes, but a 3-credit-hour university class, it was decided to meet twice a week for 1 1/2 hours per class, with one hour of lab (to be scheduled later). Partly because of the schedule and partly because I could not find the exact test I wanted, I decided not to go with a traditional ESL grammar textbook. Instead, I chose a grammar workbook, GrammarWork 1, which had exercises covering the grammar points that the placement exams showed that the students needed work on. The grammar itself would be taught as it became necessary--i.e., as problems surfaced in the students' writing. In this way, I hoped to make the lessons pertinent and not become a "grammar-bound" class.

Figure 3

To meet the other two course objectives, I chose an ESL reader that is used in IELP's advanced reading class, Eye of the Tiger, and an ESL weekly newspaper, News for You. The reader was assigned as outside reading with discussion questions to write answers to. The students were quizzed on several chapters at a time, after discussion in class. The newspaper, News for You, provided a variety of activities in the way of exercises, cross-word puzzles to practice and learn vocabulary, current events, quizzes, and lots of vocabulary work.

The lab requirement that first semester was pretty light. Basically, it consisted of getting the students set up on and learning how to use E-mail to ask about class assignments, and generally chat, and write class assignments on the word processor.

During the second semester, some minor but significant changes were made. The main objective, methodology, and course objectives stayed the same, but changes were made in the materials and labs of the class.

The original two students decided to take the class again. We changed the course number, and a third student joined the class. All interested students were given the placement exam again. The new student placed at an equivalent level as the others (see Figure 4).

The grammar workbook was changed to the next level of the series, GrammarWork 2, and News for You was continued, but the reader was dropped. In its place, students were given the opportunity to choose two books (approved by the instructor) they wanted to read. As they were reading the books, they had a set of questions to write "Reader Responses" to. The essay questions were given set due times in order to help the students judge their reading time better. In addition to these materials, I brought in extra work on idioms and other words taken from The ESL Teacher's Book of Lists. Also, most students bought Barron's Handbook of Commonly Used American Idioms, and we did some exercises using it. Much more writing was required of the students and a lot of practice was necessary to improve their reading ability.

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Figure 4

Student 3

The biggest change occurred in the lab part of the class. From the experience of the first semester, we discovered that the students did not know how or were apprehensive of using the computers. So, each student chose a free time when she and I could work together in the lab. Here we have worked on basic computer skills, using WordPerfect for Windows 6.1, and using E-mail. This has been a beneficial time for both the students and me. No interpreters were used in the labs.

The two semesters of this class have taught us a lot. As we move into the third semester we are looking at several changes that we feel would be beneficial to the students. One thing that we have learned is that the class will always be dynamic -- changing to accommodate the students' needs.

INTERPRETER'S PERSPECTIVE

As with any interpreting situation, the interpreter's first responsibility is to assess each deaf student's mode of communication. Each class may have students using a variety of preferred modes, from PSE to ASL. As the interpreter I use PSE, but do switch to ASL if there is some difficulty understanding placement of words or concepts related to the current topic of discussion. If the discussion is related to verbs and their endings, I will use some Manually Coded English (MCE) to differentiate between the "-s", "-ed", and "-ing" endings.

Interpreter Role

As interpreters, we are constantly reminding people who have no experience using interpreters of such things as "I'm here only to facilitate communication," "We can not express an opinion," or "No, I will not run down the hall and get you a cup of coffee." As a part of the team of the PEC English class, my role covers more than "facilitating communication." At the beginning of the class, it is explained to the students that my role is more than that of an interpreter in this class. I bring up issues that the teacher and students may not have recognized and actively participate in classroom discussions when achieving a clearer focus of the

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material is necessary.

An advantage I have is the fact that the instructor has become well-versed in deafness, Deaf culture, and the syntax of ASL. She is able to interact with the students on a level that has more understanding than instructors in other classes. It is not necessary to discuss the Deafness and communication issues as is sometimes needed with other instructors. Advance preparation strengthened our working relationship. We are comfortable working together and depend upon one another for clear communication of the subject. An example of the advantage of being able to step out of my role as interpreter is when the instructor's explanation of material is not understood by the students. I can then ask the instructor to present that information in a different style, such as using the board. This allows the students to receive the information in a much more visible manner.

Conclusion

As we approach a new semester this fall, we are reviewing the past two classes and working on improvements for future classes. Our experiences this past year have been invaluable in helping us develop and progress. Perhaps the most rewarding experiences have been in our coming together as a team -- functioning as a unit to provide the students with the language skills they need to succeed in their college courses. In a final note we would like to thank the PEC for their continued and valuable assistance. This class is a reality because of their support.

Materials List

Breyer, P. P. (1995). GrammarWork 1: English Exercises in Context. 2nd edition. Englewood Cliffs, NJ: Prentice Hall Regents.

Breyer, P. P. (1996). GrammarWork 2: English Exercises in Context. 2nd edition. Upper Saddle River, NJ: Prentice Hall Regents.

English ALFA Placement Test. (1983). Houghton-Mifflin Co.

Kress, J. E. (1993). The ESL Teacher's Book of Lists. West Nyack, NY: The Center for Applied Research in Education.

Makkai, A. (Ed.) (1991). Barron's Handbook of Commonly Used American Idioms. 2nd edition. Hauppauge, NY: Barron's Education Inc.

News for You. A publication of New Reader's Press, publishing division of Laubach Literacy International.

Reading Placement Test. Developed by Faculty at the Intensive English Language Program, University of Arkansas at Little Rock, Little Rock, Arkansas.

Smith, W. (1992). The Eye of the Tiger. [retold by Margaret Tarner] Oxford: Heinemann.

Writing Placement Test. Developed by Faculty at the Intensive English Language Program, University of Arkansas at Little Rock, Little Rock, Arkansas.

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ESL Tutor: Educational Software for Improving
English Skills of Students Who Are Deaf*

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ESL Tutor is a set of educational software programs developed to help college students, who are deaf or hard of hearing, improve their English vocabulary and writing skills. The product was called *ESL Tutor* because there is general agreement among educators of the Deaf that learning English is often a second language acquisition experience for many deaf children especially if their primary language is ASL. It has been in use in California community colleges for more than 10 years. In 1992, DPI entered into an agreement with the author to expand the program for the Mac system as well as to re-write the PC version to add user safety features. These development tasks are now completed and DPI has been distributing the programs throughout the US and Canada for about a year.

There are three independent programs in *ESL Tutor*. They are available as individual. The programs provide vocabulary training and contain exercises to improve writing. The <u>Vocabulary Enrichment</u> program contains more than 2200 words including English idioms. These words are defined using ASL gloss words. <u>Parts of Speech</u> includes a program to help deaf students understand and interpret English words that have multiple meanings. A group of 73 words having a total of 255 separate meanings is used. The exercises consist of:

1) Identifying the use of the word (its part of speech) in the sentence

2) Selecting the proper meaning of the word from a list of possible meanings based on their part of speech.

Finally, <u>Grammar in Action</u> is a program having of 530 short essays (paragraphs) which contain common writing errors. The student identifies the error and corrects it, proofreading the essay.

The first of these programs, <u>Vocabulary Enrichment</u>, contains more than 2200 words on 10 disks or modules. The program organization is described in figure 1 - *Outline for Vocabulary Enrichment*. Figure 2 - *Overview, Vocabulary Enrichment* shows the 10 modules divided into two groups - modules A through D and E through J. Figure 2 also describes the relationship of the lessons to the individual modules (the first four modules, A-D, have five lessons and the last 6, E-J, have three). A free demonstration disk of these programs is available from DPI (and was used in this presentation to illustrate the different features of the programs).

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* This presentation was made in June, 1994 in Atlanta, Georgia at *Tools for Language: Deaf Students at the Postsecondary Level*, a PEC-sponsored mini-conference.

A major feature of <u>Vocabulary Enrichment</u> is that it provides out-of-class time exercises for students to practice their vocabulary. A second feature is that it has a "look and feel" that is appropriate to an adult user. Much of the educational software available today is written for younger children and many adult users may be put off by this. A third feature is that it is "results oriented" -- the student must learn the material to progress. Over the past ten years, the author gave pre and post tests (samples are included with the documentation of the program) to his students. Students who took these tests usually had comprehension in a range of 10-15% on the pre-tests and this improved to 90-95% on the post test after the student used this program. Regular follow-up with random groups of previously studied words helps ensure retention of the material.

The second program, <u>Parts of Speech</u>, is shown in *Overview, Parts of Speech*, figure 3. Figure 3 also includes a list of the words used in the demo disk. This program deals with the subject of multiple meaning English words like "back", "draw" and "just". Seventy three words of this type were chosen having a total of 255 different meanings. These words are also contained in module F of the vocabulary enrichment program so if the school has access to this program, the students may already be familiar with the meanings of the words. However the objective of this program is to give students practice with the strategy of finding the specific meaning for an English word with multiple meanings based on the way it is used in a sentence - its part of speech.

The <u>Parts of Speech</u> program does not *teach* the various parts of speech of English. But is does provide exercises that will support this classroom training in an out-of-class time environment that is stimulating for the students.

The third program, <u>Grammar in Action</u>, is discussed in *Overview, Grammar in Action*, figure 4. This program provides practice exercises consisting of short essays or paragraphs containing English writing errors common to deaf students as well as other ESL students. The student proofreads these essays, identifying the errors and correcting them.

There are four types of errors used in the program. "Articles" and "Verbs" have 175 essays each and "Word Choice" and "Suffixes" have 60 essays apiece. The fifth segment, "Combinations" contains a mixture of the above four errors in each essay. There are 60 of these essays as well for a total of 530.

Both "Articles" and "Verbs" contain rules which will appear on the screen when the student makes a mistake in correcting the error. These rules are included in the documentation as well as a list of suffixes and word choices contained in the program. A major objective of this program is to teach the students that proofreading their work is both essential and perfectly acceptable.

A demonstration disk containing examples for each of the above three programs is available from DPI at no charge. Both the PC (DOS) and the Mac platforms are supported. DPI is a California non-profit corporation with the mission to recruit, train and employ people with disabilities as computer professionals. Established in 1980, DPI has more than 250 people today.

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The training program (DPI's mission) consists of two parts: a formal in-class education component and a work experience component in which the student participates in actual client related work supervised by DPI employees. In almost every instance, a job for the student results.

ESL Tutor offers an advantage to the mission of DPI by:
1) Providing a very effective work experience assignment for our students
2) Giving us the potential for jobs for the graduates of our program
3) Providing a product that serves the needs of the population of people with hearing loss

Figure 1
Outline: Vocabulary Enrichment
(Ten Modules)

	Type of Vocabulary	# of Words	Comments
Module A	General Vocabulary	225 words	1 word meanings
Module B	General Vocabulary	225 words	1 word meanings
Module C	General Vocabulary	225 words	2 word meanings
Module D	General Vocabulary	225 words	2 word meanings
Module E	General Vocabulary	225 words	3 to 5-word meanings
Module F	Multi-Meaning Vocabulary	255 words	Covered in POS
Module G	Prefixes-Roots-Suffixes	150 words	Examples
Module H	Prefixes-Roots-Suffixes	225 words	Words
Module I	Idioms	225 words	1 or 2 word meanings
Module I	Idioms	225 words	3+ word meanings

Figure 2

Overview: Vocabulary Enrichment

Modules Chapter Organization	A - D	E - J
Lesson 1	3 groups of 5 words Study new word Give meaning (until correct) All 15 words Give meaning (until correct)	3 groups of 5 words Study new word Give meaning (until correct) All 15 words Give meaning (until correct)
Lesson 2	Fill in blanks with word bank (15 words) (until correct)	Practice Quiz Graded Not recorded
Lesson 3	Fill in blanks with word bank (15 words) (until correct)	Random Review Prior chapters
Lesson 4	Practice Quiz Graded Not recorded	None
Lesson 5	Random Review Prior chapters	None
Chapter test	Results recorded on disk Passing grade by teacher	Results recorded on disk Passing grade by teacher

Figure 3

Overview: Parts of Speech

Two lessons:
   1 - How is the word used in the sentence?
   2 - What does the word mean? (from several possible meanings)

Word list in demo disk:

Word	Meaning	Part of Speech
Back	Move to the rear	V.
Draw	Make happen	V.
Just	Exactly	Adv.
Draw	Get	V.
Run	Go through	V.
Back	Support	V.
Draw	Move	V.
Run	Spread color	V.
Back	Unpaid	Adj.
Draw	Close	V.
Just	Only	Adv.
Draw	Same score	N.
Run	Tear	N.
Just	Fair	Adj.
Run	Print	V.

Figure 4

Overview: Grammar in Action

Objectives:

   Identify error in essay:

   Correct the error

Types of errors:

   Articles

   Verbs

   Word choice

   Suffixes

   Combinations of above

Teacher management control:

   Easy to add or drop a student

   Teacher selects sequence of essays

   Student status and progress reports

Computer-Mediated Literacy Development in Deaf and Second Language Populations

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Introduction

I think there will be a world market for maybe five computers.
— Thomas Watson, chairman of IBM, 1943

Computers in the future may weigh no more than 1.5 tons.
— Popular Mechanics, forecasting the relentless march of science, 1949

640K ought to be enough for anybody.
— Bill Gates, 1981

What *can* be predicted with reasonable certainty in terms of the uses of technology in the future? One fact is indisputable: computer-mediated instruction is emerging as a viable technological tool in a variety of educational contexts from preschool to college and university levels. Particularly promising is the potential for literacy development in an environment conducive to collaborative work, meaningful goals and real-time audiences. The contexts of literacy instruction are undergoing crucial transformations, to allow for concurrent changes in the nature of texts, of communication, and, more specifically, of language. This electronic link between social contexts and community (Duin & Hansen, 1994), leads educators away from traditional curricular notions and challenges beliefs, values, and pedagogy. One of the pedagogical theories implicit in an integrated writing environment is collaborative, or "interactive," learning (Batson, 1988). Collaborative learning techniques allow students to read what others have written as it is being composed as well as after it is complete; the students "comment on, contribute to, learn from, and share texts as they work together" (Bertrum & Rubin, 1993, p. 19).

To realize the potential of technology in literacy education, it is necessary to articulate the objectives of literacy development. Educators attempting to implement an innovation typically face the complex challenge of meshing new ideas with well-established beliefs and practices. Thus, a definition of literacy that includes technology is laden with political, economic, and educational agendas because technology, as much as literacy, is filled with ideological conflicts, shaped by forces of economics, history, and politics (LeBlanc, 1994).

The application of technology for literacy education through electronic conferences allows students to use the tools of literacy to examine the power structure of society; the goal, says Cooper and Selfe (1990), is to change those structures so that disenfranchised groups might participate in political arenas. Literacy is a social technology. That is, literate communities develop varied social, linguistic and cognitive practices with texts.

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As the definition and contexts of literacy development change to include technologies such as electronic networks for literacy instruction, it requires understanding and acceptance of the evolving process.

The term *computer mediated communication* is used to encompass the merging of computers and telecommunications technologies to support teaching and learning (Collins, 1995). Typical functions and users include:

E-MAIL MESSAGES
E-mail messages can be composed directly in the telecommunications program (on-line) or first written on a word processor (off-line) and then uploaded. E-mail messages generally take a few minutes to arrive. Since the recipient does not have to be on-line, but can read the messages at anytime later, e-mail is considered asynchronous.

ASYNCHRONOUS CONFERENCING
Asynchronous conferencing allows messages to be sent from one person to many people. Two types are discussion lists, where one e-mail message can simultaneously be sent to thousands of e-mail addresses, and bulletin boards, where the same message is posted in a central place to be accessed and read by many people.

SYNCHRONOUS CONFERENCING
With synchronous conferencing, messages are sent instantly between one person and a group of people who are all on-line together. In educational settings, this often takes place in a classroom or laboratory with networked computers, and can be referred to as electronic networks for interaction (ENFI, a term copyrighted by Gallaudet University). Synchronous conferencing can also occur at a distance, taking advantage of telecommunications resources such as Internet Relay (IRC) or MOOS (virtual environments on the Internet for text-based discussion and simulation).

FILE SHARING
Both asynchronous and synchronous conferencing usually include some form of file sharing, which allows for paperless transfer of documents between individuals or within a group. This facilitates peer editing and collaborative writing (Warschaur, Turbee, & Roberts, 1994, p. 2).

Computer mediated communication (CMC) promotes self-discipline and requires students to take more responsibility for their learning. The nature of the text transfer and file sharing requires--if not demands --participation. In addition, an important aspect of CMC use in instruction is that it is text-based. Facility in writing is essential across the entire curriculum; one cannot communicate on a computer network without writing. Because CMC is, at present, primarily text-only, the consequent reduction in social cues leads to "protective ignorance" surrounding a person's social roles, rank, and status (Collins & Berge, 1995). For this reason, it is particularly suited to equality of voice in communicative activities.

If language learning is facilitated by interaction, i.e., the give and take of information about shared topics, negotiation for meaning, expansion of propositions, repetition, and clarifications that occur in any conversation (Batson & Peyton, 1986), then an environment rich in communicative practice, where students make and negotiate meaning through text writing, should foster linguistic proficiency and aid in the process of language acquisition for second language learners.

The medium of electronic communication breaks down barriers in ways that allow minority cultures, especially deaf populations, to participate fully in the discourse community. Computer-mediated classrooms present enhanced opportunities for effective instruction in process writing, critical reading and analysis, and purposeful communication techniques, in addition to developing competency in the use of technology and writing across the curriculum (Bertram, Peyton & Batson, 1993). As the locus of communicative control in the classroom shifts from teacher-directed to student-directed, students become empowered. English, therefore, becomes alive and vital as it is used in meaningful and comprehensible ways to achieve shared goals.

The use of CMC to teach writing, thus, holds great promise for a number of reasons, according to Day and Batson (1995): writing is more easily demonstrated; writing tasks are more realistic; writing occurs for an established audience; writing practice is easily encouraged; collaborative opportunities are created; the lag time between classroom discussion and student writing is reduced; and conversations are not limited or unequal. Everyone has access to the "floor" at the same time which can lead to conflict or "flaming." However, as Gruber notes (1995) a classroom that provides students with a means for authentic thought will not suppress different opinions; instead, students' differences will be valued and their ideas will become a means for exploring issues important to a liberating classroom. When used critically, CMC can enhance that goal by providing a space for students to raise issues connected to class discussions. It can also provide insights into different backgrounds and look at the social, political, and economic implications connected to classroom approaches. These situations call for what Gruber (1995, p. 76) labels "discussion of the conflict solution" where "different personalities in the classroom; conflicting political viewpoints; varying racial, economic, and social background; and gender and differences in sexual preference are likely to cause tension that allows for open discussions and critical discourse."

The purpose of this research is to investigate the use of the Daedalus Integrated Writing Environment (DIWE) as an interactive instructional medium in deaf and second language classrooms in an effort to determine whether student-directed discussions of writing foster intellectual community. In addition, the students' relative knowledge and growth of certain problematic syntactical features will be explored as a possible predictor of increased English proficiency.

Two research questions are implicit at the outset:

1. What is the effect of "situated context," or a context where students write, interpret, and negotiate texts via computer networks, on the overall literacy development of post-secondary deaf students using Electronic Networks for Instruction (ENFI)? The areas of focus should include: social construction and interaction; situated literacy; distribution of power; and accessibility (Duin & Hansen, 1994).

2. What is the role of input and interaction on the acquisition of English syntactical structures in a networked-based classroom? The area of focus should include specific attention to how interlocutor interaction affects grammatical development during the process of negotiating text.

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Rationale

The over-riding concern in deaf education has always, of necessity, been basic literacy: how to help students who have lost their hearing early in life, and therefore have had little exposure to English, to acquire a level of written English proficiency that approximates that of their hearing peers (Batson & Peyton, 1986). As Batson and Peyton suggest, serious efforts to develop a naturalistic use of English have reflected multifarious communication approaches--speechreading, audio-loops, teletype (TDD) machines, overhead projectors, signed English, Signing Exact English, English fingerspelling (the Rochester method), Cued Speech, the Autocuer (eyeglasses with signaling mirrors), and Real-Time Captioning. However, the Commission on Education of the Deaf (established by the Education of the Deaf Act, 1986) concludes that some 175 years of research on the teaching of English literacy to deaf children have been, "remarkably unproductive: deaf students still are graduated from high schools coast to coast with third- or fourth-grade reading achievement scores" (Bowe, 1991, p. 13). Many communication methods have been tried over the years with little notable impact. The real problem that deaf students face is not a lack of hearing but rather a limited exposure to English.

Why are their reading levels at roughly the third or fourth grade? Predicting the language proficiency of deaf children is complicated. A number of factors such as home language, degree of hearing loss, age at onset of hearing loss, whether either or both parents are hearing or deaf, and educational background can make enormous differences in both American Sign Language (ASL) and English language proficiency. Bochner and Albertini (1988) note that only ten percent of 18 years olds read above the eighth grade level. In addition, on writing and grammar tests, deaf subjects manifest a variety of problems with English, including using shorter sentences with few conjoined and subordinate clauses; reiterating words and phrases within discourse; using more articles and nouns and fewer adverbs and conjunctions; and showing verb tense and agreement errors and the misuse of function words.

Another problem associated with predicting the language proficiency of deaf children is that it is often difficult to define "native" language for deaf individuals. According to Quigley and Paul (1984), many of the 75% of deaf American adults who use American Sign Language (ASL) regard ASL as their native language. Yet, as Quigley and Paul point out, since only 3 or 4% of deaf children are born to two deaf parents and fewer than 10% have one deaf parent, only a small percentage of deaf children really acquire ASL naturally in infancy and early childhood. "Therefore, the deaf individual's linguistic behavior can be understood in terms of delayed L1 development and in terms of a continual, less naturalistic L2 development. . ." (Berent, 1988, p. 134). Under these circumstances, as Berent postulates, we might be tempted to speak of this situation as "L1.5 acquisition."

While the reasons for this are extensively hypothesized, heavily debated, and unquestionably merit consideration, it is not within the scope of this current paper to go into such depth. It is sufficient to suggest that one line of thinking that might lead us closer to answering the perplexing and critical question is that the

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view of deafness and the challenges that deaf children, their parents, and their teachers face, requires reconceptualization (Erting, 1992).

While it is true that deaf children can't hear, it is more important to emphasize that they do see. It is through seeing that deaf people have created a visual language and a visual culture. Deaf children are different, not deficient. Their access to the world and, thus language and education, is achieved primarily through vision. As Erting (1992) states:

> While a deaf individual may choose whether or not to be an active participant in the Deaf community, that deaf person can not choose to hear -- no amount of practice, hard work, or desire will transform that person into an individual who uses hearing in a primary way as vision. It is our task as educators to create a linguistic and learning environment that is fully accessible to the child, rather than expect the child to communicate and learn in ways that are physiologically impossible. . . . we in the educational establishment have not yet created such environments for deaf children, and if we were to do so, we would begin to see significant improvement in literacy skills (p. 103).

Several researchers have established clear connections between an accessible learning environment and literacy. Vygotsky (1978) in particular has emphasized the role of social interaction in the individuals spoken and written language development. Vygotsky contends that written language is intimately related to spoken language, both being a socially-situated and developmentally continuous process. As Erting states, "We must make spoken language accessible. . . through print, but by relating it to their way of seeing and to their way of communicating" (1992, p. 99). The basic premise is that teachers and children need to converse. Research into the role of input and interaction and the negotiation of meaning in second language acquisition (Braidi, 1995; Pica, 1994) offers rich insights for those attempting to understand literacy development in individuals who are deaf or second language learners. As Albertini (1993) asserts in relation to developing critical literacy:

> Recalling and reflecting on past experiences establishes a basis for the student to read critically. Meaning is created by the reader in interacting with a text, by the writer in retrieving experience and committing a perspective to a paper. . . For the critical theorist, a role of the reading/writing teacher is to help the student uncover the relationship between knowledge and power in society (pp. 62-63).

Albertini suggests that teachers encourage writing as a tool to shape critical interpretation of experiences. For this to happen it is necessary to reexamine assumptions about writing and literacy that pervade educational practice and shift from complete emphasis on functional and cultural literacy to allow for critical literacy development. CMC use is based on a sound pedagogy that affords learners the opportunity to react critically with meaningful text in real-time audiences where they can explore their individualism in a rapidly expanding information age.

Tina, a deaf student in a postsecondary Developmental English class, aptly describes the difficulties deaf children experience in learning English:

> Children who are born with hearing can that hear from their parents all the time. Children with hearing loss is that they couldn't get the language unless if their parents knew some

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signs for the hearing loss. Hearing impaired children without their parents knowing sign language that cause their education fall behind than hearing children. They used ASL because there is only one way they can communicate - through their hands. ASL is kind of mix language, not a follow the rule like English language. It use by the body and facial movement. This is why most deaf people use ASL instead English because English is very difficult language - primary language.

Deaf students seeking admission to postsecondary settings generally begin their studies with a significant educational handicap, and unfortunately, a high number of these students will drop out. Although there are a number of variables that mitigate their lack of integration into the social and academic systems of the institution (Nash, 1992), the most notable are their communication and academic achievement skills. Deaf students need to master the intricacies of standard academic English, and absorb information from English language materials that for many are still beyond their levels of syntactical knowledge (Berent, 1994). This is a most complicated task even under favorable conditions. At a very minimum, college students are expected by their instructors to use grammar, punctuation, and spelling correctly; to organize their text topics clearly; to present their arguments cogently; and to alter their style skillfully to meet the needs of their audiences. For many reasons, then, success in college is dependent on success in English (Anderson, 1993).

In a literate society, learning is the process of constructing necessary linguistic meaning from text. That deaf students have difficulty with English syntax and, therefore, reading is a well documented phenomena (Quigley & King, 1980). Because of their slow rate of syntactic development, many deaf students are not able to read the very material from which they are supposed to learn. As Lang and Lang (1992) state:

> Content mastery of particular subjects, while important, is not the only consideration in current work. The interaction between the learner and the world is receiving increasing scrutiny; for such interaction is critical in the formation of identity. We can see a growing tension that exists between the self and the world, and between a student's self and others; achieving such understanding may be a primary task in the postsecondary years. While pursuing mastery of academic content and professional goals in postsecondary programs, the young deaf adult must simultaneously seek knowledge about power, people, and culture (pp. 67-69).

An additional concern noted by these authors is that at the postsecondary level, many deaf students are bilingual in sign and a written/spoken language. Lang and Lang (1992 p. 69) raise the questions: "How does that bilingualism shape and sort their world and others' being in the world with them? How do deaf students gain access to professional language, and participate visually in the language of 'the system' ?"

Innovation is necessary in order to usher in change in the way we provide instruction for deaf individuals in academic settings. In the area of writing, the view of computers as an empowering force has been especially strong since computers can be used to foster membership in a community. Deaf and second language learners must be seen as agents of change in the struggle for intellectual voice among marginalized learners. According to the Commission on Education of the Deaf (1988), "Perhaps the single most hopeful

prospect for achieving quantum leaps in progress for persons who are deaf lies with technology, much of it computer based."

Computer-mediated communication (CMC) or interactive networks, though largely an untapped resource in classrooms for the deaf, hold great promise for the delivery of instruction in English and other content areas (Stuckless & Carroll, 1994). Addressing the Educational Applications of Technology for Deaf Students symposium, Davila (1994) states that:

> Because the availability of well-designed technology is so critical in the empowerment process, each of us needs to be sensitive to ways in which we contribute to, detract from, this process. Because we hold within our hands so valuable a component of the process, we must always keep at the forefront of our minds the true purpose for utilizing our skills: creating an environment in which deaf individuals can make informed decisions for themselves, communicate for themselves, project themselves, and relate effectively with others. Without innovative technology, these activities would be very difficult for some deaf individuals and impossible for many. But we must never forget that this process is a means to an end: the empowerment of deaf and hard of hearing people (p. 9).

This present study is motivated by the need to create accessible learning environments that will encourage unrestricted freedom of expression for students who will then be able to communicate in ways that are accepted and understood by everyone. When deaf students respond to education in positive ways that reflect a developing interaction with English, the acquisition process is enhanced.

A brief description follows of the Daedalus Integrated Writing Environment which is the interactive learning network used in the present study. This study focuses on postsecondary students who are deaf and learning English as a second language while using the Daedalus Integrated Writing Environment (DIWE).

THE INSTRUCTIONAL CONTEXT

What is DIWE?

Daedalus is a piece of software that defines the computer as a part of a network, a set of computers linked together in a Local Area Network, or LAN, so they can share information stored on a fileserver. DIWE defines the computer network itself as a medium for teaching and learning by means of (often interactive) written discourse.

DIWE itself is a collection of interacting components which allows instructors to post instructions and other messages to students in a file that they can view at any time. WRITE is a simple word processor. INVENT, an invention heuristic that students can use in choosing, exploring, and focusing topics for their essays, has its counterpart in RESPOND, which guides peer reviewers in critiquing draft essays. MAIL is an electronic mail system which can be used as a combination bulletin board, social invention aid, peer review system, and classroom management tool. INTERCHANGE allows the users to conduct intensive, far-ranging class discussions live or in "real time" over the network. All of these are available from a single menu. There

are also a number of tools, available under a separate menu, which allow students and instructors to keep track of their work, and copy files to the right folders (The Daedalus Group, 1993).

Theory Behind DIWE

The Daedalus Integrated Writing Environment is based on the pedagogical theory of collaborative, or "interactive" learning and uses techniques that create a student-centered learning environment which encourages and enhances language use through social interaction. Whichever program is used, the basic assumption of research on computer writing networks has been that students will benefit from collaborative writing (Bump, 1990).

Collaborative writing development espoused by Bruffee (1984) calls on individuals to view writing as an activity that can be enhanced by working in and with a group of other writers. It encourages, perhaps even demands, student engagement. Students become active creators and users of knowledge, rather than passive receivers. Collaborative learning allows for practicing of previously presented skills and concepts. It allows students to attempt to create personal knowledge through negotiation (language) during social interaction. In practice, however, learning to write with others is difficult. In the traditional writing classroom, time constraints and routines are counterproductive of collaboration (Hartman, et al. 1995).

According to Hartman, et al. (1995), the technology of computer mediated interaction is entirely devoted to letting people communicate with one another, and the characteristics that make it as such are uniquely suited to increasing interaction and to expediting collaboration. As Kern (1995, p. 459) states, "Thus the normal pattern of classroom discourse, consisting of a teacher-initiated topic, student reply, and teacher evaluation" is reduced in favor of student initiated control of the shared discourse.

Guidelines for Classroom Management

When accountability for learning is shifted from the instructor to the student, it is necessary for the instructor to redefine his or her role in order to create activities that will foster communal ethos. Intellectual and social frameworks within which the class's negotiation for understanding takes place must be well structured. The instructor must plan ahead for the purpose of the activity and consider which components of the Daedalus environment are well suited to the goals of the particular lesson. It will also be necessary to practice manipulating texts within the system, making use of the mechanics in relation to the writing task, which should be tackled in discrete tasks which build upon one another. Class assignments should be posted before each lesson begins. They should be structured in such a way as to allow students to proceed as soon as they log on and to work at their own pace.

Sample Lessons

Following are two sample screen lessons previously used in the DIWE classroom. The nature of the lessons allows students to proceed at their own pace.

Assignment October 7

1. Go to ACTIVITY and select NEW WRITE WINDOW. Type your dialogue journal response to the question, "If you were in the video ASL - PAH!, what would you say about yourself?" When you have finished save it to your disk.

2. After you have completed number one, go to UTILITIES and select TURN IN A DOCUMENT. Turn in your composition.

3. Respond to MAIL.

Assignment October 14

1. If you have not already completed the assignment from October 7, do so now.

2. If you have completed the 10/7 assignment, go to ACTIVITY in the menu and select NEW WRITE WINDOW. Type five of your sentences from the homework (10/13). When you have finished, go to FILE, save your work on your disk and then print it.

3. When you have finished 1&2, read "Deaf parents are happy when their baby is born deaf" (see me for a copy). What do you think the author means by the statement that, "It's not, however, the hearing loss that puts people in the deaf culture; it is how they identify themselves." ? Go to INTERCHANGE under ACTIVITY and discuss your answers.

4. Respond to any MAIL.

Note: The theory behind the consistent use of dialogue journals as tools that can be used to promote sense of audience, as well as an awareness of turn-taking, questioning, answering, commenting, and initiating - skills which are more than basic "grammar" in successful communication (Bailes, C., et al. 1986; Cannon & Polio, 1989) is applied to the electronic mail and Interchange portions of DIWE. The transcripts from these portions should reflect similar patterns.

A particular problem that occurs in deaf classes is the use of "Telecommunication Devices for the Deaf (TDD) language", such as, "BEC" for because or "SK, SK" for signing off or "(smile)" and "u" for you. This is a natural outgrowth of the expression of keyed text for these individuals; it is perhaps possible that this could be considered parallel to the "medium specific" conventions such as smiles [:-)], frowns [ ):-( ], or winks [;-)] used to compensate for the absence of prosodic and paralinguistic features found in face-to-face oral communication (Kern, 1995). It is generally requested that students keep this at a minimum in their expression of English text on the network. It must also be agreed upon prior to the outset that all language will be the student's approximation of written English and will be an attempt to conform to the shared goals. The following brief excerpt of an *Interchange* session demonstrates not only the dynamic student-to-student interaction, but also the potential for liberated discussion. In response to the prompt, "How do you feel that you have changed since leaving high school?", the discussion included:

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Fara: *John try to think positive about your goal and life. You'll learning something a lot from school. Have a great weekend (smile).*

Robert: *Oh, hi Fara.*

Fara: *Robert Big Hello to u and have a great weekend and see u on Monday or whatever. Good-bye. Sksk*

Phillip: *I am feel same personality. I feel different some change my life what kind point change is no more dorm houseparent responsible for me and also time wake up and now I am responsible for wake time and bills and go to school for start time class that's life!.*

John: *I feel clumsy and I try my best if I can do it I can show you prove that I can do it and don't give up.*

John: *Now I am college student no more high school.*

Pedagogical considerations concerning the character of the networked interactions (Peyton & Horowitz 1988; Collins, 1988) such as side conversations, off-topic conversations, or missed conversations because the student is concentrating on typing a message, the tendency to make hasty conversations in order to keep up with the communications, "playing around," or use of "bad language" become less of a problem when students perceive the network to benefit their language growth and efforts to express themselves intellectually in relation to the group.

An additional necessity for the instructor is to have a back-up plan. All systems fail from time to time and frustration invariably accompanies the use of technology. It is best to have an alternative activity that can be quickly shifted to should Daedalus fail to operate properly - which it will.

METHOD

Subjects

Seventeen profoundly deaf individuals (90dB PTA +/- 10) in two separate classroom levels (ENC 0009/ENC 0019, Developmental English I/II; and ENC 1152, Communications II) participated in this study. Students were placed in these sections based on their performance on the Stanford Achievement Test for the Hearing Impaired (scores are transferred from their high schools), the Test of Adult Basic Education (TABE), which is an entrance requirement, and a writing sample. Actual cut-off scores vary with the population each session.

At the start of the session, students were instructed in the process of logging on/off and "pulling up" work from Daedalus. This was done using the file server and a large screen projection device to minimize visual disturbances that occur trying to instruct students in the lab. Approximately two 40 minute sessions of instruction occurred.

The students met in the computer lab one to two days per week during regular class time to work on the Daedalus Integrated Writing Environment (DIWE). When students were not in the lab, they received regular classroom instruction at their respective levels.

Instrumentation

Students first completed student information sheets to survey prior knowledge and establish demographic data (see Appendix A). This was an area suggested by O'Connor, et al. (1989) in a previous study that examined the effect of ENFI and non-ENFI environments on students' passing rate on the Writing sections of the *English Placement Test (EPT)* which is given at Gallaudet when a student enters the program and at the end of each semester thereafter. Subsequent work by Mary Fowles (1993) also addressed this issue. Then, Developmental English students were pre-tested (and later post-tested) using the *RTAS, Revised Test of the Ability to Subordinate, form A* (Berent, 1988).

Berent (1988) revised the *Test of Ability to Subordinate* (Davidson, 1978) with permission from the author, by changing the sentence-combining task to a multiple choice version. He also created a second version (form B) which was used as a post-test for this research. In assessing the syntactic levels of college-level deaf students, Berent was interested in establishing orders of difficulty among nine *RTAS* English structures and explaining these orders within the framework of current linguistic theory. The *TAS* was designed to assess the ability of college-level intermediate and advanced ESL students to control the following nine embedded syntactic structures in English: 1) prenominal adjectives, 2) adverbs, 3) prepositional phrases, 4) infinitive phrases, 7) adverbial clauses, 8) relative clauses, and 9) noun clauses. It is a 45-item pencil-and-paper test containing five tokens of each of the nine target structures; it employs a sentence combining, fill-in-the-blank format.

In order to target students with reading difficulties in the Developmental English class, a general reading measure was obtained using the *Nelson Denny Reading Test* (comprehension portion), form G, Copyright 1993. Noting reading scores was relevant for the Developmental English level students as these students are required to comfortably perform a variety of reading tasks on the network. This has been identified as a potential problem with use of *Interchange* in "slow readers" (Hughes, 1994). The rapid pace of the text can place a considerable burden on students with additional reading problems. Students in the upper level courses were not targeted for potential reading difficulty during the course of this study; it was determined, based on their placement, that those students would demonstrate more advanced textual skills.

Data Collection and Analysis

Initial writing samples were reviewed and scored holistically by three professionals familiar with the writing of students who are deaf using the *Test of Written English (TWE) Scoring Guide* (see Appendix B), Copyright 1986, 1990 by Educational Testing Service.

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In addition, a portfolio approach was adopted that reflected shared goals and experiences. Fowles (1993) includes an extensive discussion regarding assessment and the design of a portfolio program for ENFI environments in Network-Based Classrooms. Students selected a final writing to compare to their earlier submitted writing. Students were prompted to compare their writing on the basis of global and local occurrences in their writings and on the process of personal growth. Periodic reflections about the process were also informally monitored through the electronic mail portion of DIWE, and formally by way of an adapted questionnaire (Kern, 1995).

Students were pre-tested and post-tested using the *RTAS* which was then analyzed to determine if the findings were consistent with Berent's (1988) results. His testing revealed that, generally, the deaf college students were most successful on structures that exhibit subject-verb-object word order and in which those grammatical relations are explicitly represented.

In addition, transcripts were analyzed for grammatical trends in input language and interaction while looking specifically for patterns in social interaction that suggest increasing sophistication in usage. The overall quality of the student text was also noted.

Results and Discussion

In response to the survey on prior knowledge and demographic data (refer to Appendix A), the following breakdown was established:

Age: 17-19 = 24% 20-21 = 35% 22-30 = 29% 31-40 = 12%

Gender: Male = 59% Female = 41%

Ethnicity: White = 59% African American = 6%

Hispanic = 29% Asian American = 6%

Language spoken in the home:

English = 70% Spanish = 24% Thai = 6%

Language preferred:

English only = 12% ASL/English = 70%

Spanish/ASL = 12% ASL/Thai = 6%

Experienced with word processing:

Fairly well = 29% A little = 36% No = 35%

Experienced with DIWE:

First session = 35% Second session = 65%

It was expected that students with more experience using DIWE would be able to log on and get to the tasks more quickly. By the end of the session, however, most of the students were able to get to their assignments with relative ease.

The results of the pre/post test on the *RTAS* yielded the following:

RTAS PRE/POST TESTS RESULTS

Table 1 Percentages of Correct Responses, Overall and by Group on the Nine Structures of the *Revised Test Of Ability to Subordinate*

Pre-Test

Structure	Overall	Level I/II	Level III
Prenominal adjectives	56%	46%	66%
Adverbs	49%	34%	63%
Prepositional phrases	61%	44%	77%
Infinitive phrases	34%	18%	49%
Participial phrases	24%	10%	37%
Gerund phrases	31%	8%	54%
Adverbial clauses	64%	56%	72%
Relative clauses	47%	5%	88%
Noun clauses	39%	20%	57%

A comparison of the level I/II combined class and the level III class reveals that performance on most structures gradually improves as the level of proficiency rises. A difference between the two groups of 20% or more occurs on all structures on the pretest, except adverbial clauses. The largest difference (83%) occurs in relative clauses. If 80% is considered mastery, then level III appears to have mastered relative clauses on the pre-test at 88%.

Level I/II students had most success with adverbial clauses, prenominal adjectives, prepositional phrases, adverbs, and noun clauses, and the least success with relative clauses, gerund phrases, participial phrases, and infinitive phrases. Level III students had more success with relative clauses, prepositional phrases, adverbial clauses, prenominal adjectives, and adverbs, and the least success with participial phrases, infinitive phrases, gerund phrases, and noun clauses.

Post-test results yielded an overall increase on prenominal adjectives, adverbs, prepositional phrases, infinitive phrases, participial phrases, gerund phrases, and adverbial clauses of 9.14% while relative clauses and noun clauses decreased by 8.5%. According to Berent (1988) relative clauses violate basic NV(N) constituency and therefore interfere with the deaf learner's assignment of the basic grammatical relations of subject, verb, and object. He noted this structure as problematical on his initial testing with the *RTAS* as well. Accordingly each proficiency level handled relative clauses slightly differently.

In both classes, general writing samples were reviewed by two other professionals familiar with deaf student writing at the start of the session and scored using the *Test of Written Language* (1987) scoring guide (see appendix B). These were then included in the students' portfolios as were other writing samples which were scored holistically. A comparison of the average initial essay score and the final essay scores yielded gains in

the ability to address the writing topic, organize and develop the supporting detail and approximate appropriate syntax and usage. Lexical gains were also observed.

Table 2 Percentages of Correct Responses, Overall and by Group on the Nine Structures of the *Revised Test of Ability to Subordinate*

Post-Test

Structure	Overall	Level I/II	Level III
Prenominal adjectives	57%	50%	83%
Adverbs	63%	38%	68%
Prepositional phrases	69%	47%	83%
Infinitive phrases	47%	28%	52%
Participial phrases	29%	12%	46%
Gerund phrases	45%	15%	51%
Adverbial clauses	73%	58%	83%
Relative clauses	36%	12%	60%
Noun clauses	33%	25%	52%

In response to the question students were asked regarding the process of learning English using DIWE, a number of responses were recorded. Two examples follow:

One student expressed a concern early in the session that is common with the students:

> Well, I like to learn about this computer yes but I don't want to waste time. But I really interest in the computer.

Often students fear that they are using valuable class time for what seems like play. This feeling usually subsides once the students realize how much work they actually do in networked writing. Another student below seems to express some frustration in learning the system.

> I'm doing okay... still learn with this computer stuff.

While yet another student has much praise for the method of learning.

> Well, I like this because I learn how to improve my English language. I like to give people feedback. Bueno me gusta mejorar my lenguaje de ingles, escribir las palabras, me siento muy bien en usar la computadora por que me ayuda, en como mejorar. Espero que puedas entender. Te queremos mucho.

The above example was given by a student who felt more comfortable in her native language of Spanish to express her written feedback.

Responses to the student questionnaire are reported in Appendix C. Overall students felt the use of DIWE was a positive experience, they found the small group discussions helpful, they were comfortable with the way assignments were written, and they felt that the time was well spent. Most interesting was the

realization that not only the best students talked the most (#9). While 54% strongly agreed or agreed, 36% were neutral or disagreed. In terms of anxiety over the use of English (#10), 45% disagreed or strongly disagreed that this was a problem for them on the network. This was one area of particular concern.

Sample dialogues from *Interchange* sessions were reviewed for examples of student effort to achieve comprehensibility of message meaning as they negotiated by working linguistically in order to achieve that needed comprehensibility. Pica (1994) suggests that instances where interlocutors engage in repeating a message verbatim, adjusting its syntax, changing its words, or modifying its form and meaning, are reflected in learner output and evolve in communicative settings. One particular *Interchange* session where students were asked to read a local newspaper article "Deaf Parents Are Happy When Their Baby Is Born Deaf" (St. Petersburg Times, 10/11/94) and discuss what the author meant by the statement that "It's not, however, the hearing loss that puts people in the deaf culture; it is how they identify themselves" demonstrated clear examples of these factors of negotiation:

Chris: *Most hard of hearing like to be in the hearing world that's why they not like to be involves deaf cultures because we learning slowing and behind the news happens. Hearing people became hearing loss and they trying to be learning sign language but all people who are hard of hearing and hearing loss not using sign language. They prefer to use voice with hearing aid.*

Tom: *I think not. Most hard of hearing people like to be hearing world because I went to Gallaudet U. student, and I seen many hard of hearing people in my prep. group, and they love to joining deaf culture. Because they can feel their hard of hearing alike to be deaf and they knew that the deaf people are about same as hard of hearing people.*

Jean: *I am in the same story. It talk about hearing loss with hearing aid. They can talk by communication, but they don't get involved with deaf, but it harder for them use A.S.L. and socialized because raised with hearing family. I am in the both world. It better to deaf in own culture hard of hearing in the hearing world - they can talk.*

Chris: *I disagree this, but I am not discriminate your opinion. I always see hard of hearing like to be hearing so I always notice hearing people always desire to learn sign language when they meet deaf people.*

Phay: *Some hearing impaired people like to have hearing or deaf children as family. Most deaf people prefer to have deaf children like other hearing people have hearing children a family. I think why deaf people like to have deaf children as family is because they can communicate through sign language like other hearing family can communicate through voice. I understand why some hard of hearing don't identify with the deaf culture is because they never grew up in that kind of deaf culture, they grew up only in a hearing world. If I have some children, I don't care if they are deaf or hearing children, but I rather to have them to learn some sign so they can communicate with me.*

As Kern (1995) and Batson (1995) have also noted, examination of *Interchange* transcripts reveals a somewhat "chatty" nature of writing that students produce. Kern also suggested that while the discourse

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generate during the *Interchange* session obviously shares certain aspects of written discourse - for example, its graphic form (which allows for deliberation and editing before messages are posted) - the preference for certain syntactical structures, and greater lexical density is also noticed.

Much of the *Interchange* discussion of the deaf students tended to be "metalinguistic" in nature. This feature was also noted by Kern (1995, p. 459) who posed the question: "Might it be that the written form of *Interchange* discussion enhances students' awareness of the features of their collaborative discourse by distancing them from it and allowing them to review visually the discourse to find patterns and progressions?"

An additional feature of negotiation occurred in the mail portion of DIWE where students' engaged in asynchronous adjusting of textual meaning in response to peer feedback. Some examples of the feedback follow:

> Tom: *Jessica, I agreed with you about Ethics class. That course made us interest. Umm. . . I noticed when you typed in first sentence, it talked about present, right? But after that you talked about past, so please try to thinking about reader reading in your paragraph. He or she will think which you were talking about past or present or future, got it?*
> *Thanks, Tom...*

> Jessica: *Tom, I'm not sure what your wanted to know. I don't understand what you mean by asking me if this was present or past?? I think I understand but to answer your question, I wrote this before. It was old. It's not about present. If you have any questions, pls ask me.*
> *Jessica*

An interesting note on this particular discussion was that the student switched back to read her own writing three times in a nine minute period, which can be tracked on the *Mail* portion of DIWE. Afterward, she re-read Tom's feedback before she commented on his statements. She was obviously searching for evidence of his claims.

Conclusions

One goal of this research was to establish a positive link between the use of the computer mediated networked language program, specifically DIWE, and increasing levels of linguistic sophistication in deaf college students. Trends are emerging in the electronic writing environment, but the systematic application of a planned course of action should increase the effectiveness of the outcomes of the network. Designing input that will challenge students but serve to enhance their acquisition of problematical English structures has always been difficult.

A secondary goal was to create in the students a desire to be connected to the discourse community, whether through electronic mail, on-line classrooms, or through the development of materials specific to deafness that can be shared world wide. The electronic word is a powerful medium for individuals in the

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community of inquiry. Stigma associated with speech that is not normal may lead the student to shy away from dialogue. Only a receptive environment will solve this challenge.

The more deaf students participate and collaborate in the community of inquiry and develop self-direction, the sooner the stigma attached to the difference is lifted, self-confidence is nurtured, and the student's own goals and dreams are reached. One student's struggle to develop intellectual voice is reflected in an evaluative statement regarding her continuing process of acquiring English:

> I think that teacher is good performance to work with student by the English class because we learn new many discover of the language, group debates, homework, and hear new things for the lecture. But we are very patient to fight on the concept of our life to speak in the language for the writing and procedure of the education. For me, as I had been difficult to catch the lecture that make me feel increase solution of work that would keep continue many methods of grammar for situations that keep me confuse sometime.

Access to higher education is possible for deaf and second language learners when the barriers to academic language and social constructions are minimized and students are no longer marginalized in the community of academic inquiry. Electronic networks provide one means of reorganizing classrooms to situate literacy within the control of writers.

It is evident from this research that "situated context" where students write, interpret, and negotiate texts via computer networks positively influences the language learning of students who are deaf. While it is not a panacea for language acquisition, nor is it a substitute for normal classroom discussion, it *is* a viable means of creating social contexts and meaningful uses for language.

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Student Information Sheet for Beginning of Semester DIWE Students

Please provide the following information. All of this information will remain confidential and be used for group data only. No student will be singled out by name or ID number. Please use your name ONLY so you can be located at the end of the semester.

1. Date _____
2. Name _____
3. Student ID _____
4. Class (e.g. ENC 009/0019, ENC 1151, ENC 1152, etc.) _____
5. Age (optional)
    _____ 17 - 19   _____ 20 - 21   _____ 22 - 30   _____ 31 - 40   _____ 41 -
6. Gender
    _____ Male   _____ Female
7. Ethnicity
    _____ White   _____ Black   _____ Native American
    _____ Hispanic   _____ Asian American
8. Language spoken in the home _____ (please specify)
9. Language you feel most comfortable with _____ (please specify)
10. Please indicate your experiences with DIWE (using a computer network to communicate with the teacher and with other students)
    _____ This is my first session in a DIWE class
    _____ This is my second session in a DIWE class
    _____ I have had two DIWE classes before
    _____ I have had three or more DIWE classes before
11. Do you know how to use a word processor?
    _____ yes, fairly well
    _____ yes, a little
    _____ no
12. Do you use a word processor for your writing classes?
    _____ always
    _____ sometimes
    _____ never
13. When writing for your classes, do you compose with a pencil and paper before entering your text into the word processor?
    _____ always
    _____ sometimes
    _____ never
14. When writing for your classes, do you compose your essays directly at the word processor?
    _____ always
    _____ sometimes
    _____ never
15. How would you rate your overall typing ability?
    _____ I do not type at all
    _____ minimal (under 30 wpm)
    _____ average (30-60 wpm)
    _____ proficient (60 wpm)

Test of Written English (TWE) Scoring Guide

Readers will assign scores based on the following scoring guide. Though examinees are asked to write on a specific topic, parts of the topic may be treated by implication. Readers should focus on what the examinee does well.

Scores

6   **Demonstrates clear competence in writing on both the rhetorical and syntactic levels, though it may have occasional errors.**
A paper in this category
—effectively addresses the writing task
—is well organized and well developed
—uses clearly appropriate details to support a thesis or illustrate ideas
—displays consistent facility in the use of language
—demonstrates syntactic variety and appropriate word choice

5   **Demonstrates competence in writing on both the rhetorical and syntactic levels, though it probably will have occasional errors.**
A paper in this category
—may address some parts of the task more effectively than others
—is generally well organized and developed
—uses details to support a thesis or illustrate an idea
—displays facility in the use of language
—demonstrates some syntactic variety and range of vocabulary

4   **Demonstrates minimal competence in writing on both the rhetorical and syntactic levels.**
A paper in this category
—addresses the writing topic adequately but may slight parts of the task
—is adequately organized and developed
—uses some details to support a thesis or illustrate an idea
—demonstrates adequate but possibly inconsistent facility with syntax and usage
—may contain some errors that occasionally obscure meaning

3   **Demonstrates some developing competence in writing, but it remains flawed on either the rhetorical or syntactic level, or both.**
A paper in this category may reveal one or more of the following weaknesses:
—inadequate organization or development
—inappropriate or insufficient details to support or illustrate generalizations
—a noticeably inappropriate choice of words or word forms
—an accumulation of errors in sentence structure and/or usage

2   **Suggests incompetence in writing.**
A paper in this category is seriously flawed by one of more of the following weaknesses:
—serious disorganization or underdevelopment
—little or no detail, or irrelevant specifics
—serious and frequent errors in sentence structure or usage
—serious problems with focus

1   **Demonstrates incompetence in writing**
A paper in this category
—may be incoherent
—may be undeveloped
—may contain severe and persistent writing errors

Papers that reject the assignment or fail to address the question must be given to the table Leader. Papers that exhibit absolutely no response at all must also be given to the Table Leader.

Student Questionnaire on DIWE

Please answer the following questions honestly. You do not need to write your name on this questionnaire.

Answer with one of the following:

(a) Strongly agree   **(b) Agree**   **(c) Neutral/No opinion**

                    (d) Disagree   **(e) Strongly disagree**

1.   DIWE was a positive addition to this class.
     a. 36%   b. 55%   c. .9%   d. 0%   e. 9%

2.   The *Interchange* sessions were too short.
     a. 0%   b. 36%   c. 46%   d. 9%   e. 0%

3.   Small group discussions on *Interchange* were the most helpful.
     a. 27%   b. 55%   c. 9%   d. 9%   e. 0%

4.   The discussion topics were interesting.
     a. 18%   b. 55%   c. 27%   d. 0%   e. 0%

5.   The way the assignments were written helped me to feel more comfortable in participating.

     a. 46%   b. 55%   c. 0%   d. 0%   e. 0%

6.   The time we spent using *Interchange* would have been better spent in the classroom.
     a. 18%   b. 9%   c. 46%   d. 18%   e. 27%

7.   The *Interchange* sessions changed the class discussion in a positive way.
     a. 18%   b. 64%   c. 18%   d. 0%   e. 0%

8.   Most of the discussions were unimportant.
     a. 9%   b. 0%   c. 46%   d. 18%   e. 27%

9.   Good computer skills were needed to participate in the discussions.
     a. 36%   b. 18%   c. 9%   d. 0%   e. 0%

10. Worry about writing in English kept me from participating.
     a. 0%   b. 9%   c. 46%   d. 36%   e. 9%

11. The instructor did not give enough feedback.
     a. 9%   b. 18%   c. 55%   d. 9%   e. 9%

12. Students were more honest on *Interchange* than they would be in regular class sessions.
     a. 18%   b. 46%   c. 18%   d. 18%   e. 0%

13. The *best* students talked the most on *Interchange* sessions.
     a. 36%   b. 18%   c. 18%   d. 18%   e. 0%

14. Knowing the *Interchange* program made it easier for me to participate.
    a. 18%   b. 55%   c. 18%   d. 9%   e. 0%

15. It was difficult to read everything that everyone wrote.
    a. 18%   b. 18%   c. 27%   d. 18%   e. 9%

16. The instructor should have given more guidance in the *Interchange* sessions.
    a. 18%   b. 64%   c. 9%   d. 0%   e. 0%

17. DIWE was a welcome change from the usual class routine.
    a. 27%   b. 64%   c. 9%   d. 0%   e. 0%

18. DIWE improved my ability to write in English.
    a. 46%   b. 46%   c. 9%   d. 0%   e. 0%

19. DIWE improved my ability to read English.
    a. 27%   b. 64%   c. 9%   d. 0%   e. 0%

20. DIWE improved my ability to discuss ideas in English.
    a. 36%   b. 36%   c. 27%   d. 0%   e 0%

Supporting Science Teachers Through a National Network:
The Access to English and Science Outreach Project (AESOP)

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Harry Lang
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The Access to English and Science Outreach Project (AESOP) pools the knowledge and expertise of high school science and language teachers, special education professionals, educational researchers, and university instructors. By sharing best practices and recent knowledge, instructional strategies are being tested that will raise deaf students' interest and achievement in science. To promote the use of best practices, this grant project, which is supported by the National Science Foundation and based at the National Technical Institute for the Deaf, begins with regional workshops. At the workshops, teachers focus on three areas that are crucial for deaf students studying science: self esteem, hands-on activities, and writing.

Self Esteem

Students—hearing or deaf, male or female—need positive self-esteem to succeed in school and in careers. Research clearly has shown greater achievement for students with positive self-esteem. Positive role models contribute to the development of self-esteem. Whatever their academic backgrounds, few teachers know of the significant contributions to science and technology made by deaf people: for example, that a chemical element, a comet, and numerous important scientific principles were discovered by deaf scientists. The fact that few deaf students know of these contributions, or even know a science teacher who is deaf, may contribute to their reluctance to consider scientific careers.

In the workshops, we present recently-published historical information on the contributions of deaf women and men to science and technology, and appropriate and stimulating ways to use this information in the classroom. Students are encouraged to read and write about well-known scientists like the inventor Thomas Edison and the rocket pioneer Konstantin Tsiolkovsky and lesser known scientists and researchers like the astronomer Annie Jump Cannon, and Donald Balantyne, a specialist in microsurgery. All were pioneers in their fields and most faced situational and attitudinal barriers because of their deafness. AESOP participants are also encouraged to contact living deaf scientists and invite them to their classrooms.

Hands-On Activities

Standard instructional delivery in science classrooms where there are deaf students is lecture and explanation. However, research has shown that deaf students who manipulate objects and are involved in

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hands-on activities and related discussions, achieve higher scores on science content tests than those who do not. Many teachers report that simple, inexpensive demonstrations of scientific principles are "worth a thousand words" in a science class. In the AESOP workshops, we use empty pop bottles, paper cups, rulers, string and balloons to demonstrate learning activities that may easily be replicated by teachers and students. Both procedure and principle are emphasized. Students need to *DO* science to understand it. That is, they need to gather the materials and assemble the equipment whenever possible. They need to follow written instructions and write down procedures, observations and questions. By structuring the classroom so that students are involved in scientific procedure and by providing appropriate questions and the prompts for questions, the teacher sets the course for critical thinking about phenomena or perhaps discovering the scientific principle that is the object of the lesson.

Writing

Teachers of deaf students know that the language of science, especially its frequent use of structures like the passive voice and use of technical and semi-technical vocabulary is particularly challenging. These teachers know, and research has shown, that deaf students make hypotheses about the language similar to those made by other learners of English (for example, hearing students of English as a second language). They may not know that their students bring significant experience in functional and social writing to the classroom. They may not realize that their students have used writing (and their developing English language ability) as a tool for learning and communication outside of the classroom. Informal writing may be a powerful tool for teachers and students to use to learn the language of science and to reflect on key concepts.

Scientists use writing to comprehend scientific text, to record observations, to question, to report and to think about observed phenomena and key concepts. In the workshops, we demonstrate the use of "double-entries" (in a reading journal), note cards for generating questions and hypotheses, "vocabulary enhancement," that is, systematically adding technical and semi-technical terms to students' descriptions, and creative and reflective writing to learn science content.

Improving deaf students' access to the language and content of science and stimulating them to consider careers in science cannot be the responsibility of a single educator or field; such a change requires collaboration among professionals from different disciplines as well as with parents. This is why AESOP encourages cross-disciplinary teams in our efforts to identify and pilot "best practices."

The Network

Research has shown that innovative programs focusing on hands-on science activities are often sustained when teachers are enthusiastic and "claim ownership of the programs" (Kyle, 1985). Another goal of the workshops is to provide an opportunity for teachers to share their own best practices (strategies) with others and to begin designing an instructional unit that will make use of these strategies to teach a selected science

principle. A regional workshop also represents the beginning of a local network of teachers focused on the teaching of science to high school students who are deaf. Following the workshop, the network expands for these participants as university instructors and researchers with experience in teaching deaf students make themselves available to consult on the design of instructional units. Strategies, designs, problems, and progress are shared with the teachers in the national network through the AESOP newsletter and a World Wide Web site. AESOP's advisory board provides a national perspective and offers suggestions for addressing the critical issues related to access to science.

Hopefully, the network will allow us to gather experiences and data on successful classroom strategies. Teachers in the network who try the instructional units and record and share their experiences, provide valuable insight for the research component of the Project. Another objective of the Project is to determine what factors promote sustained implementation of innovation. In the past, research has shown that teachers have discontinued the use of new strategies for a variety of reasons, including a lack of appropriate inservice training. In AESOP, we are investigating factors leading to implementation of new strategies in teaching science to deaf students and the role the network plays in initiating and sustaining the use of these strategies over time.

To improve science instruction for deaf students--that is, to increase motivation to learn science, understanding of science principles, and access to the language of science--we are relying on the willingness of colleagues from different disciplines to collaborate and their willingness to reflect on why certain strategies are or are not effective. Our most recent experience with teachers in Rochester, Minnesota and Trenton, New Jersey shows us that not only are colleagues willing to cross discipline boundaries to create curriculum, they also find it stimulating and rewarding. Communication following the workshops indicates that when teachers take the time to reflect on their experience with new strategies, they have valuable insights for others. We expect that the growing AESOP network will be the right vehicle for exchanging these insights.

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Teachers interested in the Access to English and Science Outreach Project should contact the authors at:
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Enhancing Support Services

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of
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Realtime Captioning: Access Equal Success

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What is Realtime? What does it do? Who uses it? Who benefits from it? What does it cost? What's in that black case? We hope to answer all these questions and more in today's presentation. We would also like to briefly tell you where we are from and the mission we are charged with in support of students who are deaf and hard of hearing.

The National Center on Deafness (NCOD) is a model comprehensive support service program for deaf and hard of hearing students enrolled in an integrated setting. Its primary goal is to make all university services fully accessible to this population. Support services include interpreting, notetaking, tutoring, counseling, career development and placement, assistance to faculty and staff who work with deaf individuals, and most recently, Realtime captioning in classrooms and other campus venues. We have captioned meetings for Brenda Wilson, President of California State University, Northridge and also for President Bill Clinton when he visited our campus after the 1994 earthquake.

Today NCOD provides support for approximately 250 students who are deaf and hard of hearing, more than any other mainstream campus in the United States. In addition, NCOD responds to over 300 calls per week requesting information on deafness, support services, higher education and many, many calls about Realtime captioning.

Staff and students at NCOD realized that not everyone in the classroom was benefiting from traditional services such as interpreting and notetaking. Alternative solutions were sought, and Realtime captioning appeared to be another option in meeting these needs. We have been using Realtime in the classroom since 1992, and its growth has been unprecedented. A video illustrating the use of Realtime in and out of the classroom was included as part of the conference presentation.

Realtime began at CSUN in the fall semester of 1992 in one class, three hours of service weekly, with one captionist -- Sandy Eisenburg. The student response has been phenomenal, and Realtime currently serves over 160 classroom hours per week with new requests coming regularly.

In August, 1994 NCOD hosted a seminar in academic Realtime captioning. The response was outstanding, with over 200 participants in attendance. Consequently, we began our Realtime training program in January 1995 and currently employ 11 hourly captionists and a Realtime coordinator. A sample training outline and schedule are available from the authors. The training program has been quite successful, and we

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are often complimented on our captionists' precision, professionalism, and quality of their work, as well as their friendliness.

Equipment used for classroom Realtime consists of a court stenograph machine linked to an IBM-compatible laptop computer. Software used is RAPIDTEXT and WordPerfect 6 for DOS, which allows control of font size, style and color as well as student access through the computer keyboard at the same time the captionist is hooked through the stenograph. We also hook up to TV's using an inexpensive VGA to TV converter, allowing many students to view. Other devices, options, and specifications are also available from the authors.

Realtime captionists stenographically record all classroom proceedings, including lecture and student commentary. Students are usually identified as male or female student, although proper names may be used to identify speakers as well. Special notations are used as indicators to prompt students to look at a chalkboard or large map or to show when the professor is demonstrating something. We include blurbs such as "laughter" so our students will get the flavor of what is happening. And if there is an uncaptioned film shown or no decoder available, we will caption what is said on that film (although these captions will not imprint on the film itself; that is a different process).

Students are responsible for bringing diskettes to our student copy center where a hard copy is printed out after class and distributed to the students who are deaf and hard of hearing. These notes are also used by professors to help prepare their lectures and by interpreters, notetakers, and tutors to provide technical vocabulary and class information for tutoring sessions. A pilot classroom note sales program for hearing students in classes already served by Realtime has been initiated by the University through the Associated Students organization. In addition, computerized or hard copy is available for captioning of any event, and many times this eliminates need for a secretary to take handwritten notes.

Because Realtime is a dual service, providing both instant display of the spoken word and a hard copy of proceedings, we can usually use a captionist to substitute for an interpreter or a notetaker or sometimes both. Additionally, captionists are generally able to work for a longer period of time than interpreters. Given one 20-minute or two 10-minute breaks, captionists are able to work in classes up to three hours in duration. Realtime can also be transmitted remotely to other locations via modem connection. With all these uses and options, one can see that Realtime can be a very extensive and cost-effective service.

You are probably wondering who gets Realtime services in the classroom and how classes, Realtime captionists, and students are matched. Providing the service that a student requests in the classroom begins late in the previous semester. Registration for the fall semester usually occurs in May of the previous spring. Students meet with an NCOD counselor and fill out a schedule of classes. Their classes are listed on *WIWC* cards (Who's In Which Class). At this time the counselors and students decide if Realtime captioning is their choice for some or all of their classes. We strongly suggest to students who really benefit from Realtime to

request it at registration time in order to ensure filling their request. Services are color-coded on the *WIWC* cards and yellow is the color we have designated for Realtime service.

Sometimes it is obvious to the staff that Realtime Captioning will be needed for a very oral student who does not sign or a late-deafened individual who is not yet comfortable in any communication mode. Some students know nothing about Realtime and are exposed to it here in a class where another student requested it, and suddenly a whole new world of understanding is opened up.

There are no hard and fast rules about who gets Realtime. Some students may request it after the semester begins, especially in a very technical class where words are long and difficult to spell. Once a word is entered in the captionist's dictionary, it will generally always be spelled correctly. We have found that very, very few students give up Realtime once they have it in a class. At the NCOD we work together as a team, so anyone in any department may see that a student is not progressing with traditional service and may suggest Realtime as another *access to success*.

For some students, Realtime has made the difference between success and failure. Having equal access to information, commentary, and the repartee and joking which are a normal part of everyday classroom activity opens up the university to these students, and they are able to interact and be a part of the class. Realtime gives them the opportunity to excel, and this has been reflected academically in their grades, as well as in some students' demeanor, attitudes, and even the way they dress and carry themselves.

Evaluation of Realtime captionists by students occurs every semester at about the midterm point; to date, the response has been overwhelmingly positive. We have found that the great majority of students who have had Realtime request it for future classes. As the Realtime coordinator, Sandy also observes the captionists from time to time, reviews their raw notes, and gives an evaluation. In general, our captionists produce excellent work and are continually improving. They appreciate the atmosphere of support we offer and truly enjoy serving our students.

Of course, Realtime is not a flawless communication method, nor is it a panacea. One drawback occurs when serving non-oral students. Since most captionists are not fluent signers, these students must type on the computer keyboard or write notes for the captionist to voice. However, since we have such a large deaf student population at CSUN, some of our classes are also served with an interpreter. We do have some non-oral students who request Realtime because of the extensive vocabulary it provides. If funding is available, NCOD plans to purchase additional laptop computers to allow more students to individually hook up to the captionist's computer, thus expanding interactive potential.

There is always the possibility of equipment failure. If this happens, our captionists will take handwritten notes. We try to keep extra equipment on hand in case such a problem arises. It is also very important for providers of Realtime services to have technical support readily available for hardware, software, and video technology.

For labs or extremely diagrammatic, demonstrative, or contextual classes, Realtime may not be the ideal service because it is literally text on screen. However, sometimes these classes work out better than expected; it really depends on the individual class and student. Realtime notes can be very long because they are a complete record of classroom proceedings and not a condensation or outline of main points. They contain all the material, both extraneous and essential, and some students complain about this. However, many students are able to take their own abbreviated handwritten notes from the Realtime screen. Some students actually view this as an opportunity to learn a new skill, notetaking, which they were unable to do themselves using an interpreter or lipreading.

At the National Center on Deafness, we see a very bright future for Realtime captioning and its many uses. Service requests are always increasing. In our future outreach activities, we will attempt to contact more learning institutions through the distance learning center at California State University, Northridge's Oviatt library and will provide Realtime workshops as well.

What Is A Qualified Interpreter . . . And How Do I Get One?

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Abstract

The recent passage of the Americans with Disabilities Act (ADA) brings the issue of disability access to the forefront at institutions of higher education. An emerging group of students with disabilities on college campuses today is students who are Deaf. Although there are several institutions that have a specific charter to serve Deaf students, these students are now applying to colleges and universities that have never before had a Deaf student enrolled. All institutions of higher education, whether or not they are "specialized" colleges for the Deaf, are required to provide accommodations that will meet the communication needs of student who are Deaf.

To assure equal opportunity to all programs and activities, institutions are required to provide what the ADA refers to as "auxiliary aids." The ADA specifically recognizes the request for a sign language interpreter as an auxiliary aid and defines a "qualified interpreter" as "an interpreter who is able to interpret effectively, accurately, and impartially both receptively and expressively using any necessary specialized vocabulary." Due to the national shortage of qualified interpreters and the high demand for their time, service providers are struggling to find qualified interpreters to meet the needs of students at their institutions who are Deaf.

The purpose of this paper is two-fold. One goal is to examine the definition "qualified interpreter" as outlined in the federal regulations. State and national certification does not necessarily imply that the interpreter is competent in the classroom. Many hold credentials but still need to be evaluated to see if they have the experience and skills to satisfy the definition of "qualified interpreter." By the same token, there may be interpreters who have adequate skills but lack the credentials. A process is needed to identify and assess these individuals.

The second goal of this paper is to propose a model for interviewing and assessing interpreters. Rather than relying on non-standardized state assessment instruments and self-reported past experiences and skills, the presenters propose an alternate means of determining qualifications of interpreters.

Other questions the authors will consider include: Is the educational institution meeting the ADA requirements by hiring someone who can sign, but not interpret? How does reasonable accommodation fit into the picture?

In summary, the paper will both define "qualified interpreter" as it applies to the postsecondary setting and provide a model for interview and assessment of potential service providers and staff interpreters.

* * * * * * * * *

The University of Georgia's Office of Disability Services has been providing interpreter services to students who are Deaf for many years; however, in 1993 five staff interpreter positions and a Coordinator of Interpreter Services were approved and added to the existing professional staff. With this addition came the concerns about: 1) how to determine which interpreter qualifications are essential for the needs of the student population that utilize sign language interpreters and, 2) once these criteria have been established, how to locate qualified applicants for those positions.

Numerous definitions of "qualified sign language interpreter" exist. The Americans with Disabilities Act, the National Registry of Interpreters for the Deaf, Inc., and the Georgia Registry of Interpreters for the Deaf, Inc. have all proposed definitions of "qualified interpreter." Many other definitions have been developed, but all vary to some degree.

Before delineating those applicants who may be "qualified," it is important to first determine who may not be appropriate for your consideration. Many students entering college are products of mainstream, public school programs. Often these students utilize a signing system other than American Sign Language (ASL). The skills of the interpreter must meet the needs of the student population. It is therefore imperative that interpreters providing services to these students have the capability to *transliterate* which is taking the spoken message and rendering it in an English-like fashion *and* recognizing a message signed in a more English-like manner and voicing it in appropriate English.

It is often assumed that individuals from the following categories have appropriate skills to interpret in an educational environment. The categories include: 1) Children of Deaf Adults (CODAs), 2) graduates from Interpreter Training Programs (ITPs), 3) family members of the student who is Deaf, 4) students of American Sign Language, and 5) persons who possess a Quality Assurance level (a state level interpreter assessment).

It is often assumed that a CODA, whose parents are Deaf, is innately qualified as an interpreter. However, both parents may be products of the state residential school for the Deaf, be active within the local Deaf Community, and possess American Sign Language as their language of choice. The CODA may grow up with little or no exposure to any of the signed codes for English. Although these individuals *may* have the sophisticated skills of signing and *interpreting* (the ability to relay information between two very different languages - ASL and English), they may have no competence with transliteration.

The majority of Interpreter Training Programs are two-year programs (some are of lesser duration) and offer an Associate of Arts degree in Sign Language Interpreting. As with any other language, two years is not a sufficient amount of time to master both the language and acquire the skills and knowledge necessary to interpret/transliterate using that language. Upon completion of a recognized ITP, graduates are considered to possess a minimum level of proficiency and *may* be ready to work under the tutelage of an experienced interpreter.

While family members may possess the interpreting/transliterating skills required by your students, it is suggested that interpreters not be placed in situations that could possibly compromise ethical behavior. Having one's

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relative present in the postsecondary academic setting may prove to be detrimental to both the student who is Deaf as well as the interpreter.

Individuals who enroll in American Sign Language classes are extremely eager and motivated to put themselves in situations where they are "interpreting" in order to "help out." As previously stated, however, to become proficient in another language requires years of commitment. In addition, ASL students must practice, not only with their hearing classmates, but within the Deaf community. Unfortunately, the misconception that a sign language student equates with an interpreter still exists. For example, in a recent week-long workshop for currently working educational interpreters in the public schools, a survey was taken to determine qualifications and professional preparation of those in attendance. Those attending the conference reflected a cross-section of interpreters working in public schools. It was discovered that approximately 80% of working interpreters had no more than two sign language classes prior to beginning their careers as educational interpreters.

The Quality Assurance (QA) state level interpreter assessment is a measure of interpreting/transliterating skills that tend to be somewhat less stringent than the evaluation offered by the national Registry of Interpreters for the Deaf, Inc. States that currently utilize the QA process often develop the testing procedures, materials, and criteria independent of other interpreter assessments. It follows that the level of interpreting/transliterating skill reflected in a Level III awarded in one state may be equivalent to a Level I in another state. One's level of measured interpreting proficiency should not be accepted blindly. Rather, all applicants should undergo an in-house assessment of interpreting/transliterating competence.

Determining Qualifications

Applicants for the position of staff interpreter at the University of Georgia are interviewed and assessed by the Coordinator of Interpreter Services and a Disability Specialist who are both nationally certified by RID. The principal evaluator, the Coordinator of Interpreter Services, has received training at both the state and national levels to evaluate both interpreting and transliterating proficiency. Materials utilized during the skills assessment part of the interview are of two kinds; some are produced in-house while others are obtained through distributors of sign language/interpreting books and videotapes.

A ready supply of assessment materials can be obtained fairly easily by arranging with professors and instructors to audio-tape classroom lectures and discussions. These recordings, in turn, can be employed during the skills assessment segment of the interview process. Additionally, current staff interpreters should be encouraged to incorporate these same tapes into their skills enhancement activities.

In seeking qualified individuals to provide interpreting services to students who are Deaf, there are additional characteristics that are essential for staff interpreters to possess.

Stamina — How long can one interpret at a given time without compromising the content of the interpreted message and/or developing Overuse Syndrome or Carpal Tunnel Syndrome? A recommended maximum of twenty five hours of in-class interpreting per week has been established at the

University of Georgia. This number includes situations in which the interpreter is working alone as well as situations where there is another member of the interpreting staff assisting which are referred to as teamed situations.

Flexibility — How capable is the interpreter at going into new situations and performing both professionally and with the desired level of proficiency? At times, due to illness or other conflicts, an interpreter may be asked to interpret a class that is not part of his/her regular schedule. Does the interpreter possess the interpreting/transliterating competence to enter a new situation, often at a moment's notice, and relay information accurately and appropriately?

Attitude — Many applicants may come from a freelance interpreting background. Freelance/independent interpreters might have enjoyed the luxury of being able to accept and reject assignments based on particular interest and/or monetary need. In the capacity of freelance interpreter, the individual acts as his/her own "boss" and manages his/her own time and schedule. The adjustment to becoming a staff member with a supervisor can be overwhelming for some and this point should be discussed openly during the interview.

Interpersonal Skills — Working as a staff member, it is essential that applicants possess the ability to work cooperatively with other professional staff within the Office as well as other staff interpreters in a team interpreted situation. Additionally, because our program is relatively new, most professors have never experienced having a student who is Deaf and an interpreter present in the classroom. This situation requires the interpreter and/or Disability Services staff to adequately explain the interpreter's function within the classroom setting and to overcome possible pre-existing attitudes and/or stereotypes.

Knowledge — While we can all be reasonably assured that an interpreter at the elementary level possesses knowledge in the areas of study at this level such as primary colors, basic geography skills, fundamental principles of science and mathematics, the course content at the postsecondary level is as varied as the number of students enrolled in these courses. The sign language interpreter/transliterator must often be aware of current world events in general, be knowledgeable of current of political events and leaders, and be aware of new economic trends. While the additional duties often assigned to interpreters in the public schools decline, an increased responsibility for course content occurs at the college/university level (refer to Figures 1 and 2).

Interpreter Profiles

The interpreter profiles (refer to Figure 3) illustrate the similarities as well as the differences in criteria utilized when hiring qualified individuals. Each candidate was interviewed and thoroughly assessed for sign-to-voice and voice-to-sign interpreting and transliterating (refer to Figures 4 and 5). Each applicant was determined to be qualified to provide interpreting and/or transliterating services for students who are Deaf.

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Before "qualified" can be satisfactorily determined, the following areas warrant careful examination. Of primary importance is the number of classroom hours to be interpreted and how those hours are blocked, including consecutive classes or those staggered throughout the day. Other areas to consider include: a) the number of students requiring interpreting services, b) the level of involvement of Deaf students with extracurricular activities, c) the particular language preference(s)/communication style(s) of students who are Deaf, d) course content, e) level of difficulty of particular course, f) the rate/speed of delivery within individual classes, and g) the educational level of applicants. By assessing these areas, you can better determine not only the number of interpreters necessary to provide quality services, but which interpreter characteristics will best meet your program's unique situation. Once these particular aspects have been defined, appropriate personnel can be sought, assessed and, if suitable for your specific needs, be employed.

Programs that do not have professionals with sign language interpreting and skills assessment expertise should contact one of the professional organizations and agencies from the list located in the Appendix. This resource is provided to aid you in contacting specialists who may assist with interpreter evaluation and interview procedures.

Media Resources

Below are listed some possible resources that may assist you in the evaluation process of potential educational interpreters.

Sign Media, Inc.
Burtonsville Commerce Center
4020 Blackburn Lane
Burtonsville, MD 20866-1167
Phone: 800 - 475-4756 (V/TTY)
FAX: 301-421-0270

Live at SMI - series of six videotapes of Deaf individuals signing a variety of stories

Sign Enhancers
1320 Edgewater NW
Suite B10, Room C2
Salem, OR 97304
Phone: 800 - 76-SIGN-1 (V/TTY)

Still More Deaf Children Signers! - ages 13 to 18 years

Sign-to-Voice series (tapes 4A, 4B, 4C, 4D, 4E, 4F) - each videotape consists of a different Deaf adult signing an array of stories

Deaf Culture Autobiography series (tapes 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H) - description similar to above series

Figure 1

Postsecondary

Elementary

Interpreter

Student

Figure 2

Additional Responsibilities

Course Content

Elementary

Postsecondary

(Graphics courtesy of Marie Griffin, UT)

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Figure 3

Interpreter: A

Sign Language Acquisition: *ITP, interaction with Deaf people*

Years Experience working with Deaf people: *13*

Years Interpreting Experience: Prior to professional training -   *none*
                               After professional training -   *2*

Years <u>Educational</u> interpreting Experience: *6 months*

Degrees: *AA - Liberal Arts, BA - Sign Language Interpreting*

QA or National Certification: *Has passed the RID written evaluation.*
                                       RID performance exam - March 1996.

Professional Training: *Bachelor's program - Maryville College.*

Courses comfortable interpreting: *Most undergrad courses - humanities and related courses*

Courses not comfortable interpreting: *Math courses and upper level sciences*

Self evaluation using: ASL/Interpreting   1 2 <u>3</u> 4 5
                      SEE/PSE/Transliterating   1 2 3 <u>4</u> 5

Interpreter: B

Sign Language Acquisition: *ITP, interaction with Deaf people*

Years Experience working with Deaf people: *3 3/4 years*

Years Interpreting Experience: Prior to professional training -   *none*
                                 After professional training -   *3 1/2*

Years <u>Educational</u> interpreting Experience: *3 1/2*

Degrees: *AA*

QA or National Certification: *registered for Georgia QA*

Professional Training: *ITP and workshops*

Courses comfortable interpreting: *Most undergrad courses/some basic graduate level courses*

Courses not comfortable interpreting: *Upper level math and science*

Self evaluation using: ASL/Interpreting   1 2 <u>3</u> 4 5
                      SEE/PSE/Transliterating   1 2 3 <u>4</u> 5

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Interpreter: C

Sign Language Acquisition: *ITP, Interaction with Deaf community*

Years Experience working with Deaf people: *6*

Years Interpreting Experience: Prior to professional training -   *1*
                                  After professional training -   *5*

Years <u>Educational</u> interpreting experience: *6*

Degrees: *AA in Interpreting*

QA or National Certification: *Georgia QA*

Professional Training: *ITP*

Courses comfortable interpreting: *Anything but upper level Science*

Courses not comfortable interpreting: *Upper level Science*

Self evaluation using: ASL/Interpreting   1 2 <u>3</u> 4 5
                             SEE/PSE/Transliterating   1 2 3 <u>4</u> 5

Interpreter: D

Sign Language acquisition: *One semester*

Years Experience working with Deaf people: *8*

Years Interpreting Experience: Prior to professional training -   *3*
                                    After professional training -   *3*

Years <u>Educational</u> interpreting Experience: *6*

Degrees: *MA - Clinical Psychology*

QA or National Certification: *QA from Arkansas, Registered for RID written test*

Professional Training: *ITP, workshops*

Courses comfortable interpreting: *Liberal Arts and Humanities, Fine Arts*

Courses not comfortable interpreting: *Computer Science technology*

Self evaluation using: ASL/Interpreting   1 2 3 <u>4</u> 5
                             SEE/PSE/Transliterating   1 2 <u>3</u> 4 5

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Interview Questions

1. Background/interest in UGA position

2. Educational interpreting experience

3. Endurance/stamina - discussion of schedule
   daily hours - (4 - 5)
   weekly hours
   flexible - evening/weekends

4. Interpreting skills
   certification level
   strength/weakness in skills areas
   "   /   "   in course content areas (prefer math-science, English, etc.??)

5. Knowledge of Code of Ethics
   strong point -   (from interviewer's perspective)
   weaknesses -   (from interviewer's perspective)

6. "Passive Interpreting" - down time

7. Familiarity with deaf culture

8. Define "professional distance" as it applies to postsecondary educational interpreting.

9. Secondary responsibilities - if down time is extended
   administrative experience
   program development
   presentations
   time management and organizational skills
   self-starter

10. If applicable, how will the change from freelancing to a "nine to five" job affect you?

11. Coming from a freelance background, how comfortable are you with supervision?

   What kind of supervision do you prefer?

12. Explain why you are the best person for the job - i.e. personal characteristics, professional accomplishments, etc. which make you an asset to this institution.

Debra Brenner/Bruce Finkbone
April, 1995

Figure 5

University of Georgia
Office of Disability Services

Skills Assessment Form

Applicant Name _____ Date _____

CATEGORY	COMMENTS
INTERPRETING:	
Clarity of Signs	
Clarity of Fingerspelling	
Expression	
Use of Concept	
Use of Space	
Eye Contact	
Correct Mouth Movement(s)	
Correct Sign Choice	
Size of Sign Vocabulary	
Interprets Correctly	
TRANSLITERATING:	
Clarity of Signs	
Clarity of Fingerspelling	
Expression	
Use of Concept	
Use of Space	
Eye Contact	
Correct Mouth Movement(s)	
Correct Sign Choice	
Size of Sign Vocabulary	
Transliterates Correctly	
Additional Comments:	

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CATEGORY	COMMENTS
Voice Interpreting:	
Understands and Voices Signed Message into English	
Reads Fingerspelling and Numbers	
Vocal Inflection	
Fluency	
Voice Projection	
Additional Comments:	
Voice Transliterating:	
Understands and Voices Signed Message into English	
Reads Fingerspelling and Numbers	
Vocal Inflection	
Fluency	
Voice Projection	
Additional Comments	
GENERAL COMMENTS:	

Debra Brenner/Bruce Finkbone
July, 1994

Document adapted from the Quality Assurance Assessment of the Georgia Registry of Interpreters for the Deaf (GRID).

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Resources For Finding Qualified Interpreters

Registry of Interpreters for the Deaf, Inc. (RID)

The Registry of Interpreters for the Deaf, Inc. (RID) is a national organization of professionals who provide sign language interpreting/transliterating services for Deaf and hearing persons. Contact RID to receive information about your local/state affiliate chapter of RID and/or interpreter referral services/agencies.

Registry of Interpreters for the Deaf, Inc. (RID)
8719 Colesville Road, Suite 310
Silver Spring, Maryland 20910-3919
(301) 608-0050

EdITOR Council and Regional Delegates

EdITOR is a special interest group of RID, composed of RID members who are educational interpreters and transliterators.

Jeanne M. Wells - Chair
57 Raleigh St.
Rochester, NY 14620
(716) 475-6890 (W)

Paul Klucsarits - Vice Chair
603 Scandia Hemman
Lindenwold, NJ 08021
(609) 227-7200 ext. 506 (W)

Joan Cohen - Secretary/Treasurer
625 Delaware Avenue
Delanco, NJ 08075
(609) 764-7675 (H)

Karen Lefebvre - Region 1 Delegate
33 Frantone Lane
Loundonville, NY 12211
(518) 869-9427 (W)

Region I - CT, DE, MA, ME, NH, NJ, NY, PA, RI, VT, WV, Quebec, New Brunswick, Nova Scotia, Denmark, Sweden

Bruce Finkbone - Region II Delegate
325 Georgetown Drive
Athens, GA 30605
(706) 542-8719 (W)

Region II - AL, DC, FL, GA, MD, MS, NC, SC, TN, VA, Virgin Islands

Karen Hale - Region III Delegate
101 Edgewood
Crystal Lake, IL 60014
(708) 397-3000 ext. 2266 (W)

Region III - IL, IN, KY, MI, MN, OH, WI, Ontario

Gail Altman - Region IV Delegate
15671 Hester Street
Chesterfield, MO 63017
(314) 569-8100 (W)

Region IV - AR, CO, IA, KS, LA, MO, MT, NE, NM, ND, OK, SD, TX, WY Alberta, Saskatchewan, Manitoba

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Malina Lindell - Region V Delegate
P.O. Box 1283
Pendleton, OR 97801
(503) 276-6616 (W)

Region V - AK, AZ, CA, HI, ID, NV, OR,
UT, WA, British Columbia, Hong Kong
Guam, New Zealand

Postsecondary Education Consortium

PEC Central Office
The University of Tennessee
112 Claxton Addition
Knoxville, TN 37996-3400
(423) 974-8427

Central Piedmont Community College
Services for Hearing Impaired Students
P. O. Box 35009
Charlotte, NC 28235-6421
(704) 342-6421

Chattanooga State Technical Community College
Deaf and Hearing Impaired Program
4501 Amnicola Highway
Chattanooga, TN 37406-1097
(423) 697-4452

DeKalb College
Center for Students with Disabilities
555 North Indian Creek Drive
Clarkston, GA 30021
(404) 299-4038

Hinds Community College
Services for the Deaf and Hearing Impaired
Box 1282
Raymond, MS 39154-0999
(601) 857-3310

Jacksonville State University
Office of Disabled Student Services
147 Daugette Hall
Jacksonville, AL 36265
(205) 782-5093

Kentucky Tech - Jefferson Campus
Deaf and Hard of Hearing Program
727 West Chestnut Street
Louisville, KY 400203
(502) 595-4221

New River Community College
Center for the Deaf and Hard of Hearing
Drawer 1127
Dublin, VA 24084
(540) 674-3619

St. Petersburg Junior College
Program for the Deaf/Hard of Hearing
2465 Drew Street
Clearwater, FL 34625
(813) 791-2628

Spartanburg Technical College
Cooperative Program for the Sensory Impaired
P.O. Drawer 4386
Spartanburg, SC 29305-4386
(864) 591-3811

University of Arkansas at Little Rock
Disability Support Services
2801 S. University
Little Rock, AR 72204-1099
501-569-3143

Computer Speech Recognition as an Assistive Device
for Deaf and Hard of Hearing People

Joseph Robison

Carl Jensema
Institute for Disabilities Research and Training, Inc.
Silver Spring, Maryland

Introduction

Technology challenges us to keep up with it, adapt to it, and grow with it. This may seem to be an overwhelming challenge, but the benefits are too far-reaching to ignore. One technology that is growing at an extremely rapid pace is computer speech recognition. Developed as a dictation tool for business applications, computer speech recognition will eventually have many applications for deaf and hard of hearing people, but most of these applications are still years away. One area where it has several immediate applications is interpreting. The technology has advanced such that it can be used by sign language interpreters where the usual interpreting process encounters problems. As the speed and accuracy of computer speech recognition improves, it is likely to become a standard interpreting tool.

The Institute for Disabilities Research and Training, Inc. (IDRT) is currently involved in a three-year U.S. Department of Education grant to study how speech recognition can be used by sign language interpreters as an assistive tool to provide more complete interpreting for deaf and hard of hearing (D/HH) students in mainstream classes. Sign language is, and always will be, an effective means of communicating information to D/HH students. However, computer speech recognition can provide a useful communication tool in certain circumstances.

When the Interpreting Process Breaks Down

Sign language is an extremely effective means of communication for D/HH people in most cases. A good interpreter can keep pace with normal rates of speech accurately while providing the D/HH person with critical facial and body gestures needed to convey the speaker's emotion. However, American Sign Language (ASL) contains roughly 5,000 signs while a typical abridged English language dictionary contains about 80,000 words and speech recognition dictionaries contain up to 160,000 words. There are an estimated 500,000 words in the English language. The lack of an extensive sign vocabulary does not normally present a problem in daily conversation because people commonly use only a few thousand words of their vocabulary. For example, Jensema and McCann analyzed the captioned text of 183 television programs. Because of the volume of words collected in this study, it is an accurate representation of language spoken on a daily basis. Of well over

800,000 words in the captions, only 16,000 unique words were used. Of these, just 250 words accounted for two-thirds of all 800,000 in the text (Jensema & McCann, in press).

Extensive vocabulary is therefore not a problem in signing most communications. The estimated 5,000 signs, supplemented with fingerspelling, is adequate for most situations. The problem comes when technical or complicated vocabulary is used. Many high school and college- level courses contain complicated vocabulary for which there are no signs. Interpreters may fingerspell many of these words, but how many interpreters can correctly fingerspell the names of countries and places like Czechoslovakia, Uzbekistan, Kfar Ezion and Kealakekua Bay, or names of world leaders such as Gamal Abdel-Naser and Binyamin Netanyahu? The following words are taken from a partial list of specialized vocabulary used in a 46-minute high school anatomy and physiology class. These are words that would have to be fingerspelled or represented with made-up signs:

astrocytes	epidermal cells	ventricle
microglia	meboid	psuedopod
dendrites	ligodendroglia	paraplegic
quadriplegic	myalin sheath	oligodendroglia cell
mitochondria	adipose	node of Ranvier

Fingerspelling words such as these slows down the interpreting process while potentially creating confusion if the interpreter or student is not familiar with the correct spelling. Made-up signs can be used to communicate this vocabulary, but the D/HH student can encounter difficulties when different interpreters are used.

Foreign languages also present a problem for a sign language interpreter and student. Even if an interpreter is fluent in the language being studied, translating the target language to signed English will not benefit the student. The only alternatives are fingerspelling everything, writing all instructions and exercises on the chalkboard, learning to lip-read the foreign language, or tutoring the student on an individual basis. However, none of these alternatives is practical. Fingerspelling everything in a foreign language is too slow and difficult. Writing everything on the chalkboard is too time-consuming for the teacher and class. Lip-reading is difficult and cannot be perfectly mastered. Individual tutoring is possible, but this defeats the goal of providing equal access to the classroom for D/HH students.

Many foreign-language classrooms now focus on using a conversational mode from the very beginning. It is critical for all students to interact in the target language to develop their language skills. Many times oral exercises are not written on the chalkboard because of time limits. Fifty minutes a day does not give an instructor much time to review old lessons, teach a new lesson, and focus on conversational, listening, and writing skills. A D/HH student who does not have access to oral classroom activities is not only denied important developmental exercises but also their right to equal access to education. It is also quickly becoming the norm for colleges and universities to require students to have completed two or more years of high school

foreign language courses. This increasing emphasis on foreign languages makes equal classroom accessibility more important than ever for D/HH students.

Speech Recognition Development

Research and development for speech recognition has been going on for four decades, since Davis, Biddulph, and Balashek at AT&T's Bell Laboratories began doing research on a machine capable of understanding isolated spoken digits in 1952 (Davis, Biddulph, & Balashek 1952). From this early work, speech recognition research has expanded and is now a worldwide effort being pursued on many different fronts.

Although computers are not yet capable of understanding speech in the manner of HAL in the movie _2001 - A Space Odyssey_, or the robots in the _Star Wars_ series, much has been accomplished in the area of speech recognition. There are a number of systems on the market which can be trained to understand the speech of a specific user with better than 90 percent accuracy at speeds of about 65 words per minute.

The "Holy Grail" of computer speech recognition is a system which will understand continuous speech spoken by anyone at normal conversational speeds of 120 to 140 words per minute. Although this has not yet been realized, advancing technology and an increasingly competitive speech recognition market are moving this goal toward reality. Currently, computers must be trained to understand the speech of each individual user, and users are required use "discrete speech" when dictating into the computer. Discrete speech means that the speaker must pause briefly (approximately one-tenth of a second) between each word. The computer needs this pause for two reasons: to have time to analyze the input, and to prevent the acoustic patterns of each word from overlapping and distorting the word boundaries (Markowitz, 1996). Until continuous speech is mastered, the computer must be able to identify the beginning and ending of each word to recognize it. Although this slows the user's rate of speech, dictation speeds of 65-70 words a minute with a 90-95% accuracy rate are possible and continue to improve as computers become faster and speech recognition programs improve.

Leading commercial speech recognition systems such as Dragon Dictate, Kurzweil, and IBM are "speaker dependent" systems. This means that every user must create a voice file which is based on his or her particular speech patterns. Users begin with voice files copied from a basic voice template. Voice files are modified as the system learns more about the user's unique voice characteristics. The more the voice files are used, the more likely they are to fit the particular user, and the more accurate the speech recognition process is likely to be. The process of building a voice file is essential in achieving high word recognition accuracy. Fortunately, the development of faster computers and newer versions of speech recognition systems is reducing the time needed to build accurate voice files.

The basic principles of a speech recognition system can be made to fit most any language. Several of the best-known speech recognition systems are available in a variety of languages. For example, Dragon Dictate is available in U.S. English, U.K. English, French, German, Italian, Spanish, Latin-American Spanish,

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and Swedish. The IBM system is available in U.S. English, U.K. English, Spanish, French, German, Italian, and Arabic.

Speech Recognition in the Classroom

For speech recognition to be used as an interpreting tool in the classroom, it must be unobtrusive and mobile. Because system operators sometimes need to speak while the teacher is speaking, they must dictate at low enough voice level to avoid distracting the teacher and students. Most speech recognition systems have various settings which allow the operator to adjust the microphone volume and sensitivity levels. It is equally essential that the background noise level of the classroom does not interrupt the word recognition process. Excessive background noise such as laughter or slamming books can cause the program to hear phantom words or distort words which are being dictated. Most speech recognition programs also provide settings to adjust to the amount of background noise. These options give the speech recognition operator flexibility to customize the system according to the class dynamics.

As an experiment, IDRT set up speech recognition in an advanced European history class in a local high school. The class included two deaf students who shared a sign language interpreter. The class lectures contained many long and complicated European names, many of which the interpreter did not know how to spell correctly. The speech recognition system could not keep pace with the class lecture, but it was able to retrieve the difficult names with little effort. Both the students and the interpreter began to use the speech recognition screen to see how to spell certain words. It was found that speech recognition was useful as a vocabulary reinforcer in this particular situation.

IDRT spent three months using speech recognition to help interpret for a deaf high school student taking second-year Spanish. He had earned a B in Spanish I, but was falling behind quickly in the second year. His interpreter signed for him when the teacher spoke English but could not help him when Spanish was spoken. IDRT put a personal computer with Spanish speech recognition on a small cart and set it up every day next to the student's desk where the student could see the screen easily during Spanish class. A Spanish-speaking person who had trained on the speech recognition system sat next to the student and took notes in Spanish with speech recognition. Reading the screen was made easier with boldfaced and enlarged fonts. At the end of class the generated file was saved and later printed out to create a hard copy. This procedure was very helpful to the deaf student and provided much information he would otherwise have missed.

Learning to Use Speech Recognition

Learning to operate speech recognition systems is fairly simple, and an extensive background in computer operation is not necessary. Dragon Dictate, Kurzweil, and IBM provide interactive training programs to help new users establish their voice file and learn how to use the system. Once the user has created a voice file, some voice training is required. Voice training is simply dictating into a word processing

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program, correcting all incorrectly recognized words, and storing the corrected data in the voice file. The computer's recognition improves as more data is entered, and the voice file becomes a more accurate representation of the user's voice.

To facilitate the process of building a voice file, IDRT has developed a workbook to train the computer to recognize the 3,000 most commonly used words in the English language. This list covers the majority of words used in daily speech. After about 15 hours of voice training, most users can dictate 65-70 words per minute with 90-95% recognition accuracy.

The key to accurate speech recognition is consistency. Users must consistently correct mistakes and pronounce words exactly the same way. If mis-recognized words (i.e. user says "can" and the computer hears "and") are not corrected, the user's voice files will become corrupted and there will be a lose of recognition accuracy. Similarly, if consistent pronunciation is not maintained while dictating, speech recognition accuracy will decline. The computer does not care if a word is pronounced in an unusual way, as long as it is pronounced exactly that way every time.

The Future of Speech Recognition and Sign Language Interpreting

Speech recognition computer technology continues to improve at a rapid pace. Computer companies are extremely eager to develop a system which can be trained to understand continuous speech. They are close to achieving this goal. Such systems are likely to be on the market by the year 2000.

Speech recognition currently has many different applications, and more will be added as accuracy and speed improves. Current applications are perhaps broader than most people realize. Medical transcriptionists are reducing the common risk of repetitive motion injury by using speech recognition to enter medical records, while many business people are using it to increase productivity by dictating their own documents. People with physical disabilities who normally cannot operate a computer with their hands can now do so with speech recognition. Among other things, this opens up the increasingly resourceful world of the Internet to severely disabled people. Furthermore, in the field of deaf education, speech recognition currently provides a special interpreting tool to help D/HH students gain greater access to mainstream classrooms.

In the future, the role of computer speech recognition in interpreting will grow as the speed and accuracy of the systems improve. Far from making interpreters obsolete in the foreseeable future, computer speech recognition is more likely to expand and enhance the role played by interpreters in communication involving deaf and hard of hearing people. It represents a new tool to be mastered and applied, and those who do so will open new markets for their services, especially among the great mass of late-deafened people who never learned sign language.

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Addressing Student Life Issues

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of
Hearing, April 17-20, 1996, Knoxville, TN

Conference Sponsors:
Postsecondary Education Consortium
at the University of Tennessee, Knoxville

PEC Affiliate Programs

Conference Co-Sponsors:
California State University, Northridge
Seattle Central Community College
St. Paul Technical College

Marcia Kolvitz, Editor
University of Tennessee
125 Claxton Addition
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A Customized Residence Hall Experience for Students who are Deaf or Hard of Hearing

Nancy Kasinski

Maggie DePuye

Jack Felver
Northern Illinois University
DeKalb, Illinois

Northern Illinois University is a state supported, comprehensive university. There are approximately 16,000 undergraduate and 7,000 graduate students enrolled at NIU. NIU is about 65 miles east of Chicago and thirty miles south of Rockford, Illinois' second largest city.

For many years, NIU has had a larger than normal population of deaf and hard of hearing students for a mainstreamed university (average of 40 students enrolled at the college level). One reason this is true is probably due to NIU's location and the existence of several large high school programs for deaf and hard of hearing as well as several good programs in community colleges located in the Chicago suburban area. Also, even many years before Section 504 of the Rehabilitation Act of 1973 went into effect, the Program for Hearing Impaired, a self-contained transition program for deaf and hard of hearing students was established at NIU. In addition, an undergraduate program in deaf education and graduate and undergraduate programs in deafness rehabilitation add to the attraction of NIU for students.

Early on, the problem was identified of providing appropriate housing for the student who was deaf or hard of hearing. Adapting all residence hall rooms on a campus to accommodate students would be both impractical and financially prohibitive. "Deaf community" is important, but we did not want to segregate students. Since 1978, a cooperative endeavor between the office providing support services to deaf and hard of hearing students and Student Housing Services, provides interested hearing and deaf/hard of hearing students a unique learning experience, utilizing as a catalyst a residence hall floor.

Academic Residential Programs

Academic Residential Programs are special housing options jointly sponsored and administered by the Office of Student Housing Services and an academic unit of the University. These options are highly recommended for students who have interests or career plans in the related programs. Student participants take part in the usual social and educational activities characteristic of any residence hall floor, but also have the opportunity to gain additional benefits oriented towards specified areas of academic interest. These benefits include additional faculty interaction, special facilities and equipment, programs and activities in the academic

area of interest, exposure and concomitant discussion with other students who share the same interests, and an increased opportunity for career information and faculty references.

NIU's first academic residential program was created in 1974 and is currently in its 22nd year of operation. The ten academic residential programs created since 1974 currently accommodate over 600 students on thirteen residence hall floors. The Hearing Impaired Interest Floor was created in 1978, and has been a popular option since that year. The description of the Hearing Impaired Interest Floor is as follows:

This special floor option is designed for those students who are deaf/hard of hearing or for those who are majoring in areas that relate to hearing impairment. Examples would include such majors as deafness rehabilitation, audiology, speech and language pathology, and teacher training of children who are hearing impaired/deaf or the multiple handicapped. The goals of the floor include: 1) bringing together those students who have common interests; 2) providing special recreational and social events including captioned tapes; 3) providing educational programs that pertain to hearing impairment; and 4) stimulating interaction between those students who are deaf/hard of hearing and those who are preparing for careers in working with individuals who are deaf or hard of hearing. Such activities will enhance personal and educational growth and will create a better understanding of all members involved with this floor. All students will have access to 1) staff who are knowledgeable of hearing impairment, and 2) special equipment such as visual doorbells, a visual fire alarm system, amplified handsets for telephones, a TTY, and a television with closed captioning.

Program Management Team

Each academic residential program requires the cooperation of a number of individuals: faculty, central housing office staff, residence hall staff, and program participants. The first component of an academic residential program at NIU is the "Faculty Coordinator." The selection of the Faculty Coordinator by the participating academic unit assures consistent involvement on the part of the academic unit in the development of the residential option. The Faculty Coordinator must be committed to the goals of the academic residential program and have time allotted to work with both the program and its student participants. In addition, to be successful, he/she must be able to interact effectively with students and have a positive perception of Student Affairs and the potential of the academic option component in the residence halls. The Faculty Coordinator assists in the design and implementation of the academic residential program through the development of program goals and expectations for student development. In addition, the Faculty Coordinator works cooperatively with the housing staff in establishing criteria for the recruitment, selection, placement, and retention of student participants. He/she is involved in the selection process for the undergraduate Resident Assistant (RA) assigned to the program. The Faculty Coordinator also holds specific responsibility for coordinating the involvement and support of other faculty in the activities of the academic residential program and for supervising the work of the Resident Assistant in those functions directly related to the academic aspects of the program. The Faculty Coordinator attends and participates in appropriate staff meetings, works

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with the housing staff, Resident Assistant, and floor participants in planning and implementing academically-related activities, and participates directly in the ongoing evaluation of the program.

In order to assure good communication and planning, the Office of Student Housing Services also designates a specific member of the administrative staff to work with the academic option floors. This individual, the "Housing Office Liaison" holds responsibility for overall coordination of all academic residential programs. As well as working with the Faculty Coordinator to develop the program and procedures involved in the program, the Housing Office Liaison has specific responsibilities including chairing academic residential program staff meetings, coordinating residence hall facilities and services used by the academic residential programs, and clarifying or mediating issues of concern between the academic and student affairs staff members associated with the program.

The creation of the position of Housing Office Liaison demonstrates the level of commitment from the Office of Student Housing Services and the Division of Student Affairs to the concept of the academic residential program. Time must be allotted for the Housing Office Liaison to take on this task and the individual must be able to work with faculty members and reflect an appreciation for the faculty role in a such a program. Finally, the individual selected must have demonstrated leadership, organization, communication, and administrative skills.

Residence hall professional staff members also have an important role with an academic residential program. In addition to their general administrative, supervisory, training, advising, counseling, and programming responsibilities in the residence hall, designated residence hall staff members must become involved with an academic residential program. This involvement consists of assisting in the development of the residential program's special activities, supervision of the program's RA, and attendance and participation in the academic residential program's staff meetings. In the case of the Hearing Impaired Interest Floor, the Director of the Residence Hall and the senior staff member responsible for supervising the RA of the floor are directly involved with the program.

As the member of the management team that lives on the floor and has the most contact with the residents, the Resident Assistant (RA) of the floor is a very important member of the management team. The RA is supervised by the residence hall senior staff for the standard RA position responsibilities including, but not limited to: establishing positive rapport with individual floor residents; assisting in crisis intervention; developing and maintaining a community environment; advising student activities; enforcing rules and regulations; participating in hall coverage; and completing administrative requirements. In addition, the Resident Assistant is supervised by the Faculty Coordinator for any appropriate responsibilities designated by the Faculty Coordinator and approved by the Housing Office Liaison. Typical additional responsibilities include: assistance with the program's special academic activities; coordination of special equipment, completion of reports for the sponsoring academic unit; and participation in the academic residential program staff meetings.

The selection of the Resident Assistant for the Hearing Impaired Interest Floor has been a joint effort between the Senior Residence Hall Staff and the Faculty Coordinator(s). The Student Housing Office has a planned procedure for RA selection which begins with informational meetings for students thinking about becoming Resident Assistants and proceeds through many group processing activities and interviews. After Housing Services determines the candidates that will be invited to apply for RA positions, candidates interested in the Hearing Impaired Interest Floor are referred to the Faculty Coordinator(s) for interviews. Returning RAs that might be interested in the floor are also referred for interviews. The ideal RA for the floor would be a person with strong RA skills, RA experience, knowledge of deafness and good signing skills. Unfortunately, candidates fitting this description are few and far between. Through the years, we have found that the most important quality for the RA is strong RA skills. We would like an RA who could sign, but we have found that this skill is not as important as the RA skills and the willingness to be flexible in communication and to learn some sign.

Communication between the members of this team is essential to the smooth running of this program. Communication is facilitated by monthly meetings of the Academic Coordinators, the Housing Office Liaison, the Residence Hall Senior Staff members, and the RA. Information at these meetings include feedback on residents' interactions, floor members' participation, prior floor activities, and upcoming activities. In addition, regularly scheduled meetings occur between the RA and a Faculty Advisor (weekly or bi-weekly).

The Hearing Impaired Interest Floor is a coed floor located in Grant Towers South, a large residence hall of two towers with ten floors of student rooms in each tower. The floor has twenty-five student rooms, one room for the Resident Advisor, a "typing/study" room, a pressing room, two restrooms, and a lounge. At full capacity, with no single rooms allotted, the floor will have fifty residents and one RA.

Typically, the floor population can be categorized into several different groups: students who choose to live on the floor who are deaf or hard of hearing; students who choose to live on the floor who are in a related major; students who choose to live on the floor for some miscellaneous reason; and students who are assigned to the floor. It is interesting to note, that although the last group of students did not initially choose to live on that floor, the majority elect to return to the floor the following year.

Each student who requests to sign up on the floor, signs a "Request to Live on Hearing Impaired Special Interest Floor", which contains the expectations of the residents of the floor. These expectations are:

1. Be in good academic standing.
2. Abide by rules and regulations regarding study hours, as well as respecting study rights of all others on the floor.
3. Attend all floor meetings called by the RA
4. Participate in social and educational activities sponsored by the floor. (Non-hearing impaired students must attend at least two educational programs per semester).

5. Assist in the organization and/or implementation of at least one social, cultural or educational program per year.

6. Contribute to a good atmosphere on the floor through a positive attitude towards other residents and towards planned activities, in order to develop a strong sense of community spirit and involvement.

If a student does not abide by this set of expectations, they may be removed from the floor or denied the right to return the next year. (This would probably not occur in the case of a student who is deaf or severely hard of hearing who needs the safety features of the floor). It is interesting to note that in the nineteen years the floor has been in existence, only a handful of students were "encouraged" to not return, and only one was actually "denied" the right to return. The residents of this floor have always been very active and enthusiastic, and have high rates of participation in activities.

Equipment

Each room on the floor has been equipped with strobe fire alarm lights. In addition, each room has been wired with "doorbell light" and a flashing light for the telephone. Telephones are also equipped with volume control handsets. Illinois has a state funded program for eligible residents to obtain a TTY, so most qualified students have them, but there are TTYs available for short-term check-out for students who do not have their own. Through the years, the residents have also raised money for a television set, VCR, and decoder for the lounge. Last year, the floor won a contest for most participation points in Grant South, and won a large screen television which has the closed caption option in it. They have donated the older set and decoder to the hall to use for programs.

Recruiting

Students are recruited to become residents of this unique academic option floor in a number of ways. A brief description of the floor is already included in the housing informational packets that prospective students receive shortly after being accepted. In addition, approximately every six weeks, the Office of Registration and Records sends the Faculty Coordinator names and addresses of prospective students who have indicated on their applications that they intend to major in one of the majors related to deafness. The Faculty Coordinator then sends them packets of information explaining the purpose of the floor and encouraging them to consider the floor as their choice of housing options on their "Housing Application."

When Student Housing Services receives prospective students' applications, they are processed for room assignments. If students have selected the Hearing Impaired Interest Floor as their second or third choice, the Faculty Coordinator is given the student's information, and a letter is sent to the student encouraging the student to reconsider their choice. Sometimes, the Faculty Coordinator will call a student to see if they have questions regarding the floor that will help them make informed decisions about their housing options.

The Faculty Coordinator is also the coordinator of support services for deaf/hard of hearing students at NIU. As such, she is able to disseminate information to prospective deaf/hard of hearing students about the floor, stressing the importance of the safety benefits of living on the floor. Students may choose to live elsewhere in the residence halls with more limited accommodations, but most choose to live at least their first year on this floor.

In-house networking assists in effective recruitment. Encouraging academic advisors in the various deafness/health-related departments to disseminate information during orientation for prospective students, or advising week for currently enrolled students has worked well. In addition, the institution's scheduled Open House's are another means of promoting the floor.

Current and past residents of the floor are excellent promoters for the floor. Often, friends of residents request to live on the floor after visiting and seeing the floor "in action." Prior to "Hall Sign-up" for current students, residents of the floor sometimes will go to select classes to give short announcements about the floor, encouraging students to sign-up for it. These are usually introductory level special education or communicative disorders classes. Short presentations or oral announcements are often given in various sign language classes around campus.

Activities

Traditionally, the residents of this floor have been very active in floor and hall activities. A variety of floor activities including social, academic, and service-oriented are available. The floor regularly wins "participation contests" in the hall ranging from the number of residents contributing in a blood drive to the number of activities and participants during a semester. Students are active as floor and hall officers, and participate and contribute to many of the hall committees.

Emphasis is placed on providing programming in the area of deafness to not only residents of the floor, but also to all residents of the hall. Every fall, the residents of the floor are active in planning a "Deaf Awareness Week." Guest speakers, movies, Sign Sync, and other activities are highlighted during the week. One evening, all residents of the residence hall must fingerspell their name to get into the cafeteria. An announcement of the requirement as well as the alphabet are placed in each resident's mailbox. Residents of the floor are available that evening, to teach and assist students to fingerspell their names. Throughout the year, residents of the floor teach non-credit sign language classes to interested hall residents.

Opportunities are provided to allow students and faculty more interaction than just through classes. Faculty members are invited to give presentations at the hall. The floor has sponsored "advising workshops" with advisors from related departments. Presentations/workshops on career opportunities in the related fields have been successful. More informal interaction between students and faculty members is encouraged by inviting faculty members to have dinner with the floor residents.

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Evaluation/Feedback

Written evaluations are received from the residents of the floor. These evaluations reflect a high level of satisfaction in the experience of living on the floor. Comments from residents and observations from professionals involved indicate the following :

- The floor usually develops a strong sense of unity and community. Students indicate that they have interests in common and therefore benefit from living together. A high number of returning students each year further indicate residents' satisfaction with the program.

- The residents learn from each other and learn to appreciate their differences. Students who are majoring in deafness related fields, but who are not familiar with the Deaf World, comment that they learn many things about the deaf that they would never learn or experience in the classroom.

- The floor provides positive exposure to the world of deafness to the entire population (approximately 1,000 students) of the residence hall.

- Parents of new students feel more secure knowing their daughter/son is a resident of the floor. The additional faculty contacts, contacts with the Faculty Coordinator and the closeness of the floor help them to feel that their "child" will not just be a number that gets lost in the crowd.

- Living on the floor assists many deaf or hard of hearing students that have had little or no contact with other deaf or hard of hearing students, to feel more comfortable interacting with their peers. They transition in to better acceptance of their situation and become comfortable interacting in a deaf community.

- Residents who are deaf or hard of hearing tend to have more frequent contacts with the coordinator, and are not as hesitant to approach her with problems as students who live in different situations.

- Students without much prior sign language experience, benefit from living on the floor and seeing and using sign language on a daily basis.

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Alcohol and Other Drug Use Among Post-Secondary Deaf and Hard of Hearing Students

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PROGRAM OVERVIEW

MCDPDHHI as a Model Program

The Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals (MCDPDHHI) was established in 1989 to meet the chemical dependency treatment needs of deaf and hard of hearing individuals in an environment that was cognizant of and responsive to the communication and cultural needs of these persons. Initially designed with an adolescent focus, the Program has expanded to serve persons aged sixteen years and above. In 1990, the Program was the recipient of a grant from the Center for Substance Abuse Treatment under the Critical Populations section to serve as a model program for substance abuse treatment of deaf and hard of hearing persons. The grant, initially funded for 3 years and later renewed for an additional 2 years, provided for the development of clinical approaches, specialized treatment materials, outreach and training services and dissemination of products and information. Through the support of the grant funding, two national conferences were held that focused on substance abuse and deafness. A number of materials were developed and the approaches developed by the Program were captured in print and videotape so they could be replicated in other areas. In addition, the Program also received a grant from the Office of Special Education and Rehabilitation Services. This grant provides intensive four day Professional Development Forums focused on training professionals who work with deaf and hard of hearing clients who may be chemically dependent. To date, 19 of these trainings have been held with more than 350 participants from a variety of professions including vocational rehabilitation, education, interpreting, counseling and others. An additional five trainings will be provided according to the current funding.

Client Demographics

Program participants come from across the United States and Canada. As of this date, more than 490 persons have received treatment services at the Program. While the Program serves a diverse spectrum of clients, the majority of the clients are deaf (88%), male (78%) and Caucasian (77%). However, males and females representing a variety of ethnic groups have participated in the Program including those of Native American/Canadian, Hispanic and African American backgrounds. Hard of hearing persons as well as deaf persons with additional physical challenges including cerebral palsy, Usher's Syndrome and other vision

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problems have been clients in the Program. Clients come from a range of family backgrounds, social situations and educational experiences and vary in age from 15 to 74 years of age with the largest percentage of clients in the 25 to 35 years of age range.

A variety of funding sources have covered the cost of client treatments. Thirty-seven percent of clients are funded by Medicare; 19% are funded by Medicaid. Private insurance is the funding source for 21% of the clients and funding for the remainder of clients comes from sources including Indian Health, vocational rehabilitation, HMO's and Canadian funding sources. The average length of stay is approximately 35 days with shorter stays often being dictated by limitations of funding sources.

When clients come to the Program, they are asked to indicate their preferred mood altering chemical. Alcohol is the most commonly preferred chemical (57%) followed by cocaine (18%), marijuana (12%) and crack (9%). Other drugs including heroin, hallucinogens, tranquilizers, inhalants and PCP represent the preferred drug for about 3% of the admissions. Aside from the preferred chemicals, most clients are polysubstance users meaning that they use a combination of alcohol and other drugs. In addition to chemical dependency, clients who participate in treatment at the Program often present with issues related to physical health, mental health, abuse, sexually transmitted diseases, family issues and legal or employment status.

Materials Development

With the support of the grant from the Center for Substance Abuse Treatment, the MCDPDHHI has developed a number of materials in the area of alcohol and other drug abuse for use with deaf and hard of hearing persons. "Dreams of Denial" is a 23-minute video presented in voice, sign and captions and designed to be an education/prevention tool for adolescents through adults. The video tells the story of a deaf man who is struggling with chemical dependency and raises a number of issues faced by deaf persons related to the use of alcohol and other drugs. The video includes information about peer pressure, Twelve Step groups, treatment, family issues and barriers faced by deaf and hard of hearing persons in recovery. The video comes with an instruction guide which provides complete information for use of the video in a variety of settings.

"Choices" is a curriculum developed by the Program to address the areas of risk taking and decision making skills. The concepts taught in the curriculum are applicable to a wide range of age levels. The curriculum offers instruction and skill building on free/forced choices, a model decision making process, strategies for identifying alternatives, risk assessment and practical application of the skills taught. The curriculum is presented in a workbook format with complete teaching instructions.

"Clinical Approaches Manual" is the complete description of therapeutic approaches developed at the Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals. Within the manual program philosophy and techniques are described in detail. Sample assignment sheets as well as behavior management strategies are included. In addition to assignments based on the Twelve Steps of Alcoholics Anonymous, the manual includes assignments for specialty groups such as grief group and evaluation

assignments. A videotape, "An American Sign Language Interpretation of the Twelve Step Program", was developed to accompany the manual. This hour-long video presents an explanation in ASL of each of the Twelve Steps and is also voiced and captioned. The video may be used in conjunction with the assignments given in the manual.

A relapse prevention workbook entitled "Staying Sober: Relapse Prevention Guide" provides individuals with information about the process of relapse and offers strategies for preventing or intervening on the relapse process. This workbook is designed to be used with a counselor or other professional and gives clients the opportunity to use various methods of communicating their ideas. The book identifies common relapse triggers, explores feelings of recovery and relapse, and reviews important principles of self care in recovery.

The National Information Catalog is a listing of materials designed for deaf and hard of hearing consumers targeting substance abuse and related topics. The catalog provides a description of the materials and information about where they can be obtained. The Program also publishes a newsletter which carries articles and announcements related to substance abuse and deafness. The Program also makes available numerous articles and printed materials about this subject area.

Program staff continue to be active in sharing information with interested persons including professionals serving deaf and hard of hearing persons, consumers, educational institutions and community members. The program is active in the local Minneapolis-St. Paul area providing prevention/education and intervention services at school programs for deaf and hard of hearing students. Likewise, Program staff provide consultation and presentations to other agencies serving deaf and hard of hearing persons. The Program frequently receives requests to provide presentations at local, regional and national conferences. Although the primary purpose of the Program is to provide chemical dependency treatment services, staff is also committed to outreach and training services as time permits.

CHEMICAL USE, ABUSE AND DEPENDENCY

Continuum of Chemical Use

The use of mood altering chemicals is often viewed on a continuum from no use of mood altering chemicals through dependent use of these chemicals. On the "no use" end of the continuum are generally those people who have never used mood altering chemicals. Although this position may be viewed as an absolute, it seldom exists this way. Usually, we consider that someone is abstinent (no use) when they abstain from alcohol and other common drugs of abuse. Typically our consideration of chemicals does not include prescription and over the counter medication, caffeinated beverages, tobacco, household or work place chemicals and various kinds of food. For the remainder of this discussion, we will consider alcohol and other drugs. Most people, at some time in their lives, move into the portion of the continuum called "use". Usually, this begins in the

adolescent years with experimental use of mood altering chemicals. At the most conservative end, the "use" portion of the continuum includes moderate or occasional administration of the chemical either as appropriate medical use or appropriate social/recreational use. It is often in the area of social use where ambiguities arise based on the various norms which help to define what is appropriate. Among the sources for these norms are the culture(s), religion, parental influence, peer group and personal values. When the norms from these sources are unclear or conflicting, ambiguities arise. As one moves along the continuum, use remains moderate but becomes more frequent and then habitual. The beginning of risk behavior emerges when one uses mood altering chemicals for the thrills or with the intent to get high or drunk. In this stage, there may be use to relieve stress feeling like one needs the chemical to deal with pressures.

At the point at which one's use of mood altering chemicals interferes with normal functioning, one crosses into the area of abuse. Characteristics of abusive use include use of excessive amounts of chemicals; inappropriate use (including thrill-seeking, intent to get drunk/high, spree use); continued use in spite of negative consequences; rationalizations and minimizing use; lack of awareness about the degree of impairment; and inability to change in spite of plans.

Dependency is defined in a variety of ways by different sources. It generally includes a kind of craving that must continue to be satisfied by repeated use (for its usually pleasurable effects) even when negative effects accompany or result from the use. Dependent or addictive use of mood altering chemicals means significant interference with normal functioning and usually deviates significantly from cultural norms. The notion of the use being beyond the control of the individual is generally accepted as part of the criteria. Also, there is a feature of preoccupation with the drug, usually to the exclusion of most other things in the individual's life.

The progression from abstinence or use to dependency can vary in the length of time it takes to happen. Generally, the younger a person is when the progression begins, the more quickly it advances. An elderly person may also experience a more rapid progression toward dependency. While it is possible for a person to move back and forth from one area to another, it is generally agreed (at least in the disease model of chemical dependency) that an individual cannot move from dependency back to non-problematic use. In fact, a dependent person who experiences a period of recovery (abstinence) and then relapses, immediately returns to the low point or extreme of his or her dependent use (as opposed to beginning the progression again).

Risk Factors for Developing Chemical Dependency

Although there is significant debate about the etiology of substance abuse problems, a number of factors are thought to increase a person's risk for developing difficulties with the use of mood altering chemicals. Probably foremost among the risk factors is family history of chemical dependency. Studies, mostly focused on alcohol use, show an increased risk of developing addiction when parents have a history of substance abuse. Some studies seem to show involvement of biological factors, but whether this risk stems from environmental factors or genetic ones, it appears to be an important warning sign. Several other factors

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are also thought to contribute to the development or seriousness of substance abuse problems. Use of mood altering chemicals at an early age often progresses to abusive use more quickly than in adults.

Individuals who lack education about alcohol and other drugs, or who do not have resources to support a drug free lifestyle, may be more at risk. When an individual has very successful experiences with mood altering chemicals, this tends to provide a positive reinforcement for continued use. Similarly, lack of negative consequences connected to chemical use may also serve to support ongoing use.

Signs & Symptoms in Life Areas

One way of assessing the impact alcohol and other drugs have on a person's life is to consider the consequences of that use in various life areas. Typical life areas to be considered include physical health, financial issues, family relationships, work/school performance, legal issues and social interactions. Taken together, these areas give a fairly complete picture of the individual's life. When a person is abusing mood altering chemicals, the impact in each of these life areas may provide an indicator as to the extent of the chemical abuse. The following are some of the consequences commonly seen in the respective life areas.

Physical
frequent, unexplained illness
sudden weight loss or gain
injuries (from fight, accidents)
generally unhealthy appearance
unusual sinus or dental problems
memory loss (blackouts)
hangovers

Financial
overdue bills
banking problems
borrowing/stealing money
owing money to others
gambling activity
unexplained sources of income

Family
fights, disagreements (about use)
neglect of responsibilities
failure to attend family functions
lack of trust
separation/divorce
loss of custody of children

Work/School
unexplained absences
pattern of absences/tardiness
inconsistent/declining performance
under the influence of chemicals
problems with boss/co-workers
discipline on job/in school

Legal
DWI or DUI charges
probation violations
restraining orders
legal fines
court appearances

Social
isolation, lack of friends
changing friends
socialization centered on use
friends are older or younger
broken relationships

These signs can help to detect a problem with the use of alcohol or other drugs. One or a small number of symptoms alone is probably not significant but in combination, they can point to difficulties. Change is also a significant factor to consider. Changes in these areas that are not attributable to other causes

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may also be indicative of a problems in this area. By looking at the life areas as named above, one can begin to get a complete picture of how chemical use impacts the individual's life as a whole.

In the treatment setting, the life area consequences mentioned above may be used in assessing the extent of a person's chemical use. However, specific criteria are used to make an official diagnosis for the purpose of planning and monitoring treatment. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) is a commonly used for diagnostic standards. The DSM-IV criteria for alcohol dependence include a maladaptive pattern of alcohol use; increased tolerance; characteristic withdrawal symptoms; inability to cut down or stop; giving up or reducing social, occupational or recreational activities because of drinking; time spent focused on drinking or obtaining alcohol; and continued drinking despite physical or psychological problems caused by the use of alcohol. Use of these criteria enable treatment providers to demonstrate the need for treatment services.

INTERVENING ON CHEMICAL USE

Educational Efforts

Many times, prevention is thought of in the narrow sense as efforts intended to prevent or delay the use of alcohol and other drugs. If prevention/education efforts are viewed in this context, it appears that these efforts have little place in the post-secondary setting since many, if not most, post-secondary students will have already used mood altering chemicals. However, if prevention/education is viewed in a broader context as a continuum, aimed at the continuum of use, application in the post-secondary setting is possible. Primary prevention, efforts aimed to prevent use before it starts, will not be appropriate for most post-secondary students. However, it is important to remember that some young people will leave high school without having experimented with alcohol or other drugs. These students can benefit from education and training in the areas of self esteem, relationships, decision making, communication, empowerment and refusal skills, all of which are included in prevention/education. In addition, information about the drugs themselves remains an important component, possibly more important with deaf students who may be lacking in their knowledge of these chemicals.

Secondary prevention involves prevention services aimed at individuals who have experienced some chemical use. Different strategies and techniques will be used when dealing with students who have had their own encounters with alcohol or other drugs. Topics such as consequences of chemical use, risks of chemical use, identification of pressures to use drugs and making choices are important in these prevention/education efforts. In addition to education, students can also benefit from support services such as counseling, support groups and help centers. Institutional policies and procedures which help to identify developing problems with alcohol/drugs and respond to them in a constructive way are also a part of secondary prevention. Post-secondary programs should have accessible counselors who are knowledgeable about alcohol and other drugs.

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Programs may be involved in sponsoring activities that serve as alternatives to alcohol and drug use. They may offer counseling, support groups and other resources students can access for assistance. Programs should also be aware of outside resources that students can utilize for help with alcohol or other drug problems. There should be an awareness of where students can obtain an assessment if problems arise.

Tertiary prevention refers to efforts that seek to prevent resumed use or relapse in individuals who have abused chemicals. Generally, this kind of activity includes the types of services recommended after a treatment experience. Aftercare often includes ongoing counseling, relapse prevention efforts, Twelve Step meetings and sponsorship. Post-secondary programs might support Twelve Step meetings by providing meeting space, assisting with interpreter services and making lists of AA or NA meetings available. Again, counselors who are familiar with alcohol/drug abuse can provide on-going counseling, support and education.

Assessment of Problem Use

Knowing and recognizing potential signs of chemical abuse, as discussed above, is an important step in helping students who may be experiencing problems. Change in behaviors as well as the appearance of several of the signs mentioned may be indicative that some kind of intervention is needed. A significant aspect of chemical dependency is the denial exhibited by the individual. In the absence of outside feedback, many people are able to rationalize, minimize and in other ways deny the problem. Chemical use becomes such an integral part of one's life that one is unable to see the negative effects or is unable to attribute them to the use of the alcohol or other drugs. This is where caring persons have the opportunity to help intervene. While accusations about chemical use may lead to even stronger denial, sharing of genuine concerns can be an effective technique to help someone realize how their use is having a negative impact. The use of "I" statements and naming specific concerns or behaviors can be helpful. For example, a concerned staff person might say, "I notice you have been missing a lot of school. I see that your grades have slipped and you often look as if you are sick. I care about you and am concerned that you might need some help." Such communication is less likely to raise the young person's defenses and lets them know that someone cares. Another important action that can be taken is allowing post-secondary students to experience the consequences of the choices they make. Sparing someone from consequences only serves to reinforce their notion that there is no problem.

Students who may be experiencing problems related to their use of alcohol and other drugs should be referred to a qualified individual for an assessment. Unfortunately, with deaf and hard of hearing students, an assessor who is able to communicate directly is often impossible to find. It is crucial that students who go for drug and alcohol assessments be provided with a qualified interpreter when the assessor is not skilled in communicating with deaf persons. A valid assessment hinges on being able to communicate clearly and accurately.

Referring to Treatment

If a student is determined to be in need of treatment services, it is important for post-secondary staff persons to be familiar with resources for treatment services. Only a few chemical dependency programs exist nationally that work specifically with deaf and hard of hearing persons. Some students may need the services of such programs. Others may be able to successfully participate in mainstream type programs with the use of an interpreter or other communication aids. Careful consideration should be given to the services and programming provided to clients when selecting a treatment program. Treatment services should meet the needs of the client and offer the client education, support, counseling, and skill building directed toward recovery from alcohol/drug abuse problems. Almost without exception, other issues or problems arise during the course of chemical dependency treatment. Some commonly identified problems include grief/loss, ineffective coping skills, abuse issues, poorly developed social skills and mental health concerns. While important and often closely linked to the use of chemicals, these problems are generally more effectively addressed in sobriety.

Post-secondary staff members who help refer a student to treatment may want to participate in on-going communication with treatment staff during the course of treatment. With the agreement of the individual and signing of proper releases, this communication can help to establish a support system for the student upon completion of treatment. Direct communication with the student can provide a sense of support for the difficult process of recovery.

Aftercare

As previously mentioned in the discussion of tertiary prevention, aftercare is essential to ongoing recovery. Treatment is an important step in the process but the real work of recovery begins after treatment. Generally aftercare recommendations include ongoing counseling (both individual and group if possible), attendance at Twelve Step meetings (Alcoholics Anonymous, Narcotics Anonymous, etc.), and obtaining and maintaining contact with a sponsor. For deaf and hard of hearing persons, these components of an aftercare plan may be difficult to obtain. Although an increasing number of AA and NA meetings are accessible through an interpreter and more counselors with training in chemical dependency and deafness are available, there still exists a serious lack of resources that are accessible to deaf and hard of hearing persons. These barriers present additional challenges to deaf and hard of hearing young people pursuing recovery.

The Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals has done some follow-up work with clients who have participated in the program. In relation to predictors that seem to correlate with maintaining sobriety, three are particularly significant. These follow-up studies show that three factors have a strong positive influence on the maintenance of sobriety: 1) someone, such as family or friends, to talk with about sobriety; 2) employment; and 3) involvement in self help groups. In other words, individuals who have the support of other sober people, who engage in some kind of work and who can communicate with

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someone about their recovery are more likely to stay sober. It appears that these factors can help clarify how young deaf and hard of hearing students can best be supported in recovery.

CONCLUSION

The use of alcohol and drugs at post-secondary programs continues to be a problem for some students including deaf and hard of hearing students. The Minnesota Chemical Dependency Program for Deaf and Hard of Hearing Individuals serves as a model program in providing appropriate, accessible chemical dependency treatment services to deaf and hard of hearing people. Materials developed by the Program, can provide useful tools in addressing and dealing with this problem. Awareness of the signs and symptoms of chemical abuse and dependency puts post-secondary programs in the position of being able to provide education, support, counseling and referral to students who may be experiencing problems. Support for students who are in recovery is also an important component of post-secondary program offerings.

For more information about the Minnesota Chemical Dependency Program for Deaf and Hard of Hearing or any of its materials, please contact the Program at:

Minnesota Chemical Dependency Program for
Deaf and Hard of Hearing Individuals
2450 Riverside Avenue
Minneapolis, Minnesota   55454
1-800-282-3323 (V/TTY)

Focusing on Non-Traditional and Underserved Students

Conference Proceedings
1996

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Helping Minority Individuals Navigate Through Successful School and Work Transitions

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As the 21st century nears, three major challenges confront postsecondary education and rehabilitation programs:

1. How to provide the best services possible during a time of diminishing resources, especially financial resources.

2. How to best meet the educational and training needs of a changing population of deaf and hard of hearing individuals.

3. How to best respond to the changing demands of the workplace for workers with the skills to compete in an increasingly diverse and global economy.

We will focus on the last two challenges. The first challenge is more complex and cannot be addressed within the scope of this paper.

We begin with a general overview of some of the significant demographic changes occurring among elementary and secondary students who are deaf or hard of hearing. Some significant implications for postsecondary education and rehabilitation programs are also highlighted. The primary sources of information on demographic changes are the most recently available reports from the Annual Survey of Deaf and Hard of Hearing Children and Youth (Schildroth & Hotto, 1995; Allen, 1994).

Following the overview on demographic changes among elementary and secondary students, we present information from our own research at the University of Arkansas. The data are from two national projects -- one on the post high school transition experiences of a sample of minority deaf and hard of hearing youth -- and the second on the career preparation, entry, and advancement experiences of minority individuals in professional and technical jobs.

DEMOGRAPHIC CHANGES BETWEEN REPORTING PERIODS 1973-74 AND 1993-94

The demographic characteristics of students enrolled in educational programs serving children and youth who are deaf or hard of hearing have changed significantly over the past 20 years. The most dramatic demographic changes noted in the Annual Survey of Deaf and Hard of Hearing Children and Youth are those related to race and/or ethnic background. Two notable trends include:

- a decrease in the percentage of white student enrollments from 76% to 60%, and

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- an increase in the percentage of minority student enrollment from 24% to 40% (see Figure 1).

When the demographic changes among minority students were further examined, significant increases were noted among two major groups of students. The most significant changes in percentage of minority student enrollment were found among:

- Hispanic students (enrollments increased from 7% to 16%), and
- Asian/Pacific Islander students (enrollments increased from less than 1% to more than 4%).

Significant Geographical Indicators for 1993-94

The four geographical regions designated by the U.S. Census Bureau are used by the Annual Survey of Deaf and Hard of Hearing Children and Youth to report student geographical distributions (e.g., North, East, South, and West). In this section, data are summarized and reported for students attending educational programs for deaf or hard of hearing students during the 1993-94 school year.

When the data were examined on a region by region basis, the South was the only region that reported more than one-half of all deaf or hard of hearing students enrolled were from racial or ethnic minority backgrounds. Of the minority students attending schools in the South, most were African-American. Furthermore, when data were examined by individual states within each of the four geographical regions, several states, particularly those in the South, Southwest, and West, reported higher enrollments of minority students compared to white students.

The implications are that in many states, especially those in the South, Southwest, and West, minority students are becoming the "new majority" in educational programs serving deaf or hard of hearing students. Listed below is a summary of some of the significant demographic trends indicated by regional and state geographical distributions.

Black students:

- 57% of Black students were enrolled in educational programs in the South.

Hispanic students:

- 18 states reported higher enrollments of Hispanic than Black students in their educational programs.
- Two-thirds of all Hispanic students reported to the Annual Survey were attending educational programs in three states, California, Texas, and New York.

Asian/Pacific Islander students:

- One-third of Asian/Pacific Islander students were enrolled in educational programs in California.
- In five states, Asian/Pacific Islander students outnumbered both Black and Hispanic students.

Enrollment by Type of Educational Program for 1993-94

Four major types of educational settings are reported by the Annual Survey. They include residential schools, day schools, local non-integrated classrooms, and local integrated classrooms. Significant

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demographic trends can also be noted in the extent of minority student enrollment within these four educational settings. Most white students are enrolled in residential schools and local integrated programs. On the other hand, most minority students attend day school programs (see Figure 2). Some reasons for the differences in educational placement are presented below.

Cohen, Fischgrund, and Redding (1990) identified two possible factors for the differences in educational placement between white students and minority students. One factor is that most day school programs, compared to residential schools, are located in large urban centers which tend to have high proportions of minority residents. A second factor is that educational placements in either local, integrated or non-integrated settings are often made on the basis of student academic achievement levels. In general, minority students have not performed as well on standardized achievement tests as their white peers (Allen, 1994). Thus, when academic achievement levels are considered for educational placements, minority students are more likely to be placed in local, non-integrated classes than their white peers.

Listed below is a summary of some of the key demographic trends by racial or ethnic background and type of educational setting.

Residential schools

- The racial/ethnic backgrounds of students attending residential schools were predominately white (65%) compared to minority students (35%); and

- Significantly more Black students (20%) than Hispanic students (10%) were attending residential schools.

Local, integrated programs and local, non-integrated programs

- The racial/ethnic backgrounds of students attending local, integrated (e.g., mainstream) educational programs were predominately white (62%) compared to minority students (38%); and

- Minority and white students were equally represented (e.g., 50-50) in local, non-integrated or self-contained educational programs.

Day schools

- The racial/ethnic backgrounds of students attending day schools were predominately minority (57%) compared to white students (43%).

Exit Outcomes for School Leavers Age 14 and Over by Race/Ethnic Background for 1993-94

Overall, 66% of the school leavers reported to the Annual Survey during 1993-94 completed high school with a diploma while 22% completed high school with a certificate. Twelve percent (12%) dropped out (see Figure 3). When graduation with a diploma or certificate were examined on the basis of selected student demographic characteristics (e.g., race or ethnic background, gender, and having one or more additional disabilities), the following trends were noted:

- students who graduated with a diploma were predominately white (65%) compared to minority students (35%);
- more males received diplomas than females; and
- more deaf students without additional disabilities received diplomas than those who had additional disabilities.

On the other hand, students who graduated with a certificate were predominately minority (55%) compared to white students (45%). Graduation with a certificate was more prevalent in the South than any other region (e.g., East, West, and North). Sixty-six percent (66%) of those graduating with a certificate were from educational programs in the South.

Since a high school diploma is generally required for enrollment in most postsecondary programs, this trend has important implications for students from the South who wish to enroll in 2-year or 4-year colleges. Also, in today's job market, high school diplomas and, often, post high school vocational training certificates have become the minimum required to qualify for many entry-level jobs.

For example, Crane (1994) reported that the Department of Labor has projected that by the year 2000 and beyond, almost all jobs will require at least one year of college training. Crane (1994) also cites other reports which project at least two years of college training will be needed. Regardless of how many years of education beyond high school are needed, it is clear that post high school education and training have become the minimum credentials necessary for anyone who wants to get a good job, earn good pay, and have opportunities for promotions and job advancement. Furthermore, as the demands of the workplace continue to change, more workers are expected to pursue both ongoing training to upgrade their skills and retraining to learn new skills to stay competitive in the workplace.

In the next section, we provide a summary of some of the key findings from our research on the post high school transition experiences of minority deaf and hard of hearing youth.

RESEARCH ON THE POST HIGH SCHOOL ASPIRATIONS AND TRANSITION EXPERIENCES OF MINORITY DEAF AND HARD OF HEARING HIGH SCHOOL STUDENTS

Purpose and Method

Although there have been significant increases in the enrollment of minority students who are deaf or hard of hearing in educational programs, research on their school to postsecondary training and/or work experiences has yet to be reported in professional literature. In an effort to respond to this need, our research was organized around the following questions:

- What are their post high school goals?
- Who are their role models and who did they perceive were their key supporters?

- What postsecondary activity were they involved in one to two years after leaving high school, and what further goals did they hope to attain?

The initial method of data collection for this study varied significantly from previous research on the school to work transition of students who were deaf or hard of hearing (e.g., Allen, Schildroth, & Rawlings, 1989; El-Khiami, 1989; Bullis *et al*, 1990; Wagner, 1991). In contrast to earlier research on school to work transition, this study focused primarily on respondents who were members of racial or ethnic minority groups. A second difference was associated with the methods of data collection. During the first phase of the study, the data were not collected with a written survey or through proxies such as parents of program personnel. Instead, the data were collected through face to face interviews with students on their school campuses. The researcher who conducted the interviews is both deaf and a member of a racial/ethnic minority group. One hundred and one (101) students were initially interviewed on six different school campuses in six different states.

At the time of the interview, the participating students supplied the researcher with phone numbers and addresses where they could be reached for follow-up data collection. Using these addresses and help from the schools, 74 students were traced. Of these 74 students who received follow-up questionnaires, 46 respondents (62%) returned completed usable questionnaires. Several students had warm personal comments for the researcher who had interviewed them, indicating the importance of the initial face-to-face contact.

Sample

The 46 respondents were compared with the original 101 interviewees. No significant differences were found between the groups in the areas of race or ethnicity, school attended, gender, or future goals. There were slightly more male students (52%) in the follow-up sample than female students (48%). They were also predominately African American (44%) or Hispanic (46%) with a small percentage of Asian students (4%) and Others (6%).

Included in the sample were a significant number of students who had moved to the United States from other countries. Thirty-five percent (35%) of the students were foreign-born, which does not vary significantly by race or ethnicity. The youngest arrived in the United States at the age of 2, the most recent arrived at 19. The mean age of arrival for the students who were born outside of the United States was 11 years old.

The first interview was conducted during the Spring of 1993 or 1994. Students, who were all seniors in high school, ranged in age from 17-21, with a mean age of 19. This is consistent with Allen's findings (1994) that school leavers who are deaf and members of racial or ethnic minority groups tend to be older than those who are white. The follow-up survey was conducted 1 to 2 years after the initial face to face interviews. Students were 19-24 years of age, with a mean age of 21. These students were in the initial phases (e.g., first one or two years) of their postsecondary activities.

Students' Key Supporters During High School When Planning For Their Futures

As students plan and make decisions about their future goals, the quality of help and encouragement they receive from significant others in their home and school environments helps shape the kinds of decisions they make (Anderson & Grace, 1991). More students indicated they received "a lot" of encouragement from their high school counselors than from any other individual. When the categories of "a lot" and "some" encouragement were combined, Mother was the most often cited as encouragement provider. Father was indicated most often as providing no encouragement at all, and that is for those students who had discussed their future goals with their father. Finally, after fathers, vocational rehabilitation (VR) counselors were second leading category of significant others identified by the students as least likely to provide them with a lot of encouragement regarding their future goals or plans.

Initial Contacts with Vocational Rehabilitation

For most students who are deaf or hard of hearing, early contact with vocational rehabilitation (VR) counselors during their high school years is essential for developing plans for post high school transitions to postsecondary training and/or work (Allen, Schildroth, & Rawlings, 1989). It was apparent, however, that a significant number of the minority students participating in this study did not have either early or extensive contact with a local VR counselor.

Seventy-six percent of the students who participated in this study had been in contact with VR at the time of their initial interviews. Of those who had contact with VR, 82 percent had their initial contact during 12th grade, 12 percent in 11th grade, and less than six percent of the students had had any contact with VR prior to 11th grade. Many of the students contacted in 12th grade had yet to initiate any actual working relationship to discuss future goals or post high school plans.

Of the students who had actually worked with a VR counselor, 49 percent discussed their Individualized Written Rehabilitation Plan (IWRP). Thirty-three percent received help planning for postsecondary training, and 21 percent received assistance related to planning for and seeking employment after high school.

Respondents' Role Models

In addition to the help received from VR counselors and perceptions of encouragement or support received from significant others in their home and school environments, students were asked in their initial interviews to identify their role models. Popular figures or celebrities such as singers, actors, or sports figures were identified most frequently by the students as their role models. These were people outside of their everyday lives and experiences that the students, like most adolescents in general, are exposed to on a regular basis through the media or other related communications mediums.

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The second category the students identified as their role models were one or both parents. School personnel were the third most frequently identified sources of role models. They ranged from teachers, both deaf and hearing, to school support staff such as dormitory counselors, janitors, and coaches. The fourth group included former schoolmates who had gone on to postsecondary institutions or other admirable pursuits after leaving high school. It was also noted that a significant number of students were not able to identify individuals that they admired or considered to be their role models.

Students' Post High School Goals at Initial Interview

When asked what their plans were once they completed high school, 80% of the students indicated they planned to pursue postsecondary education. Fifteen percent (15%) indicated they would look for work, and 4% either didn't know or were planning to pursue both school and work activities. Some of the specific jobs or careers the students aspired to included:

- Director of a Social Service Agency,
- Lawyer,
- Teacher of the Deaf,
- Actor,
- Entrepreneur - own a business,
- Lab Technician (medical), and
- Career in the Medical Profession (medical research).

These types of jobs are also indicative that many of the students have high aspirations for themselves. Furthermore, employment in many of these jobs necessitate that the students attend and complete postsecondary education programs.

Factors That Influence Student Selection of a Postsecondary Program

Students indicated a variety of reasons for choosing a particular postsecondary program to attend. The largest percentage of students (39%) indicated they chose a particular postsecondary program because it offered the field of study or major of interest to them. Secondly, 36% of the students indicated they chose a program because they felt it was the type of program and school environment in which they would feel comfortable and accepted by teachers and students. Many of the students who indicated this as a reason chose to attend programs with large enrollments of students who are deaf or hard of hearing.

The third factor, indicated by 22% of the respondents, was recommendations from friends and/or former classmate attending the program of interest. A fourth factor, indicated by 19 percent of the respondents, was recommendations from one or both parents. The final factor was recommendations from the high school counselor.

Respondents' Post High School Activities One to Two Years After the Initial Interviews

One to two years after their initial interviews, activities of respondents fell into four categories;

- 61 percent of the respondents were attending school exclusively;
- 13 percent of the respondents were working exclusively;
- 13 percent of the respondents were both working and enrolled in a postsecondary program; and
- 11 percent were job hunting and not enrolled in a postsecondary program.

More than three-fourths of the students who planned to attend a postsecondary program at the initial interview were attending the type of postsecondary program (vocational, 2 or 4 year college) they had indicated they would attend. Over 80 percent of those who intended to enter the job market directly after high school were either working or both working and attending a postsecondary program.

In sum, the implications of the follow-up contacts are that a majority of the students were able to implement their goals and enroll in a postsecondary program or enter the job market.

In the next section, we provide a brief summary of some of the key findings from our national study of minority individuals in professional and technical jobs.

RESEARCH ON FACTORS THAT CONTRIBUTE TO THE SUCCESSFUL ENTRY AND ADVANCEMENT OF MINORITY INDIVIDUALS IN PROFESSIONAL AND TECHNICAL JOBS

As indicated earlier, minority student enrollments in educational programs serving deaf or hard of hearing students have increased significantly during the past 20 years. Furthermore, in some states, minority students are becoming the "new majority" in educational programs serving deaf or hard of hearing students. On the other hand, however, several studies in the literature indicate that significant numbers of minority students have not experienced high rates of success completing postsecondary education programs, entering and advancing in professional and technical jobs compared to their white deaf peers (Andrews & Jordan, 1993; Nash, 1992). Nash (1992) indicated that academic ability was not the dominant factor influencing minority student retention and graduation from a postsecondary program. He suggested that other factors such as those related to environmental supports and those related to one's personal qualities are as important as academic ability.

Through our research on minority individuals in professional and technical jobs, one of our goals was to obtain the respondents' perceptions of the most important factors underlying their success with regard to their education and their jobs. We asked the respondents the following questions:

- What factors contributed to their success in completing their postsecondary education?
- What factors contributed to their successful entry and advancement in a professional or technical job?

Two main groups of respondents were targeted through our research:

- minority persons who were deaf or hard of hearing and employed in professional or technical jobs; and

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- minority persons who were hearing and employed in professional or technical jobs serving deaf or hard of hearing persons.

Sample

Before discussing the responses to these questions, a brief demographic profile of the 153 respondents who participated in the study is summarized below:

Hearing status

- 51% were deaf and 49% were hearing

Gender

- 59% were female and 41% were male

Race or ethnic background

- 52% of deaf respondents were African-American
- 64% of hearing respondents were African-American
- 13% of deaf respondents were Hispanic
- 24% of the hearing respondents were Hispanic
- 32% of the deaf respondents were Asian/Pacific Islanders
- 11% of the hearing respondents were Asian/Pacific Islanders

Educational attainments

- 10% had Doctoral degrees
- 40% had Master's degrees
- 34% had Bachelor's degrees
- 16% had Associate degrees or less

Types of Jobs Held by the Respondents

The respondents' job titles can be categorized into five general occupational groups. These occupational groups include service providers, administrators, educators, and those working in a variety of technical jobs (see Figure 4). As indicated in Figure 4, a higher percentage of the hearing respondents compared to deaf respondents were employed as professional service providers (e.g., school counselors, VR counselors, and interpreters) and as educators (e.g., teachers in schools or as college/university faculty). On the other hand, significantly more deaf respondents were employed in technical jobs (e.g., CAD drafters and mechanical engineers).

Respondents' Perceptions of the Most Important Factors Contributing to Success

The top qualities identified by the respondents were as follows:

- positive self-image, attitude, and expression of pride in oneself;

- ability to be persistent and not give up easily;
- skills in self-advocacy and problem-solving;
- adequate educational preparation;
- good communication skills and flexibility in handling oneself in diverse situations;
- motivation—strong desire to succeed;
- ability to establish clear, attainable goals for oneself; and
- access to positive role models.

Concluding Comments

In our study of the post high school transition experiences of deaf students from racial/ethnic minority backgrounds, we noted that over three-fourths of the respondents indicated their post high school goals were to pursue postsecondary education. Most of the jobs and careers that a majority the respondents were seeking require postsecondary training. The extent of postsecondary training required can range from a minimum of a two-year associate degree to an advanced graduate degree, depending on the type of job and the knowledge and skills required. Also, for many minority students, planning and making decisions about post high school plans, successfully navigating through several years of postsecondary training, and making transitions to a career, requires unique types of personal qualities and support systems.

What types of personal qualities and support systems should minority students be aware of that can help make a difference in their efforts to make successful post high school transitions and be prepared for the changing demands of the workplace? Through our study of minority individuals in professional and technical jobs, we sought to identify some of these personal qualities and support systems. These were individuals who had successfully completed undergraduate and/or graduate degrees and were involved in a professional career. The key personal qualities identified by the respondents were those related to adequate educational preparation, persistence in achieving goals, a strong sense of self-pride, and skill in self-advocacy and problem-solving. The main sources of support were the respondents' family members (e.g., parents and siblings) and access to positive models in their educational programs and on the job. In conclusion, while this paper summarizes our preliminary findings, our goal is to provide more detailed summaries of our research in future publications.

Figure 1

Demographic Characteristics of Students who are Deaf or Hard of Hearing Enrolled in Educational Programs

Minority
24%

White
76%

Minority
40%

White
60%

Figure 2

Enrollment of students who are deaf or hard of hearing by race/ethnicity and type of program

Legend:
☒ White
■ Minority

Categories: Residential, Local, with hearing, Local, self-contained, Day schools

**Exit outcomes for school leavers age 14 and over who are
deaf or hard of hearing by race/ethnicity for 1993-94**

	Diploma	Certificate	Dropped out
Minority	23%	12%	5%
White	43%	10%	7%

Figure 4

Current Jobs of Study Participants by Hearing Status

	Service Provider	Administrator	Educator	Technical Position	Artist
Deaf	26%	26%	19%	25%	4%
Hearing	34%	26%	31%	9%	

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Services For Students Who Are Hard Of Hearing

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Introduction

The needs of postsecondary students who are hard of hearing are often overlooked by educators, adult service professionals and the students themselves. This morning, I would like to (1) present a working definition of the term "hard of hearing", (2) identify common issues that affect people who are hard of hearing, and (3) discuss the kinds of services or accommodations that would be helpful for students who are hard of hearing.

Definitions

Many professionals are now almost automatically use the term "deaf and hard of hearing" to refer to programs and services which were originally designed for individuals who are deaf. This leads to confusion. It is important to define what we mean when we talk about people who are "hard of hearing". Let's look at some commonalities among people who are hard of hearing.

- Individuals who are hard of hearing have some degree of hearing loss varying from mild to profound.

- The hearing loss could have occurred at any age, from birth or childhood to late adulthood.

- Most hard of hearing people are not affiliated with the Deaf community, do not use sign language and rely on English (or another spoken language) as their primary and preferred language. It has been estimated that only 1% of individuals with hearing loss learn sign language (Stone & Fennel, 1990).

- People who are hard of hearing can usually benefit from assistive listening devices to augment communication with others in one-to-one and/or group settings.

- Most hard of hearing people function primarily within the "hearing world" in terms of their family, friends and work relationships, and *want* to live within that world. They are "culturally hearing".

Question: what is the result of these commonalities? Answer: individual differences. For one thing, there is no "community" of people who are hard of hearing. In fact, most young people who are hard of hearing would say that they have never met another individual with a hearing loss, except perhaps a grandparent or other elderly relative. Because most do not have an opportunity to share and compare their experiences with others who are hard of hearing, they usually make assumptions about hearing loss which are similar to those pervasive in our society. These misperceptions contribute to the communication barriers they experience every day.

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Myths or Misunderstandings

It is ironic that misperceptions about hearing loss are so common and that it seems to be such an overlooked and invisible disability. In the United States, approximately one in nine people has a hearing impairment (Adams & Hardy, 1989). That means that we all know someone with hearing loss, although that person may not identify himself or herself and may not wear hearing aids which make the disability apparent. These are several reasons that erroneous assumptions about hearing loss persist and that it is considered primarily a consequence of old age, when actually 60 percent of those who have a hearing loss are under age 65 (National Health Survey, 1988).

One common assumption is that hearing aids "fix" or "cure" hearing loss in the same way that glasses can correct myopia. This suggests that if a person wears a hearing aid, he or she can understand others and communicate as if there is no hearing loss. Family members and friends usually believe this is true. We have all heard someone complain "If my grandfather (grandmother/mother) would just wear the hearing aids, we wouldn't have to shout all the time!" Or, "If he used his hearing aids, he wouldn't complain that everyone mumbles!" What are the reactions of the people who are complaining? Confusion, exasperation, frustration, anger. What about the person who wears the hearing aid and still cannot hear clearly? He or she will experience many of the same feelings, as well as guilt and anxiety, finding fault with the hearing aid for not working right or assuming blame for the fact that it doesn't solve all of the communication problems.

The reason why hearing aids cannot "fix" a hearing loss is that they *amplify* sound but cannot always *clarify* sound for someone who has a sensorineural hearing loss. Speech discrimination can still be problematic. And, in noisy environments, hearing aids amplify unnecessary background sounds as well as conversation, making them useless at best. Hearing aids can be helpful in many settings for many people, but they are just one piece of the puzzle in dealing with hearing loss.

Another misperception many people have is that speechreading or lipreading skills are easily acquired and can be used to avoid problems associated with hearing loss. Unfortunately, speechreading ability is dramatically affected by a number of factors — lighting, visual or auditory distractions, speaker facial characteristics or gestures, distance between the speaker and listener, listener characteristics such as visual acuity, motivation, anxiety, fatigue, etc. Speechreading is very situation-specific. Even in the best case scenario, speechreading is a guessing game, and is only one more piece of the communication puzzle. Most people do not know this, however, and assumptions about speechreading therefore also interfere with understanding the effect of hearing loss.

Similarly, many people who do not have a hearing loss (as well as some people who are deaf) assume that if someone can *hear* speech, s/he can *understand* what is being said. In reality, speech discrimination ability also depends on many situation-specific environmental, speaker and listener factors. Not only can a hard of hearing person fail to understand what is said, he or she can also *misunderstand* what is said. Sometimes misunderstandings or misinterpretations cause greater problems than not being able to understand at all. You may have heard about a book written a few years ago by an individual with a severe hearing loss entitled What's That Pig Outdoors?, a question the author once thought he was asked by a family member.

There is another misconception that professionals as well as others may believe and is particularly insidious. It can have a very negative impact on service provision for consumers who are hard of hearing. That is the assumption that the communication problems experienced by an individual are equal to the level of his or her hearing loss. This belief results in an interpretation that a "severe" hearing loss results in severe problems, and a "mild" hearing loss causes mild problems. If we were to follow this logic, we would assume that a person who is deaf due to a profound hearing loss has profound problems. Fortunately, we have the experience to know that this assumption is not logical and does not take into account individual differences and strengths. The same factors must be considered in assessing the impact of mild, moderate and severe hearing loss. In fact, the American Speech-Language and Hearing Association (ASHA) is considering how the use of those descriptors often result in more confusion than understanding, and may recommend changes in the terminology now used by audiologists.

Adjustment to Disability

In order to comprehend the communication difficulties faced by individuals who are hard of hearing, we must understand basic information about the hearing process. An audiogram can demonstrate the effect of a hearing loss on a person's ability to understand speech. In simple terms, an audiogram measures hearing acuity at various levels of pitch and loudness. Individual speech sounds fall within varying ranges of pitch and loudness, so that a person with a hearing loss might hear only parts of words. For example, some individuals with sensorineural loss might be unable to distinguish the letters f, s, th, and k but more easily detect vowel sounds such as o, a, and u. Gaps in auditory information are often "filled in" automatically, as when a misspelled word on a page is not detected. The gaps may be filled in incorrectly, however. A friend of mine who is hard of hearing once related a perfect example of this phenomenon. As a child, she was in a canoe with family members at a lake in Minnesota, when suddenly her sister and aunt began screaming "There's a skunk in the water! There's a skunk in the water!" As she looked about her to find the skunk, the others jumped out of the canoe. She was astonished that they would deliberately jump into the water where a skunk was swimming. Only when she turned around and saw a snake in the canoe did she realize that they had been shouting "Jump in the water!" Without a visual clue, "jump" and "skunk" sound alike to her!

Through experience, people who are hard of hearing can identify many common problems that affect their ability to understand speech. Speech discrimination ability is often reduced in the following listening situations: on the telephone; in a car; in the presence of background noise; when groups of people are talking; at lectures, plays or movies; when public address announcements are given; when traveling by plane, train or bus; in business or other meetings; when the listener does not know that someone is talking; or when he or she does not know the topic of a conversation. Clearly, many of these common problem situations could occur daily in postsecondary training settings.

In addition to information from an audiogram which can pinpoint specific speech discrimination limitations and the configuration of one's loss, how a person feels about the disability and what coping strategies he or she employs have a significant impact on that individual's ability to cope with everyday communication demands. Common reactions to hearing loss range from denial, frustration, anger and depression to embarrassment,

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interpersonal conflicts, and withdrawal from others. In light of the these emotional factors and the lack of opportunity that most people have to learn about hearing loss, share experiences, and use equipment and other modifications, it is not surprising that hard of hearing persons often lack effective coping skills which would maximize the use of their residual hearing.

Service Considerations

We need to understand more about hearing loss. "We" refers to hearing rehabilitation professionals and educators, deaf professionals, family members, friends, and coworkers, as well as professionals and consumers who are hard of hearing.

In order to cope effectively, a person who is hard of hearing must acquire many skills and have the opportunity to practice those skills to resolve or alleviate everyday communication problems. He or she must understand how the hearing process works and does not work, depending on the severity and configuration of his or her own hearing loss. The individual also needs to be able to assess each environment in terms of communication barriers, determine the source of potential and actual communication problems, and devise appropriate solutions. Then comes what can be the most difficult challenge -- taking action by changing one's behavior, telling other people what they can do to help, and reminding them when they forget.

Keeping all of this information in mind, what are the pieces of the puzzle that make up accommodations options for students who are hard of hearing?

- Outreach efforts to identify students and motivate them to use accommodations at school, in and outside of the classroom;
- Appropriate and thorough audiological evaluation and hearing aids;
- Availability and training in the use of adaptive equipment (FM or infrared systems, captioned videotapes, real-time captioning, phone amplifiers and visual alert devices);
- Attention to coping skills -- information about hearing loss, support groups, stress management instruction, and assertiveness training;
- Speechreading training, including sharing information about its limitations and/or effectiveness in various situations or settings;
- Notetaking services in the classroom;
- Environmental considerations, taking into account class scheduling, auditory and visual distractions, room acoustics, class size, breaks and other factors which can influence listening ability and fatigue;
- Resource information such as Vocational Rehabilitation, Self Help for Hard of Hearing chapters, written materials, local community service programs, counseling assistance, and resource development to expand what is locally available;
- Education about hearing loss for faculty members and other school staff.

Because there is a lack of information about accommodation options in most communities and within training programs, it is imperative that educators and administrators work in conjunction with other professionals to develop and enhance services for students who are hard of hearing.

Summary

It is clear that the needs of postsecondary students who are hard of hearing are in many ways unique, so that these students do not easily fit into the support system provided for other students with disabilities. We have looked at a definition which points out that the term "hard of hearing" can be used to generally describe many individuals who experience hearing loss but are not a part of Deaf culture. We have identified some of the common issues that affect people who are hard of hearing. We have also developed a list of possible accommodations that can be coordinated and/or supported by professionals in postsecondary settings which will enable students who are hard of hearing to more fully participate in college life and prepare for their future careers.

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Traditionally Underserved Deaf Adults: Triumph or Tragedy?

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Introduction

This seminar will try to offer characteristics of traditionally underserved deaf adults while also help you identify how your program can assist or provide needed services. Much of the information we have included was received from the Northern Illinois University Research and Training Center on Traditionally Underserved Persons who are Deaf and also from years of exposure and service to students in our postsecondary programs. A growing portion of "low achieving" deaf adults, in which a disproportionate number of who are also from minority backgrounds, are applying to postsecondary programs throughout the country. The more selective postsecondary programs have suffered some degree of enrollment decline. The extent of the decline in enrollment depended on how responsive they were to demographic insistence and if they found creative ways to accommodate students with complex and challenging needs. At the time of admissions, many students cannot meet the literacy requirements for admission. That's the time when a program stretches its role and must step outside the norm to accommodate individual needs.

There are many deaf adults who are very successful and have tremendous talents. Our presentation does not address this group. Instead, it deals specifically with deaf and hard of hearing students with multiple problems. They "lack a combination of communication, academic, social, and/or independent living skills to such an extent that they are unable to function independently without significant support services" (Long & Clark, 1994). These attributes are also applicable for vocational skills of the traditionally underserved deaf individual.

Traditionally underserved deaf students are applying to postsecondary programs and are entering classes. As a result, we have gone through many programmatic changes. We began asking questions such as:
- Where do these students fit into the services that we offer?
- What additional services do we need to better serve their individual needs?
- What types of support services must we provide to get results?
- What type of assessment data do we need?
- Are we able to serve this population? If not us, who?

Emphasis must be placed on the identification of needs for all students. The longer this phase is delayed, the greater the risk for failure. Appropriate data collection is important for several purposes:
1. Identifying physical, academic, social, emotional, and behavioral strengths and weaknesses

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2. Program planning

3. Establishing additional support services for counseling, care coordination, etc.

4. Setting academic and vocational/career goals

Once a traditionally underserved student enters a program, it is usually not sufficient to provide only an opportunity for access. Left unsupported, the student is very likely to experience a series of failures. If it is the opinion of staff members that services must be provided, then a support system must be established to help the student understand his/her rights, limitations, and needs. More importantly, he/she needs to know how to access the systems that can provide support. Services that are provided and those that are needed may not be parallel. Support is needed to:

1. Make the classroom instruction beneficial,

2. Increase employment potential,

3. Appropriately encourage the selection of appropriate career goals, and

4. Encourage good decision-making processes.

Identifying students who can be included in this group may be difficult. This population may also demonstrate one or more of the following characteristics:

- Minimal speech or speech-reading skills
- Low math skills (1st - 4th grade)
- Minimal to adequate range of sign language skills
- Limited social skills
- Poor emotional control
- Difficulty establishing social support
- Desire for either positive or negative attention
- May require long-term support for successful employment

- Low reading skills (1st - 4th grade)
- Limited writing skills
- Limited independent living skills
- Fundamental need for counseling
- Low frustration or tolerance level
- Impulsive behaviors
- Compulsive behaviors
- Generally poor attitude

One of the most important predictors of academic success is reading. A significant portion of severe and profoundly deaf 17 year old adolescents have very low reading skills. While poor readers can be found among all racial and ethnic groups, the problem is most acute among the African American and Hispanic American populations. This fact is of increasing importance to postsecondary programs because the portion of minority students in the pool will increase dramatically during the 1990s (Nash, 1991).

Many vocational and trade schools require at least a 4th grade reading level in order to benefit from instruction (U.S. General Accounting Office, 1986). If Allen's findings (1991) remain good estimates, then 19% of Hispanic deaf students, 22% of African American deaf students, and 52% of white deaf students read at or above the 4th grade reading level. This leads to the conclusion that many deaf young adults are illiterate.

Reality Rub: Student Profiles

The five profiles shown during the presentation have been consolidated for this publication. The profiles were gathered from information on students referred to our vocational assessment center as a result of exit exam failures, unsatisfactory progress, suspected learning disabilities, lack of progress, as well as for consideration for re-admission. One student was hard of hearing and did not have sign language skills. All five were from southeastern states. While the authors were unable to gather in-depth information on several students from secondary programs, records indicated a variety of completion credentials including state certificate, certificate of graduation, diploma, graduate, and unknown status. Of these five students, four were in college programs for approximately three years while the fifth student was referred for assessment after one semester and given information for further career exploration. The other four students dropped out of college because of either frustration and or the lack of funding.

- Average number of remedial course hours (n=5):   42 hours
- Placement scores required prior
  to taking major courses: Rdg - 41   Math - 42   Wrt - 41
- . Actual placement scores (n=5):   Rdg - 29   Math - 30   Wrt - 28
- Performance IQ, WAIS-R (n=5):   87
- Stanford Achievement Test - HI (n=3):   Rdg Comp - 3.0 (GE)

            Math - 3.1 (GE)

The Cost/Impact of Insufficient Data

What is the potential negative impact of not using assessment data for those individuals discussed in this presentation? In addition to not having information for guidance, program development, and appropriate support services, there are other costs that are described below.

Economic. Individuals misplaced or misdirected often deplete limited training funds from various sources such as Vocational Rehabilitation, scholarships, grants, family resources, etc. In addition, individuals spending years in programs where there is minimal ability to benefit, are losing valuable time away from the job market, the opportunity for advancement and salary increases . . . not to mention the tax dollars these individuals could personally be contributing.

Emotional. "Why wasn't I told the truth about my skills a long time ago?" is a question program staff often silently echo with students. The sense of frustration and failure can be an immeasurable cost, having a lasting impact on some of these students. The longer students remain within a college setting, and the stronger their self-identity crystallizes as a "college students," the more difficult it is to endure what can become a tremendous sense of failure. The often unmentioned reverse of a positive self-esteem is not only knowing one's capabilities, but also knowing and accepting one's limitations.

Data Collection: An Essential Component

Traditionally underserved students may come to programs at great risk for problems, having concomitant conditions and severe learning problems that make assessment information invaluable. Without clear descriptions of unique learning styles, academic potentials and achievement levels, the student is set up for failure and frustration as they move through a system that is not aware of or designed for their needs (Glenn, 1992).

Further supporting the concept of risk, Nash (1992) reported that hearing impaired students are at a great risk: only 50-55 percent will earn high school diplomas, 10-20 percent will receive certificates, and 25-30 percent will drop out. During recent interviews with supervisors of transitional studies including remedial and non-credit courses, they related that over the years they have served almost all of the deaf and hard of hearing students attending their institutions. A low percentage have completed the transitional studies program and successfully moved into their major areas of study. This is not to say that deaf students cannot be successful, but rather to imply that the system may not accurately evaluate and identify strengths and limitations of the students.

Assessment Reluctance: Why?

Regardless of the growing formal and anecdotal evidence that emphasizes the need for evaluative data to be used in determining programmatic needs, there continues to be resistance to gather and use this data by many support and instructional staff. The reluctance to use either diagnostic procedures or previous assessment information may be attributed to the following:

History of abuse. There appears to be an attitude carried over from the late 1960s when many training programs rightfully challenged invalid applications of assessment procedures. But assessment data, if correctly used, can assist career exploration, program selection, support service linkages, instructional methodology, etc.

Empowerment movement. In the past ten years, there has been a very strong movement to emphasize the abilities of deaf and hard of hearing individuals. Although this attitude has been and continues to be appropriate and beneficial, it has sometimes been taken to extremes, almost ignoring what individuals cannot do, potentially misleading them.

Open door admissions. Many community colleges have open door admissions policies that involve minimal entrance requirements. These flexible requirements are often a boon for adults who have the skills and potential to success; however, the process may also allow students to enter programs without accurately evaluating or gathering information needed to identify strengths and limitations.

Turfism and time restraints. It takes time to collect data and it takes trust and effort to work with other specialists unfamiliar with deaf and hard of hearing students. Turfism and the tendency to "be all things" to our students sometimes prevents professionals from using specialists to assist in the data collection process.

Career Development. Most models of career development support the notion that children begin vocational exploration by first following their interests, dreams, and fantasies, and later dreams and interests are tempered by realities provided by actual capabilities and limitations, achievement, and experience. Without clear information concerning student potential, systems can inadvertently prolong a fantasy stage of career exploration. This experience can be described as a clash or internal battle between one's career interest and actual ability or potential.

Public Misperceptions. Like their hearing peers, some deaf and hard of hearing people can and do have challenges that make college success improbable. When students and program staff are not given accurate data, and when these same students remain within a college setting for long periods of time, an unfortunate impact relates to others misperceiving that "all deaf and hard of hearing people are unable to do college level work."

How To Minimize Costs?

Although the authors are not the "experts" and continue to struggle with the best approaches to serving these students, we have a number of recommendations that might minimize frustrations. General recommendations for staff members are as follows:

Don't "throw the baby out with the bath water." Become comfortable with assessment information and use this information to assist students in making choices in a realistic manner. Enlist people with credentials in assessment, e.g. psychologists, diagnostic evaluators, vocational evaluators, etc., to assist in understanding and explaining information in an honest, helpful, and sensitive way.

Know "red flags." Become knowledgeable of the skills and abilities required by various programs and majors, and know the signs or indicators that might indicate a potential inability to benefit by continued efforts.

Investigate and innovate. Take the time to investigate staff or student concerns about learning difficulties. Ask for permission to request additional information from other sources, e.g., high school records, teachers, and/or referring agencies having other assessment data, etc. Also, ask open-ended questions of students showing serious learning problems. Their responses to these questions might lead to recommendations of additional assessments. Questions might include: specific duties and opportunities of chosen major, local and state geography, and even elementary questions concerning calendar/time and general knowledge of the environment, to name a few.

Formal service coordination. Case management or formal service coordination can also be very helpful. Once the student is accepted, it is important that regularly scheduled meetings are held between the case manager and the student. Progress should be assessed, barriers identified, and problem-solving techniques practiced. A formal case management process can structure the needed assessment and help develop plans for academic, independent living skills, and counseling. A case manager can also assist with the coordination of monitoring reassessment needs and recommend any programmatic changes. Using this process, there is a good chance that

students will not attend a program for years with little or no benefit. Systematic case management can promote ongoing meetings with opportunities for open discussions concerning student potential and performance standards.

Advocate and collaborate. Postsecondary staff members must communicate with referring parties, e.g., secondary programs and vocational/human service agencies, etc., regarding the skills and competencies needed to become a successful consumer of various majors and programs. In addition, staff members need to become advocates for the following:

- Career guidance and counseling
- Early and compassionate assessment sharing
- High standards and rigorous training
- Early career/occupational exposure
- Accurate and non-misleading graduating credentials

Training and sensitizing. Professionals knowledgeable about the potentially negative effects of paternalism and overprotection should sensitize and train staff about the very human, and, most often, well-intended feelings that can sometimes lead to open and frank discussions about performance and potential.

While an individual may function at a higher level in one area, it is the overall level of functioning that is important when determining a classification of traditionally underserved. Areas of consideration should be independent living skills, vocational skills, academic achievement, and social/emotional skills. We must look at the broad picture and plan for a total program. In order to plan effectively, we suggest the following programmatic concepts:

- regular meetings to discuss program progress in each class
- flexible time limits
- program alternatives to address functional academics, sign language classes, etc.
- positive emphasis on vocational courses and behaviors
- behavior management support
- work adjustment skills and career counseling made available to all
- on-the-job training opportunities
- tech-prep concept adopted, including hands-on, applied learning in technical areas
- pre-college preparation program
- cooperative efforts with high schools that refer students

It is strongly recommended that assessment data be compiled to include: psycho/educational information, physical and occupational therapy, social-emotional adaptive coping, and sign language assessment data, along with reading, math, and writing levels.

A tremendous amount of information about the traditionally underserved deaf and hard of hearing population was made available from the Northern Illinois University Research and Training Center on

Traditionally Underserved Persons who are Deaf. Unfortunately, this center lost its source of funding and closed in 1995. This is an example of how funding sources for the programs that serve multiply disabled deaf people have been cut, and then cut out.

In closing, the Commission on the Education of the Deaf raised the issue in 1988 in <u>Toward Equality: Education of the Deaf, A Report to the President and Congress of the United States</u>:

> The vast majority of postsecondary-aged deaf persons are unemployed or seriously underemployed because appropriate rehabilitation training and related services are not available. . . . Under the current system, state rehabilitation agencies must provide time-limited services and, consequently, they cannot always deliver comprehensive rehabilitation services to a population whose rehabilitation needs are long-term and intensive (p. 69).

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Tools For Language: Rehab 101 and Cultural Diversity*

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I have a difficult topic to discuss because we do not have a universal curriculum that is developed for teaching language to deaf and hard of hearing people. It is also a well-known fact that one of the major problems that many deaf and hard of hearing persons who are in transition, unfortunately, face is communication barriers. In that regard, Deaf ACCESS provides these individuals with an outlet for socialization and information while responding to their language needs during involvement in rehabilitation, transitional instruction, and independent living programs. This presentation will provide an overview of the role of rehabilitation in facilitating the transition of deaf and hard of hearing individuals to post-secondary programs and the general community through direct instruction and independent living programs.

Using several case examples, this presentation will also describe the various approaches used by Deaf ACCESS as a rehabilitation program to provide culturally diverse deaf individuals with language skills to succeed in post-secondary programs and the larger society.

Mission Statement

Our mission states that we strive: "To provide opportunities for deaf and hard of hearing individuals to succeed in post-secondary training and community settings." To accomplish this there must be significant people in the deaf and hard of hearing individual's cultural, training, and work environment. Providing appropriate educational and rehabilitation services to deaf and hard of hearing individuals, especially those who also possess secondary disabilities, has historically presented challenges to us. Characteristics common to multiply handicapped deaf individual include limited communication, low reading and writing skills, deficits in intellectual functioning, and lack of an adequate support system. Before the journey of adult life transition begins, these individuals must develop language skills in order to communicate.

Deaf ACCESS' Language Assessment

In 1981, Rehabilitation Services through Deaf ACCESS initiated a program to assess language functioning of deaf adults in Arkansas. The language assessment tool was created as a result of the need to test language ability. Approximately 25 deaf adults were referred to Deaf ACCESS for language assessment. Sixty percent of the referrals were Black and most of them were from the eastern Mississippi-Delta area of the state. There were also referrals from the Ozark region of the state. Many were drop-outs; only a few of the 25

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referrals had graduated from high school, and those returned home without any established vocational goals. These individuals were referred by regional independent living counselors across the state.

Tools Used

The tools we used were simple--an 8mm projector and a film entitled, "Life on the Farm." The purpose of the film was to evaluate the communication skills and assess the various communication modes each client used. Some of the areas tested were receptive fingerspelling, expressive fingerspelling, receptive ASL or signed English, reading, writing, etc. We selected this film because it had a lot of action and a variety of animals were shown with a farmer and his family doing a variety of work.

After the assessment was completed, the client was scheduled for individual classes with an instructor and a peer partner. A peer partner must have effective interpersonal skills as well as knowledge of certain ethical issues and program rules and policies. Such policies include confidentiality, record keeping, and verbal reporting to the appropriate personnel.

The peer partner promoted a positive image to the community by utilizing deaf organizations and other educational programs as resources for each client's learning experiences. As a result of these efforts, several senior citizens became interested in helping the deaf clients learn language. Therefore, we created a new program called "Project Granny." Each client was assigned to two or more senior citizens working with learning projects.

Another tool we used for language development evolved because one of our peer partners was an artist. He drew pictures and went on site to enhance learning. Presently, we have changed some of our procedures for teaching language. In keeping up with technology, we use Apple computers and programs for language development. Staff members make videotapes demonstrating sign for a variety of situations. The tools that involve more visually-oriented objects are most effective.

Case Studies

Four case examples are presented with information included on eachindividual's educational background and related personal data. I will describe the reason for referral, the services provided, and service delivery outcome for each case.

Case Example 1

After graduation from the Arkansas School for the Deaf in 1991, Tim, a white male who became deaf at age 9 months due to spinal meningitis, returned home and remained there for two years. During that time, Tim married and secured a job. Unfortunately, he begin to experience marital problems, and eventually was divorced. The divorce became too much for him to deal with and, after losing his job, he had no money to pay bills.

In 1993, an independent living counselor in the local rehabilitation office referred Tim to Deaf ACCESS for temporary housing while he looked for a job. Tim and his instructor developed a lesson plan for job seeking strategies, language development to strengthen present skills, algebra instruction, and participation in the adult education program at the Arkansas School for the Deaf. Tim secured a job as a custodial worker, but didn't know at that time he was preparing himself for something that would change his life. Tim's instructor advised him of his potential for college. He increased his desire to improve his language skills and eventually took an entrance exam and was accepted at Gallaudet University. As another accomplishment, Tim was not required to take preparatory classes due to his high scores on his entrance exam. Presently, Tim has successfully completed his first year in college. He works as a mentor at Deaf ACCESS during the summer.

Case Example #2

Tommy is a Black male who became deaf at the age of 3 years due to meningitis. Because Tommy's parents had no prior experience with deaf people, they were uncertain how best to assist him. Although they were advised by the family doctor to enroll him at the Arkansas School for the Deaf, his parent were uncomfortable with the idea of placing him in a residential living situation at a predominantly white school. Tommy's parents kept him home during his childhood years and he was not placed in any type of educational program. His world essentially revolved around his family and neighbors in his hometown. Because the town was small (approximately 200 residents), everyone knew each other and willingly provided support for one another. Thus, Tommy was able to converse with his neighbors using gestures and "home" signs. He did not have direct contact with service providers until a social worker visited his home when he was about 17 or 18 years old. The social worker decided to contact a local Independent Living Services (ILS) counselor serving deaf clients to assist him. After several visits, the ILS counselor, who was white, was not able to successfully persuade Tommy's parents to permit him to be sent to Little Rock for training.

A year later, a Deaf ACCESS staff member who was a black professional, made a visit to Tommy's home to encourage him to enroll in a Summer Language Evaluation and Training program. The black professional staff member, after a lengthy discussion, was able to gain the trust to Tommy and his parents to attend the training program in Little Rock on a trial basis.

This was Tommy's first venture outside of his southeastern Arkansas home area. Much time and effort were provided by both a black professional and black deaf peer partner in helping Tommy adjust to the new environment. He moved into a boarding home.

Transportation was provided, but Tommy eventually learned how to ride the city bus. Instructional services in independent living and communication occurred at Deaf ACCESS and in the home of a black deaf peer helper. Because of the instruction he received in ASL, plus his daily exposure to fluent deaf and hearing ASL users, his communication skills improved dramatically. He was obviously very observant and a quick learner. In addition, he received on-the-job training in janitorial work at Deaf ACCESS and was employed

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there for a short time before obtaining full-time employment. He has successfully maintained his job for the past eight years, has his own apartment, passed the driving test, and is saving money to purchase a car.

Case Example #3

This is a case example of an 42 year old white female named Sue who is deaf and has cerebral palsy. She attended special education classes in Little Rock for twelve years, then returned home in the rural Ozark region to live with her mother and sister. Initially, she had a difficult time getting assistance in her small rural hometown. Several months later she was residing in Human Development Center and stayed there from 1974-1984.

She was referred to Deaf ACCESS in 1984 by her local counselor. Her overall goal was to become independent. Information we received indicated that Sue could not function on her own, was mentally retarded, and required 24 hours daily supervision.

The instructor assigned to Sue observed an enormous amount of energy exhibited by Sue in her quest to learn. Sue lived in an independent residence for women and commuted each day to Deaf ACCESS on a city bus. The staff of the women's residence had an ongoing collaborative relationship with Deaf ACCESS' staff by providing interpreting support, sign language classes, and other consultation requested.

Deaf ACCESS' staff provide transportation instruction for Sue and she learned to use public transportation in one week. We provided language skills class, and interpersonal skills training to help her out of the institution mode to which she had become accustomed.

Presently, Sue works in a supported employment program and continues to use follow-up services with Deaf ACCESS. She is a sociable young woman who has maintained her own apartment. Her willingness to succeed in life helped her overcome many educational, social, economic, and communication barriers.

Case Example #4

Wan, an Vietnamese male, was born in 1974. His five sisters and parents are hearing. Wan never attended school in Vietnam. He communicated by using gestures and acting out his thoughts. He moved to Arkansas from a Philippine refuge camp to join his family in 1990. Wan stayed home with his parents after he arrived in Arkansas and was not involved in any programs. An independent living counselor referred Wan to Deaf ACCESS for instruction in American Sign Language, social skills, and literacy. Communication was very difficult.

During the admission interview, Wan used gestures and his parents spoke Vietnamese. The Deaf ACCESS staff relied on Wan's cousin who spoke Vietnamese, English, gesture, and home signs to faciliatate communication. Fortunately, Wan was a fast learner with good social skills. His living environment provided a healthy and positive learning experience.

After developing the ability to communicate in ASL on a basic level, Wan worked with the staff at Deaf ACCESS to consider employment opportunities. When asked about past work experience, he told us of his experiences in Vietnam. His family was very poor and had to do whatever they could to get by. He described a particular time when he earned money by selling gold at the street market. While it was difficult to understand the details of his tale, it appeared that he was employed to dig up bodies of the deceased for relocation. He explained workers who wore tall black rubber boots and gloves as the dug in graveyards. When they reached the bodies, they would remove all the jewelry and even gold teeth, hiding them in their boots and inside their gloves. These were all taken to the market later and sold for cash.

Wan was soon employed at a fast-food business in Little Rock where he learned many basic vocational skills. He then moved to the Hot Springs Rehabilitation Center for training in printing where he earned a printing certificate in December, 1993. He recently passed the written driving test, and has a certificate for successfully completing driving school.

Summary

It is apparent that language acquisition is one of the cornerstones for independent functioning. However, few tools have been identified that assist in teaching language to the special population of traditionally underserved and severely disabled deaf and hard of hearing persons. The Deaf ACCESS program has experienced successful results with a creative approach to teaching language to clients from a variety of cultural backgrounds. Components of this approach include:

- Creativity in designing language assessment and teaching tools.
- Use of a culturally diverse staff to develop rapport and trust with clients and their families.
- Individually designed teaching program to fit with the unique learning and cultural needs of the client.

This process is as effective as it is simple and low cost. Both staff and clients feel good about themselves and the mutual sharing of language. The Deaf ACCESS program will continue with this basic approach, and incorporate new tools and technology for language acquisition as our program continues to grow and develop.

Adjusting to Hearing Loss:
The Trials and Tribulations of a Deafened Adult

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The most effective way for me to begin explaining the issues related to working with deafened individuals is to describe my personal experiences in becoming deaf. I became deaf at 18 years of age due to a viral infection and high fever. I was a freshman in college and beginning to develop my own life plans. Having grown up in an Iowa farm community, I had no previous experience with persons who are deaf. I was also relatively unexposed to persons with disabilities or persons of other cultures.

I point out this lack of exposure to disabilities because the majority of persons who become deaf or are in the process of losing their hearing have had no previous contact with person who are deaf. They may have had contact with elderly persons who are hard of hearing or deaf but that is a normal expectation. People do not expect to lose their hearing as a young adult or in middle age.

As an 18 year old college freshman I was unable to accept my hearing loss and was living in a state of denial. I DID NOT WANT TO BE DEAF! Deafness is something that happens only old people. It was not supposed to happen to me. I did not tell anyone that I could not hear. I continued to attend classes and did not inform my instructors, classmates, or friends of my hearing loss. Some of them noticed there was a problem but I was not about to tell them.

I did not go to a doctor or seek assistance. The first time I went a doctor was when my parents took me during spring vacation. They noticed my hearing problem during my week at home. They probably viewed my failure to respond as being a teenage rebellion and I was blaming them for not telling me things or not speaking clearly. Internally, I was aware there was a problem but was not willing to admit it.

This first trip to an otologist that provided me with my first experience with doctors who have only a medical perspective of hearing loss. The doctor examined me and could not find any medical problem. He observed some scar tissue that was related to an infection but there was no visible problem with my ears. This doctor then suggested that I may be worried about the military draft (this was 1971 and the time of the draft lottery) and my hearing loss was a psychological reaction. I admit that I was not interested in being drafted but, 25 years later, it seems obvious that my deafness was not psychological. In private, the doctor also asked me if I had been smoking marijuana and if that may have been the cause. I had not yet been exposed to marijuana at this time so it was not a possible factor.

The feeling I remember most is that I did not want to be deaf. I was uncomfortable trying to explain my deafness to friends who had known me all my life. It was awkward to explain my hearing loss to anyone. I became isolated and chose to avoid obvious social situations if possible. In social situations, I was bluffing my

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way through conversations, usually smiling and nodding my head to comments from others. It was very embarrassing to deal with these situations and I am sure that I made a fool of myself many times over with inappropriate comments.

Looking for a Cure

I did not want to be deaf and was looking for a cure. I was only able to see the negative aspects of being deaf. I could not understand classroom lectures, residence hall conversations, television programs, radio programs, or use the telephone for conversations. I was depressed because I had become very dependent on the radio for entertainment such as baseball, basketball and football games. I was focusing on the things I could NOT do and was ignoring things that I could do.

While looking for a cure, I had to deal with communication myths that I had developed as a hearing youth. It was my belief that a hearing aid would solve all my problems. Everyone has read the advertisement that states something like "If you can hear sounds but not understand speech, this hearing aid is for you." That described my hearing loss exactly because I could hear people talking but could not understand what they were saying. I can remember my first hearing aid. It was purchased in a store about five blocks from campus. I tried the aid in the dealer's store and was able to understand his speech much better with the hearing aid. I was also able to understand the time when dialing the operator on the phone. I thought I had found my cure.

However, after walking back to campus and entering the residence hall, I discovered that I still had a problem hearing what people were saying. Did the hearing aid break during my walk back to campus? It was my first experience in comparing a nice quiet office environment with the real outside world. I continued to use a hearing aid for almost 20 years but the benefits I obtained were related environmental sounds rather than a significant increase in comprehension.

The next cure I sought for my communication problems was to learn lipreading. It was my belief that all deaf persons could lipread. Since my grades in college were worsening, I decided that to drop out of college, take lipreading classes and work on the farm where my receptive communication needs were minimal. Cows and pigs do not talk and I was smart enough to get out of the way if they started running at me.

I am sure that most of you are aware of the difficulties with lipreading. You can only see about one-third of the sounds as they are said and many of them look alike. I was never able to learn lipreading well. I nominate myself as one of the worst lipreaders ever. The only sentence I lipread well is when people I have just met ask me "Can you read lips?" The reason I am able to understand that question is because I have been asked 1,001 times. In my speech Thursday night it was 1,000 times but last night I went out to a restaurant and it became 1,001.

My inability to lipread or receive substantial benefit from a hearing aid added to the negatives I had been emphasizing with deafness. Written communication was my only effective mode of receptive

communication and few people were willing to use this method on a regular basis. I was telling myself "I can not do this" over and over. Deafness was perceived as a stigma and I was developing a negative self-concept.

People who become deaf later in life often have a similar perspective and reaction. Deafness is viewed as a negative and there is a need to assist these individuals in dealing with these negatives and developing a more positive outlook for themselves. To paraphrase comments by I. King Jordan, President of Gallaudet University, while deafness may not be a positive thing, you can not allow it to become a negative thing.

It was almost two years after losing my hearing that I informed of services available to me and introduced to sign language. Information on vocational rehabilitation services was given to me by a social worker I met while going for an ear examination. My parents continued to be supportive and arranged for ear examinations to seek a reason for my hearing loss. I was fortunate to have an excellent VR counselor who provided me with information on almost all the postsecondary education options available to persons who are deaf. These options included Gallaudet College, National Technical Institute for the Deaf, an oral program in Utah, TVI in St. Paul, California State University Northridge and the Program for Hearing Impaired (PHI) at Northern Illinois University.

I chose to attend Gallaudet College because it offered the four year program I was seeking. I took an eight week sign language class to prepare myself for Gallaudet. As you can guess, this class did not prepare me for the receptive communication skills needed at Gallaudet. My signs were limited to "My name is S-T-E-V-E" and a few other simple sentences. Regardless of my inability to sign, I did recognize that sign language was much more effective for me than any other communication method I had tried except for writing. I was able to develop my sign skills during my three years at Gallaudet and now it is my preferred mode of communication.

Adjustments

Now, I would like to use my personal experiences to assist you in understanding the adjustments faced by deafened adults. Zieziula and Meadows (1992) identified five major adjustment themes that deafened individuals confront: spectrum of emotional responses, secondary losses, confusion of identity, acceptance, and need for competent professional assistance from medical and social-support personnel. These themes were developed based on interviews with 11 deafened individuals in an effort to explain the emotions involved with hearing loss.

Emotional Responses

The emotional responses I have already discussed include denial and anger. I did not tell anyone I was deaf. Hearing loss is easy to hide and I did that for at least three years. Even today, I still hide my deafness and it is easy for me to do because I have good speech. I was also angry about the things I could no longer do, especially the loss of radio and listening to sports events. That caused a major change in my social activities.

The inability to carry on a casual conversation or to pick up the telephone and call a friend were aggravating. I was focusing on the negative and not looking for positive abilities.

If a deafened adult focuses on the negative, self-esteem will plummet and lead to feelings of depression and guilt. A person will always wonder if there was something he or she could have done differently to avoid becoming deaf. In the case of sudden onset, there are usually many "If" questions a person will ask themselves. In some cases, it is possible that deafness could have been avoided. However, it is not healthy to allow a person to dwell on the negative side of the situation.

Many deafened adults may view deafness as a temporary condition that can be cured by medication or surgery. I can remember my most frequent dream was that I was able to use the telephone. Looking back now, this dream represents my desire to be a hearing person. I no longer have that dream but I really can not tell you when I stopped having that dream. Since deafness if viewed as temporary, people prefer to hide it rather than acknowledge it publicly. The individual may display more anger-related emotions as it becomes obvious that deafness is not temporary (Larew, 1994).

Secondary Losses

Secondary losses refers to the impact hearing loss will have on the ability of the individual make adjustments for family, friends, work, and social activities. The deafened individual often is self-absorbed and not able to consider the impact their hearing loss has on others. The onset of deafness affects also impacts parents, spouses, siblings, children, and significant others. Having a deafened person in the family disrupts the established communication patterns and routines and communication becomes more labor intensive. Writing notes, speaking slowly to facilitate lipreading, and learning sign language are examples of changes that may be needed to develop effective communication. The deafness of one family member may create the feeling of extra responsibility (i.e., interpreting, making calls, serving as intermediary) for another family member. To avoid feelings of resentment and/or anger, these issues need to be addressed and resolved.

As I stated earlier, I was fortunate to have a supportive family. Every member of my immediate family has taken at least one sign language class. They are not fluent but they can communicate simple messages to me if they choose. I do have to admit that I have never discussed all the issues I mentioned with my family because we are not able to communicate fluently in sign language.

I feel there may be a similarity between families of deafened adults and the families of deaf children. If the family decides to learn sign language, they frequently learn only basic survival signs or homemade signs. Families do not receive enough information to make decisions regarding available options and services.

Confusion of Identity

Adjustments relating to identity involve the deafened person realizing he or she can no longer function as a hearing person. Most deafened individuals retain their speech skills so they are able to continue using

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speech. However, deafened individuals are aware of the lack of information they are receiving and, consequently, the need to develop alternative receptive communication skills. If the deafened person is introduced to other persons with hearing loss -- deaf, deafened or hard of hearing -- the individual becomes aware of groups of people who recognize their hearing loss and have adapted alternative methods of communication. Realizing this need for alternative communication and the fact that "I am no longer hearing" can cause confusion of identity.

Exposure to other persons with hearing loss assists deafened individuals in realizing they are not alone. They can explore social options available to them and possibly choose to become involved with other persons who have a hearing loss. The deafened person does not always make a choice between one group or another but, as all individuals tend to do, will gravitate to a group of people where they feel most comfortable. A change in social choices also impacts family members as discussed previously.

Acceptance

Accepting deafness is a process that requires a varying amount of time. In most cases, it takes an individual two to three years to integrate deafness into their lifestyle. This does not mean the individual cannot function prior to this time but that acceptance is a lengthy process. It is unrealistic to expect the individual to make the necessary life adjustments in a time frame measured by weeks or months.

Participants involved in the Zieziula and Meadows study expressed that while they had generally come to accept their deafness, there was concern that family members and significant others had problems accepting their physical and social changes. The necessary adjustments need to be discussed and agreed upon so that all family members feel comfortable with their expected roles.

Need for Competent Professional Assistance

The need for competent professional assistance is why I am talking with you today. Professionals in the field of deaf services need to be aware of the needs of deafened individuals. All too often, professionals recommend the person learn sign language and ignore the emotional adjustments I have discussed. It is important to understand that sign language is not the answer. Learning sign language can be helpful but it is not the answer.

Professionals need to understand the deafened individual is looking for a cure. Hearing aids, cochlear implants, and lipreading represent possible cures. As a professional, it is your responsibility to make the individual aware of these options, provide information on the pros and cons, and allow the individual to make his or he own choice.

Factors to Consider

When working with individuals who are deafened, there are five factors to consider. These factors are important with all individuals who are deaf but I will explain them as they relate to deafened individuals. The five factors are: age of onset, time elapsed since hearing loss, etiology of hearing loss, degree of hearing loss, and family reaction.

Age of onset is important as it relates to future plans. I could say that I was fortunate to become deaf at 18. I had not yet established myself in the work world and my future plans were still tentative. My hearing loss became a key factor as I developed my future career plans. People who become deaf later in life are not able to do this. If a person becomes deaf at age 30, having worked in a career area of 8-10 years, it would be very difficult to give up a job and go to college to learn new skills. There would be more adjustments needed if the person has family and other financial responsibilities.

The time elapsed since hearing loss is important because it will help you understand what stage of adjustment the individual may be experiencing. If the person has been deaf for several years and has received no assistance, it may take a longer time to develop a more positive attitude about hearing loss. If the hearing loss is very recent, then this individual may be denying the impact of hearing loss and looking for a sure cure.

Factors included with the etiology of hearing loss involve if the loss was gradual or sudden. Did the individual have time to prepare for loss of hearing or did it happen overnight due an accident, medical complications or other traumatic events. Several people I know became deaf due to neurofibromatosis (NF). This involves tumors on the acoustic nerve and also results in facial paralysis and other physical limitations. The trauma of NF or other disabilities must be considered when working with the individual.

The degree of loss has some impact on the individual's ability to benefit from amplification and their ability to continue to utilize speech for receptive communication. Many people who become deaf prefer to call themselves hard of hearing because there is less of a stigma involved. It is my opinion that individuals can label themselves as they prefer. I know several individuals who say they are hard of hearing but, in reality, they are deaf. I know my hearing loss is profound and my decibel loss is greater than many people who were born deaf. I called myself hard of hearing for several years even though I was only able to function at that level for two or three months.

Assessment of the family reaction allows the professional to determine what type of support system the deafened person has at home. As previously discussed, the impact of becoming deaf is not limited to the deafened individual alone. If a study was done, I think that the responses of families including deafened individuals would be very similar to those of parents of deaf children. Only a small number of families learn sign language and other communication options are often used. I am willing to bet that the deafened person often feels very isolated during family activities.

Personally, I was very fortunate to have a supportive family. I would not be speaking here today if they had not encouraged me to continue my education and supported my decision to learn sign language. My

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parents also provided financial support when needed. No one in my family is highly skilled at sign language but they have taken sign language classes and utilize fingerspelling and simple signs when needed.

Working with Deafened College Students

When beginning to work with deafened college students, it is important to answer two questions: "How does the individual communicate most comfortably and effectively?" and "What are the goals of the student?". If the individual is recently deafened, there is also the question of how to counsel a person who has no effective method of receptive communication.

Communication

For reasons already discussed, many deafened individuals are not skilled at lipreading. They may be able to use lipreading to communicate in one-to-one situations but would not be able to understand in a classroom setting. Based on their experience with conversations in different situations, deafened people may be more adept at anticipating questions or comments to assist with their lipreading skills.

Written communication is often effective with deafened individuals but the process is time consuming. When using written communication, phrases can often be used instead of complete sentences to save time. College personnel need to be aware of the need for written communication. Deafened people are similar to other persons with hearing loss in that they do not always admit they do not understand.

For classroom communication, use of voice to text translation is more effective than use of a sign language interpreter. Most deafened people are not skilled in American Sign Language (ASL). If they have learned sign language, it is often a form Signed English. Since English is likely to be the individual's first language, it is often easier to learn Signed English. It is essential that professionals understand that learning sign language is not the answer for resolving all the issues and adjustments faced by deafened individuals. It takes time for a person to acquire sign language skills, and frequently, the deafened individual does not have the opportunity to practice and develop receptive sign language skill levels needed to be effective in the classroom environment.

There are two different methods of providing voice to text translation. One is using computer aided realtime translation (CART) which involves hiring a court reporter who has the computer technology to convert their shorthand to text. This accommodation is often expensive, with fees ranging from $60-150/hour, depending on the court reporter and the location. Not all court reporters have the training or technology available to provide realtime captioning services. The National Court Reporters Association has developed a national certification test for realtime translation. Persons achieving this certification are able to translate materials at the speed of 180-200 words per minute with 96% accuracy or better. There are approximately 300 reporters who have the Certified Realtime Reporter (CRR) certification so availability is an issue. This situation is similar the existing problem with sign language interpreters in that there are many court reporters who do

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realtime translation but do not have national certification. Persons who want a list of certified reporters should contact the National Court Reporters Association.

Another form of voice to text translation involves hiring a typist and using a laptop computer. This method is less costly but also less effective as few typists are able to keep up with the normal rate of speech. Information is often missed so the student may not be full aware of topics discussed in the classroom. This shortage of information must be addressed and resolved.

Goals

It is important to be aware of the goals of the deafened student in attending college. The goal may be to learn a new career or to develop skills to continue current employment with different responsibilities. Deafened individuals may choose to learn a new career because of the communication demands in their job prior to becoming deaf. Some jobs, such as telephone operator, obviously require a career change. The Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973 provide a method for deafened individuals to retain their employment using reasonable accommodation. However, many deafened individuals are not aware of assistive devices such as TTYs, flashing signal devices, CART and other devices available that can provide accommodation.

The deafened individual may be able to continue to perform the job with accommodation but the communication demands are stressful. The individual may choose to pursue a different career where receptive communication is not as demanding. The person may also be seeking a change in environment. Staying in a job where you can no longer communicate with your co-workers can create stress, so moving to a new environment is seen as a way of relieving stress.

When advising the deafened student, it is important to discuss the communication demands of the chosen field and how the student may be able to cope with these demands. The student may need assistance in identifying career areas where his or her skills may be used but the amount of personal communication involved is minimal.

Conclusion

Assisting the deafened student at the postsecondary level requires an understanding of the adjustments that are facing the student. Of primary importance is assisting the student to develop receptive communication skills. The student should be informed of the communication options and allowed to choose the method they prefer. Exposure to other persons who are deaf, deafened, or hard of hearing is also beneficial. It allows the student to know they are not alone in dealing with hearing loss.

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Academically Gifted Deaf Students Attending Regular Four-Year Colleges and Universities

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Abstract

Recent research has indicated that there are approximately 2,000-3,000 deaf students attending regular four-year colleges and universities. The research has indicated that these students are academically gifted and have certain characteristics that contribute to their success in a mainstreamed postsecondary environment. It has been found that the students are integrated with their hearing peers and participate in the academic and social activities of their schools. Furthermore, interviews with both the students and the service providers shows that the adequacy and quality of services for these students varies from campus to campus.

INTRODUCTION

Academically Gifted or Academic High Achiever

A great deal of attention has been focused on meeting the educational needs of gifted students; however, we do not know if the same attention is being given to what we could call "gifted deaf students." The educational system in schools for the deaf is generally focused on meeting the needs of the average deaf student, or those most in need of special efforts. It is not to say that the bright deaf students are left out; there are many schools taking the needs of these students into consideration and providing an educational setting that meets their needs. We do not know, however, if "gifted" deaf students in the mainstream are receiving the same kind of support and attention that is focused on hearing students. It can only be assumed that each school may approach this issue in a different way,

It is also difficult to define what is meant by a gifted student, much less a gifted deaf student. There is no criteria to determine how deaf students could be classified as gifted or not gifted. Thus, it would be reasonable to state that, like any other student, some deaf students demonstrate the same academic ability and high achievement that some hearing students demonstrate.

This study, although not designed for the purpose of identifying gifted deaf students, discovered that some characteristics of these students clearly indicate they are "academically gifted" or "high academic achievers." It was felt, for the sake of clarity, that the latter term is more appropriate and there are several reasons for this. First, the term gifted is highly overused in education today. Second, a student, either deaf or hearing, can be gifted in one area of accomplishment, but may not do well in another academic area. For example, a student may excel in the domain of music, but do very poorly in the domain of mathematics. Third, the use of IQ tests to determine the academic placement or achievement of a student is a poor indicator of the

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student's ability in light of recent research on intelligence, especially that of Gardner (1993) and others in the field of multi-intelligence and cognitive development. Finally, each student is an individual; the student's background characteristics, secondary education, socioeconomic status (SES), parental encouragement, and other factors all contribute in some way to their academic success.

Before going into a discussion of the research and its findings, it is important to understand the growth of postsecondary education for the deaf which, outside of Gallaudet University, has occurred over a relatively short span of time. There is also a need to understand the influence of mainstreaming, in elementary and secondary education, on postsecondary education. Finally, an understanding of the size of the population we are dealing with and some of the problems that support services have faced in meeting the needs of these students is important in forming a picture of the current situation.

Historical Background

To understand the growth of postsecondary education for deaf students, a brief background of the general growth of postsecondary education in the United States after World War II needs to be understood. Three major factors contributed to the rapid expansion of postsecondary education in the years following World War II. First, the federal legislation commonly known as the "G. I. Bill" provided postsecondary educational opportunities to students who might otherwise not have gone to college. Second, the creation and growth of community colleges, which started in the late 1940's and reached a peak in the late 1960's, created new opportunities for postsecondary education. Finally, the "baby boom" generation, the large number of sons and daughters of WW II veterans, swelled the enrollment of students to a record number in the 1960's. These three factors contributed to the massive expansion in postsecondary enrollment, staffing, and construction of new facilities. It is more than likely there will be a further expansion in postsecondary education as the influx from the current large elementary and secondary population reaches college age.

During this growth in postsecondary education another boost came in the form of societal changes in attitudes regarding college attendance. This centered on issues of college opportunities for children from low-income families, leading to increased financial support on the state and federal levels in a variety of forms (Stuckless & Frisina, 1976). Support ranged from the already low tuition available within the state university systems and in newly established community colleges, to direct loans and financial aid that allowed children from low-income families access to, and choice of, a postsecondary institution.

The societal movement also brought attention to the needs and aspirations of minority sectors of our society, including the needs of those who were deaf. It is well known that, in the early years of this nation's history, postsecondary educational opportunities for deaf people were virtually nonexistent. There were scattered examples of deaf individuals attending traditional colleges and universities in the 18th and 19th centuries; however, opportunities for postsecondary education for deaf students in the United States in

significant numbers did not begin to occur until 1864 with the creation of the Columbia Institution for the Deaf, now known as Gallaudet University.

However, despite the size of the deaf population nationally, the creation of this specialized college did not result in large numbers of deaf students enrolling either there or in other postsecondary institutions. Part of the reason for this continuing small enrollment was that higher education was not widely considered appropriate for deaf people until well into the 20th century. Edward Miner Gallaudet, the first president of Gallaudet, wrote in 1893 that Gallaudet College could have doubled its enrollment at that time were it not for factors which included "the mistaken impression, more or less deeply seated in the minds of many instructors of the deaf, that higher education does not really promote the happiness of this class of persons" (Gallaudet, 1893, p. 2).

A survey, conducted by Bigman (1961) in 1955, of 1,857 institutions led to the estimate that there were only 65 deaf students in regular colleges and universities throughout the country. He estimated that between Gallaudet, which had 299 students in 1955, and all other postsecondary institutions, only 364 deaf students were enrolled in postsecondary institutions in the United States in 1955.

In 1965, 101 years after the founding of Gallaudet, Congress passed, and President Johnson signed into law, the bill establishing the National Technical Institute for the Deaf (NTID) as one of the nine colleges of Rochester Institute of Technology (RIT); this gave the country its second national postsecondary institution for deaf students. The first 70 students were enrolled in 1968; today, there are approximately 1,000 students enrolled at NTID.

The period of 1964 to 1970 saw a rapid growth of many other special regional and local postsecondary programs for deaf students. Today, the number of deaf students served by such programs is estimated to total around 5,500. However, it is noted that most of these programs have been established within existing two-year community colleges or vocational/technical institutions. In fact, Schroedel and Watson (1991) have reported that there is a predominance of two-year colleges over four-year colleges as host institutions for the 150 special postsecondary programs for deaf students which exist throughout the country today (Rawlings, Karchmer, DeCaro & Allen, 1991). Schroedel and Watson (1991) noted that, in 1985, "48% of the 140 programs were based at community colleges, 28% at universities, 13% at vocational-technical institutes and 10% at two-year or four-year liberal arts colleges." Therefore, it is seen that 71% of the special programs are based in two-year institutes. The reason for such a large number of deaf students in two-year programs is due partly to the open enrollment policies of these institutions, and partly to depressed academic performance among deaf high school students (Allen, 1994).

Influence of Mainstreaming

Although the establishment of these programs provided a wider choice for deaf students, access to the full range of colleges and universities in the United States was still limited. On the one hand, deaf students had

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a choice of attending established programs with adequate support services such as interpreters, notetakers and tutors, and often with specially designed curricula and instruction; on the other hand, if qualified, they could seek admission to regular colleges and universities of their choice, but with few or no special services in place to facilitate their academic success. Furthermore, from the information above, it is obvious that the number of special programs for deaf students in four-year colleges or universities was very limited. However, because of the influence of mainstreaming, more and more deaf students were opting for enrollment in regular four-year colleges and universities whether or not they had specially designed programs for deaf students, appropriate support services, or were devoid of services. To understand the reason for this shift in enrollment at the postsecondary level, we need to understand the influence of mainstreaming in the elementary and secondary levels of education.

Mainstreaming in Elementary and Secondary Education

Prior to the 1970's, most professionals considered special schools and classes to be the most appropriate placement option for students with severe disabilities. Such segregated schooling began to be questioned in the early 1960's and, by the 1970's, the concept of mainstreaming had moved to the forefront in the education of exceptional children. Supporters of mainstreaming believed that children with disabilities would benefit educationally by being placed in regular schools rather than in separate institutions (Winzer, 1993).

One of the agents for the transformation from segregated to integrated education was the passage of supportive legislation. Contemporaneous research indicated that four million out of seven million exceptional children were being inadequately served in separate institutions (Meadows, 1980). To address this inequity, PL 94-142, the Education for All Handicapped Children Act, was passed. A declining enrollment in residential schools for the deaf has been attributed to this law. While this decline really began before the law was passed, nevertheless PL 94-142 did have a powerful influence on the relative number of deaf students enrolled in schools for the deaf and in regular public schools. Today we are seeing even more powerful influences on schools for the deaf in the general form of governmental budget cutting; this is forcing states to reevaluate where deaf children will be taught.

Educators in the field of deaf education were aware that successful mainstreaming of deaf students required more than their mere placement in regular classrooms. Therefore, research focused on the relationship between successful mainstream placement and the degree of hearing loss, age at onset of loss, reading and language ability, and communication skills. Other factors such as race, sex, and economic status of the children were also investigated (Allen & Osborn, 1984; Karchmer & Trybus, 1977; Kluwin & Stinson, 1993; Moores & Kluwin, 1986; Northcott, 1971; Wolk, Karchmer, & Schildroth, 1982). All of this research focused on deaf students in elementary or secondary schools. However, we do not find any considerable amount of, or current, research on successful deaf students in regular postsecondary institutes, especially in

regular four-year colleges or universities. What research there is on postsecondary education has been undertaken in special programs for deaf students.

Mainstreaming at the College Level

It needs to be taken into consideration that PL 94-142, while not directly applying to postsecondary education, has had an indirect impact on deaf students enrolling in regular postsecondary institutions in increasing numbers. Because a large number of them had been mainstreamed throughout elementary and secondary school, it was to be expected that many of them would decide to continue their education in a mainstream postsecondary setting rather than enroll in one of the special programs.

Another major factor in the increase in enrollment of deaf students in regular colleges and universities was the passage of Public Law 93-112: Section 504, better known as the Rehabilitation Act of 1973, and amended in 1974. This law provided federal guidelines and requirements regarding access to postsecondary educational institutions, including special services as needed, by individuals with disabilities. Also contributing to the increase in the enrollment of deaf students in regular colleges and universities was the fact that postsecondary institutions, faced with declining enrollments, were more willing to accept students with disabilities (Chickering & Chickering, 1978; Frankel & Sonnenberg, 1978; Gjerdingen, 1977; Hurwitz, 1983, 1991; Kirk & Gallaghan, 1981; Lane, 1976; Mandell & Fiscus, 1981; Opperman, 1993; Rawlings & King, 1986).

Even with expanded access to postsecondary institutions, and the fact that the Rehabilitation Act of 1973 required postsecondary institutions to provide special services for disabled students, in the early years following this ruling, deaf students were often reluctant to make their needs known to the faculty and administrators of these institutions. It was not uncommon for deaf students to refrain from indicating that they were hearing impaired on their applications, or even after they had been admitted to their college or university (Chickering & Chickering, 1978; Hallahan & Kauffman, 1978). As a result, students sometimes did not obtain the needed support services and struggled through their programs, missing much of the information their hearing classmates received. Although many of them did complete the course work and obtain their degrees, the process was much more difficult and time consuming.

It needs to be remembered that, unlike the provision of other services for disabled students such as the installation of a ramp, providing special services such as interpreting and notetaking for deaf students is an ongoing expense. The expense of providing these special services for deaf students in regular colleges was often borne fully by these institutions, whereas virtually all the special programs were supported with federal, state, or local public funding. However, it should be added that state vocational rehabilitation agencies often paid for some or all of the cost of services; in fact, they continue even today to provide financial support for many deaf students attending regular postsecondary institutions. In addition, many deaf students are enabled to further their postsecondary education through Social Security Insurance (SSI) benefits.

Providing Support Services

Although the passage of PL 93-112: Section 504 helped open regular colleges and universities to students with disabilities, deaf students faced two obstacles. The first was that, despite the law requiring postsecondary institutions to provide special services to disabled students, the institutions were ill-prepared to provide them with an appropriate range of services (Chickering & Chickering, 1978; Hallahan and Kauffman, 1978; Mandell & Fiscus, 1981; Menchel, 1978; Redden, 1979).

A related problem was that, even if the institutions were prepared to provide services, the influx of deaf students into regular institutions was not matched by a supply of individuals who could provide the needed services for these students. One reason for this shortage was that, while the number of deaf students in postsecondary institutions had been increasing, the training of staff required to provide adequate special services for them had not been keeping pace.

The shortage of interpreting services for the general public is also reflected in postsecondary institutions. Stuckless, Avery and Hurwitz (1989) note that "the demand for educational interpreting services currently exceeds the supply" (p. 2). This example of a shortage in one area may also extend to other areas of special services such as notetaking, tutoring, and counseling. Current research confirms that there is still a personnel problem in providing support services to deaf and hard of hearing students. A report by the National Center on Education Statistics (NCES) (1994) has stated that:

> About one in five (18 percent of the institutions that enrolled any deaf or hard of hearing students in the last four academic years) had been unable to provide one or more requested support services to deaf and hard of hearing students. Fourteen percent of the institutions that had enrolled any deaf or hard of hearing students in the last four academic years had been unable to provide sign language interpreters (p. 22).

This report stated that the reason these institutions could not meet the demand for interpreters was there were not enough qualified personnel to meet the needs of deaf or hard of hearing students.

Furthermore, although it is known that interaction in extracurricular activities is an important part of life for any student (Tinto, 1987), research indicates that, approximately 20 years after the Rehabilitation Act of 1973, deaf students still do not have the support services they need to participate fully in extracurricular activities (Green, 1990; Strong, Charlson & Gold, 1987; Hurwitz, 1992; Walter, 1989).

It is an amazing fact that, with the shortage of interpreters, untrained notetakers, and other barriers to their education, the deaf students who are enrolled in regular four-year colleges and universities have done as well as they have under often very taxing circumstances. Nevertheless, this research indicated that the students who participated in this study do not regret their decision to attend a regular postsecondary institute rather than a program for deaf students.

Number of Deaf Students in Regular Postsecondary Institutions

As stated earlier, there are a large number of deaf students in regular postsecondary institutions; however, the actual number of deaf students enrolled full time in regular four-year colleges and universities is uncertain. There are several explanations for the difficulty in identifying the actual number of deaf students in regular postsecondary institutions. All students who identify themselves as having a hearing impairment, even a mild hearing loss, are counted in most of these studies as being hearing impaired. The exact number of deaf students who actually fit the definition of deaf as defined in this research (70 dB) is open to question; therefore, any comparisons among the various studies are very tenuous. Also, because regular colleges and universities do not require students to identify themselves as having a hearing impairment, there are many deaf or hard of hearing students on college campuses who have not been identified.

Nevertheless, there are several studies that provide a close estimate of the number of deaf students enrolled in postsecondary institutes. In 1988, Rawlings, Karchmer, and DeCaro identified 157 postsecondary programs that provided services for approximately 7,500 deaf students. It was estimated that an additional 30 to 40% of deaf students were enrolled in other colleges and universities (Rawlings & King, 1986). Around the same time, data obtained from 447 colleges and universities by the Association for Handicapped Student Services Programs in Postsecondary Education, now known as the Association on Higher Education and Disability, (1987) led to an estimate that, beyond the 7,500 deaf students enrolled in the special postsecondary programs, approximately 3,000 - 4,000 deaf students were enrolled in regular two and four-year institutions in the United States. Walter (1992) estimated that there were an additional 3,000 deaf students enrolled in regular colleges and universities who were not listed in the guide published by Rawlings, et al. (1988). These various estimates suggest that, as of 1987, the total number of deaf students in postsecondary institutions in the United States was between 10,500 and 11,000. It was stated earlier that around 5,500 deaf students were in special programs. If we include Gallaudet University and NTID, it is then estimated that between 3,000 to 4,000 deaf students were enrolled in regular two and four-year postsecondary institutions.

The most current data available from the NCES (1994) indicates that 20,040 students, enrolled in two and four-year colleges and universities, have been identified by their postsecondary institutions as deaf or hard of hearing. It should be noted that the 2,500 deaf students enrolled at NTID and Gallaudet University are not included in this survey. Among the groups identified by the NCES, 4,520 students were deaf, 7,770 were hard of hearing, and 7,750 were hearing-impaired students whose actual levels of hearing loss were unknown. If we assume that 50% of the last group are deaf, then the total number of deaf students rises to 8,395. Adding the 2,500 students at Gallaudet and NTID to this number yields a total of 10,895 which is very close to the independent estimate of 10,500-11,000 discussed earlier. Even in the NCES study, it should be noted that the number of deaf students is only estimated; the institutes reported only those students who have identified themselves as being deaf, hard of hearing, or having a hearing impairment. Students who preferred not to identify themselves or ask for support services may not have been counted.

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Several other independent estimates suggest there are at least 3,000 deaf students enrolled full time in regular two and four-year colleges and universities. However, how many of these students are enrolled full time in four-year colleges or universities remains conjectural.

METHODOLOGY AND DEFINITION OF TERMS

Methodology

The foundation of the research methodology used in this study is based on the importance of *working with* the research participants as *informants* rather than *subjects*. Spradley (1979) stated:

> Informants are a source of information; literally, they become teachers for the ethnographer .... Investigators are not primarily interested in discovering the cultural knowledge of the subjects; they seek to confirm or disconfirm a specific hypothesis by studying the subject's response. Work with the subject begins with preconceived ideas; work with informants begins with a naive ignorance. Subjects do not define what it is important for the investigator to find out; informants do (p. 25, 29).

Criteria for Selection of Students

The students selected for this study met the following criteria: (1) had a hearing loss of 70 dB or greater as measured in the better ear; (2) were sophomores or above in college; (3) were enrolled full time in four-year, accredited, undergraduate institutions within the New England region; and (4) were willing to participate in the study on a voluntary basis.

The reason for setting the criterion for the students to be in their sophomore class or above, was that by the sophomore year a student is less likely to drop out of college. Also, by the sophomore year, students have or have not developed friendships with their peers, are either participating or not participating in extracurricular activities, have made the adjustments to college life, have become comfortable with the college environment in general, and are able to evaluate their decision in terms of their satisfaction or dissatisfaction. Thus, by setting this criterion, the students in this study are fairly stable in their views and likely to persist to graduation, even if faced with difficulties, either of an academic or social kind.

No more than three students were interviewed at any one college or university in order to include as large a number of four-year postsecondary institutions as possible in the study. Each student was a voluntary participant in the study.

Criteria for Selection of Institutions

The institutions from which the student participants were selected met the following criteria: (1) did not have a program specifically designed for deaf students; (2) had fewer than 15 full-time deaf students enrolled; (3) did not have a coordinator of services for deaf students who devotes a minimum of 25% of his or her time to directing the program; (4) had an office or person responsible for disabled students services; and (5)

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were located within the New England region. Eighteen institutions, comprised of four-year colleges, and state and private universities, were selected on the basis of these criteria.

Inclusion of Service Providers

The coordinators of services for disabled students in these institutions were informed in an initial contact letter that the researcher also wished to interview them, during my visit to their campuses, in order to obtain their perspectives regarding the quality and adequacy of special services for deaf students. Upon confirmation of an interview appointment with a deaf student at each institution, an appointment was also arranged with the coordinator.

Locating the Students

Several methods were used to locate student informants:

First, letters were sent to members of the Association on Higher Education and Disability (AHEAD) who were located at institutions within the New England region. These letters were also sent to the offices of disabled student services of institutions in the New England region who were not affiliated with AHEAD. The letter stated the purpose of the research, inquired if any deaf students were attending their institution, if there were less than 15 deaf students, and asked if they would put the investigator in contact with these students through their office.

After confirmation that there were deaf students at these institutions, a "Dear Student" letter was sent to the institutions' coordinators to pass on to the appropriate students. The letter explained how the investigator obtained their names, the purpose of this research, and a request for permission to contact them directly to arrange an interview if they were willing to participate.

Second, contacts were made with deaf students attending colleges in the Boston area, with the understanding that they might be able to identify other deaf college students in the New England region.

Third, interpreters were asked if they were interpreting for other deaf students at institutions in this region. To protect the interpreters' code of ethics, no names were requested, but the interpreters were asked to inform the students of the research through a letter that was provided.

Fourth, assistance from the A. G. Bell Association for the Deaf was used to identify deaf students who had applied for scholarships over the past five years and were in four-year postsecondary institutions in the New England region. A letter was sent directly to the students explaining how the investigator obtained their name and the nature of this research. The letter was similar to the "Dear Student" letter sent to the service providers.

Through these methods, 80 deaf students from 32 four-year postsecondary institutions were identified. From this group, 33 students from 18 institutions were qualified and willing to participate in the study. The other students did not participate because: (a) they did not meet one or more of the criteria, e.g., they were

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freshman, or did not have a 70 dB or greater hearing loss; (b) they did not wish to participate in the study; or (c) the pre-determined criteria limited the number of deaf students being interviewed at each institution to three in order to provide a better cross section of students for the study from a variety of different kinds of postsecondary institutions.

Types of Postsecondary Institutions Attended

The students were enrolled full time in 18 different institutions, of which nine were private and nine were public. These 18 institutions had a total enrollment of 66 deaf students. The median was 3 with a range of 1 to 14 students. One large public university had 10 deaf students, and a small private college reported 14 deaf students. Two colleges, both of them small private institutions, had only one deaf student each.

The Interview

Introduction to the Interview

Prior to the interview, an informal meeting was arranged with the researcher and the student in an informal setting, such as in the lounge over coffee. Rapport was developed between the student and the researcher prior to the interview by sharing of experiences as deaf students and answering any questions they had.

The Interview Process

Audiotapes were used to record the interviews and interpreters were used during the interviews when necessary as a deaf person's voice does not always register well on audiotape; thus, the interpreter would voice for the student when necessary. The use of an interpreter also insured that valuable information given by each informant was not lost, and that probing questions could be asked for clarification.

An student interview *guide* (Appendix A), a service provider interview *guide* (Appendix B) and a demographic data sheet (Appendix C) were used during the interview. The interviews were structured so that each part of the interview referred to one of the specific questions which guided this research. During the interviews, interviewing techniques including reconstruction, open ended questions, reinforcement of responses, and probing were utilized (Bogdan & Biklen, 1982; Mishler, 1986; Seidman, 1991).

There were some variations from a typical interview in this research study. In a typical recorded interview, the researcher employs an audiotape recorder to record the interviewer's and the informant's voices. In this research, however, since both the student and the researcher were deaf, it could not be assumed that the quality of our recorded voices would be intelligible when played back on tape.

Therefore, in additional to voicing for the deaf person when applicable, it was also necessary to have an interpreter present for most sessions in the event that the informant or the researcher had difficulty understanding each other from speechreading alone. These variations from the typical interview led to several

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problems and several strategies were employed to overcome these problems; nevertheless, some information may have been lost.

Analyzing the Data

Transcribing and Coding the Data

The interviews were transcribed verbatim, with no grammatical corrections, and entered into a data base. The interviews were coded and analyzed following a series of qualitative methods in common use (Agar, 1980; Bogdan & Taylor, 1975; Mishler, 1986; Marshall & Rossman, 1989; Patton, 1978, 1990; Spradley, 1979). Coding was derived to obtain recurring patterns and themes for each research question.

Background Information

The demographic data (Appendix C) provided information on each student's degree of hearing loss, age at onset of the hearing loss, and the student's description of his/her hearing loss. The mean and range of the students' hearing losses were determined and the students were grouped by severity and age at onset of their hearing loss. The SES of the family was indicated by the family income and education of the parents. The families were grouped by family income and parents' education. The students' pre-college experiences were defined by their mainstreaming experiences as indicated in their interviews and the information on the demographic data sheet, by their GPA's, and by their Scholastic Aptitude Test (SAT) scores, including the mathematics and verbal test scores. Finally, the number of students who used support services in high school was noted.

Interview Data

Within the context of the interviews, the analysis sought recurring patterns in relation to the questions which guided this research. Data analysis was ongoing as the data were collected, through reflection, discussion, and memo writing. This ongoing activity helped direct the focus of the analysis when the transcribed interviews were coded for recurring patterns.

The intent of the analysis of the interview data was not to interpret what the students were saying, but to form a narrative summary of the students' responses which would allow the "voices" of the students to describe their own experiences. A procedure described by Seidman (1991) was followed which allowed the interview transcripts to be marked, reduced, and shaped into a form which could be reported in the context of the research so others could share and understand the experience of the students. Profiles of the students' experiences were formed through this method.

It was not possible to put all of the students' or service providers' "voices" in the final research report. Instead, a sample of the responses showing similar trends throughout particular sections of the interviews was utilized.

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Definition of Terms

For the purposes of this research the following selected terms are defined:

Deaf: The most common definitions of deafness are based on the degree of hearing loss as measured in decibels (dB) of pure-tone sounds necessary to hear across the 500-2000 cycles per second frequency range of speech, usually reported for the ear with the better hearing (Stuckless, 1987, pp. 368-9). For the purpose of this investigation, students with a loss at or beyond 70 decibels (dB) are considered deaf.

Interpreting/Interpreters: The use of a skilled intermediary to facilitate communication between hearing individuals and deaf individuals through the use of sign language and/or speech. As used in this research the term can refer to sign language, oral, or simultaneous interpreting.

Mainstreaming: The term "mainstreaming" came into being in the late 1960's when leaders in special education began to question the efficacy of residential or special class placement of handicapped children. In elementary and secondary education, mainstreaming means that a deaf student is placed full or part time in a regular classroom with hearing peers. Appropriate support services are provided for the student in the classroom, and resource rooms and other extra assistance are available for the student as needed.

All the students interviewed for this research were mainstreamed with hearing peers in a regular college setting and their support services vary. The literature review will also discuss deaf students in special programs who are mainstreamed with hearing peers, again with support services. The significance of the special program for these students includes the following: (a) support services tend to be more extensive than for the deaf students mainstreamed in regular colleges; and (b) there is an opportunity for social interaction with fellow deaf students.

Regular Colleges and Universities: These are accredited four-year undergraduate institutions, with or without graduate offerings, that do not include a special program for deaf students as defined below.

Special Programs: The 150 postsecondary institutions listed in Colleges and Careers for Deaf Students (Rawlings, et al., 1991) share the following criteria: (1) an academic unit specifically designed for deaf students; (2) an enrollment of 15 or more full-time deaf students; and (3) a coordinator who devotes a minimum of 25% of his or her time to directing the activities of the unit. Programs such as those at the National Technical Institute for the Deaf and Gallaudet University together serve more than 3,000 deaf students; most others serve between 15 and 100 deaf students.

Service Providers: As used here, this term applies to personnel who are in charge of providing support service to disabled students enrolled in regular four-year postsecondary institutions. They act in an administrative, supervisory role over persons who provide direct services to students, such as interpreters and notetakers.

Support Services: Services that are provided to deaf students in postsecondary institutions, such as interpreting, notetaking, tutoring, provision of speech amplification systems, reserved seating in classes, and other special provisions offered to deaf students in the academic and social environments within postsecondary institutions.

STATEMENT OF THE PROBLEM, THE PILOT STUDY AND RESEARCH QUESTIONS

Statement of the Problem

It is obvious from the data that more than 10,000 deaf students are presently enrolled in two and four-year colleges and universities in the United States. Because of their special needs, some of these deaf students choose to attend postsecondary programs for deaf students such as Gallaudet University or the National Technical Institute for the Deaf (NTID), or smaller programs that have been established throughout the country within local community colleges or four-year institutions. Other deaf students choose to attend regular postsecondary institutions where support services may or may not be available to meet their special needs. The number of deaf students whose choice is to attend regular colleges and universities appears to be larger than expected and may still be underestimated due to the inability to identify all deaf students who are enrolled at these institutes. Another factor that contributes to the uncertainty of the number of deaf students enrolled in regular four-year colleges and universities is the tendency to lump students with different degrees of hearing loss into a single category labeled "hearing-impaired."

The number of deaf students who will be attending regular postsecondary institutes perhaps will increase over the next decade. Several factors are indicative of projected growth: the influence of mainstreaming; the increased frequency of open door policies on the part of regular four-year colleges and universities to admitting handicapped students; the decline in the college age pool of students making institutions more willing to accept students they would not have accepted before; the increase in older students, some who will be deaf, returning to college for retraining or because of career change; and the increasing number of deaf students who are interested in a postsecondary education. Moreover, with the decrease in federal funding for special programs and the office of vocational rehabilitation, there is a possibility that more deaf students will be enrolled in postsecondary institutes near their home or within their home state rather than sent to special programs such as NTID or Gallaudet.

Although there is a large number of deaf students in regular colleges and universities, less was and is known about these students than about deaf students who enroll in the special two and four-year programs. The little that is known is more than 25 years old, and perhaps not applicable to the current situation in postsecondary education. The original purpose of this study was to gather information about salient characteristics of deaf students who enroll in regular four-year colleges and universities, why they choose these colleges over special programs, how they function in these environments, and the adequacy of the support services being provided to them in the regular college setting.

The information that has been obtained through this investigation should help deaf students, their parents, teachers, and high school counselors to better understand what is involved in a deaf high school student's decision to apply for enrollment in a regular four-year institution. This information should also be helpful to service providers and administrators in regular colleges and universities by providing a better

understanding of the special needs of deaf students and how these needs can be met through careful planning for, and provision of, needed services.

In addition, during the course of the study, it became obvious that certain background characteristics began to emerge that were common among the deaf students who participated in this research. These characteristics will be described within the contents of this paper and may be useful for identification of deaf students who have potential for high academic achievement.

A Pilot Study

Prior to initiating the present investigation, the researcher conducted a pilot study (Menchel, 1993). The most important fact to come out of this initial research was the finding of the degree of deafness of these students. Prior to undertaking the pilot study, it was assumed that most hearing impaired students who were enrolled in regular four-year postsecondary institutes were either hard of hearing or had a mild hearing loss. It was not foreseen that profoundly deaf students would be found among this population. The fact that all eight participants in the pilot study were profoundly deaf with a hearing loss of 90 dB or greater was an important finding and a major reason to widen the research to a larger group of participants.

Research Questions

This study as originally designed was guided by four questions.

1. Why do some deaf students decide to attend a regular college or university instead of a special program?

2. After a year or more of enrollment in a regular college or university, what reasons do these students give for being satisfied or dissatisfied with their decision?

3. How do they describe their academic and social experiences in college and what, if any, adaptive strategies have they developed in relation to their deafness?

4. How do their descriptions of the quality and adequacy of support services match or differ from the descriptions provided by the service providers in their colleges?

BACKGROUND OF DEAF STUDENT PARTICIPANTS AND A COMPOSITE STUDENT PROFILE

In the following section, the background data of the participating students is presented. It was noticed during the data analysis that similar patterns began to emerge among the participants. It was a striking fact that almost all of the students who participated in this study share all, or most, of the characteristics given here. This pattern led the researcher to classify them as high academic achievers. These characteristics could conceivably be used as predictors of potential academic success; furthermore, they can help counselors,

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secondary school teachers, and parents to identify and encourage academic development of these deaf students for a postsecondary education.

Vital Information

First, it is important to state vital information about these students and some of the similarities that were found among the participants.

Thirty-three deaf students enrolled at colleges and universities within the New England region participated in this study. All were Caucasian, except one student who was Hispanic, and all were single. Of the 33 students, 16 were in their sophomore year, 4 were in their junior year, and the remaining 13 were in their senior year. Ten of the students were male and 23 were female. The mean age of the students was 22 years (SD 3.02) with a range from 19 to 30 years of age. The oldest student in the sample had been out of college for several years before deciding to return full time to obtain an undergraduate degree. Of the 33 sets of parents of these students, 2 sets of parents were deaf.

Hearing Loss, Age at Onset and Description of Loss

Hearing Loss and Age at Onset

The distribution of the students' hearing losses in decibels (dB) as measured in the unaided better ear is as follows: one student had a moderate hearing loss of 70 dB, 5 students had severe hearing losses between 80 and 89 dB, and 27 had profound hearing losses of 90 dB or greater. Their mean hearing loss was 95 dB (SD 9.57) with a range of 70 to 110 dB. This is comparable to the degree of hearing loss that is found in the population at NTID and Gallaudet.

With regard to their ages at onset of deafness, 20 students reported that they were born deaf, 9 became deaf at age 4 or under, 2 became deaf at 18 years of age or older, and 2 reported that their deafness was progressive.

Students' Description of Their Hearing Loss

When the students were asked how they described themselves in terms of their hearing loss, 26 said they identified themselves as "deaf," 6 identified themselves as "hard of hearing," and 1 student used the term "hearing impaired." When questioned about using the term "hard of hearing" or "hearing impaired," one student quite strongly maintained that, even though she had a hearing loss of 90 dB, she was not deaf; instead, she considered herself hearing impaired as illustrated in the following quotation from her interview:

> No. I'm not deaf. I do not refer to myself as deaf. I am hearing impaired and I refer to myself as hearing impaired because I am able to hear everybody. I may not get everything 100% of the time, but I wear a hearing aid and if I can be helped by a hearing aid and I can hear you, I'm not deaf. I'm not deaf. I'm not deaf. If I can use a hearing aid, and I can hear people. .... I do not consider myself deaf. My friends do not consider me deaf. My teachers do not consider me deaf. Alexander Graham Bell Association does not consider me deaf. A lot of people are always surprised to find out that I wear a hearing aid. .... I think there's a

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distinction between being deaf and being hearing impaired. A deaf person cannot make a phone call. A deaf person cannot hear a bird.

Although this student is prelingually, profoundly deaf, one needs to respect the identification that individual students prefer. None of the students said they were trying to conceal their deafness; some simply said they did not feel comfortable using the term "deaf" when they saw themselves functioning more as a hard of hearing person than as a profoundly deaf person. Some said also that they identified themselves as either hard of hearing or hearing impaired and, since they did not know or use sign language, they did not see themselves as deaf in the sense of communication.

Oral and Sign Communication

Elementary and High School

Thirty-two of the 33 deaf students indicated they used speech and speechreading as their primary mode of communication throughout elementary and high school. Twenty-nine of the 33 students did not know or use any sign language prior to college. Four of these students reported that they also used a form of signing in elementary and high school, and used sign interpreters in class.

College

It was noted that all of the 33 students were wearing hearing aids during the interview. They indicated a dependence, at least in part, on amplification systems and the use of their hearing aids for communication inside and outside of the classroom. The fact that all of the students wore hearing aids is surprising. While statistics on the use of hearing aids by students across postsecondary special programs are not available, it is unlikely that the percentage exceeds 50%.

As previously stated, four students entered college with signing skills. Ten others were either learning or using sign language when the investigator met them for the interviews. The reasons these students gave for learning sign language included: (a) it was easier to follow a sign language interpreter in class than try and obtain information totally from speechreading; (b) the student may have developed a relationship with another deaf student who uses sign language; and (c) due to the change in attitudes toward sign language, they felt that there was no longer any stigma attached to using it and were free to express themselves as deaf people using this form of communication.

Socioeconomic Status of Their Families

The students were asked about their family income and parents' education. The results were as follows:

Family Income

The income of the families was distributed as follows: four families had incomes of less than $50,000, nine families were between $51,000 and $70,000, nine families were between $71,000 and $110,000, seven families had incomes of between $111,000 and $150,000, and three families had incomes greater than $150,000. One student was unable to furnish information on family income as he/she no longer had family contact. The fact that, of the 33 students' families, 19 had incomes equal to or greater than $71,000 indicates that there is a tendency for these students to come from upper middle and upper SES families.

Education of the Parents

In general, their parents were very well educated as the following distribution indicates: within eleven families, one or both parents had a doctoral degree; there were eight sets of parents where one or both parents had a master's degree; ten sets of parents consisted of one or both parents having a bachelor's degree; and there were four sets of parents where neither parent had an education beyond high school.

The upper SES of most of these families probably enabled these parents to provide more material advantages for their children than would be found in lower or middle SES families. Of the 33 deaf students, 6 went to private elementary schools and 8 went to private non-sectarian or Catholic high schools. Three of the students attended private schools for the deaf prior to entering a regular mainstreamed public high school.

Pre-College Education

Mainstreaming Experiences

Twenty-eight of the students had been mainstreamed in public or private schools for their entire elementary and secondary education. Three had attended an oral school for the deaf for their elementary education and then were mainstreamed into regular high schools. One student had attended a residential school for the deaf for both elementary and secondary school where signing was used in and outside of the classroom, and one student went to a special program for deaf children in a regular elementary school where an interpreter used sign language in the classroom.

High School GPA Scores

The students' GPA's in high school were well above average. Thirty-one of the students had GPA's of 3.00 or higher, and two students had GPA's between 2.00 and 2.93. Their mean GPA was 3.56 (*SD* 0.357) with a range of 2.43 to 4.00. Twenty-eight of the students reported having taken honor and advanced placement courses in high school, and they were all enrolled in college preparation courses. All of the students were accepted by at least 75% of the colleges to which they applied. Eight of the 33 students used early decision

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selection to enroll at the college of their choice; these eight students applied to only one college or university without considering any other institutions.

College Entrance Scores (SAT's)

The students had a mean combined mathematics and verbal SAT test score of 1120 (*SD* 232.48) with a range of 700 to 1450. Their mean verbal test score was 551 (*SD* 113.9) with a range of 340 to 710. Their mean mathematics test score was 593 (*SD* 134.5) with a range of 340 to a perfect 800. Considering the fact that the average combined SAT score for the four-year college entering class nationally in 1993 was 903 (Statistical Abstract of the United States, 1994), and also considering the fact that this score has not changed much over the past three years, these students have an average SAT score considerably above the national average.

Use of Interpreting and Notetaking Services

Twenty-nine students said they did not use the service of either an oral or sign language interpreter in either elementary or high school. Of the four students who said they had used a sign language interpreter in both their elementary and secondary school classrooms, three students said they used Signed English interpreting; one student used American Sign Language (ASL) interpreting; and one student used a Cued Speech interpreter for high school.

Seven students said they had used notetakers in high school, while the other 26 students said they either took their own notes or borrowed notes from a friend.

Fondness for Reading

When asked if they enjoyed reading, all of the students reported that they had been reading since they were young and still love to read:

> All my life, I always read books. When I was a young kid, when I first started going to school in _____ I had a very hard time. I didn't make very many friends. I was miserable. Kids made fun of me. And I think as a consequence I was lonely so what I did was I read. I still read an awful lot because you can read and you don't need anybody else for that. And the hearing doesn't matter.

> Like, last summer, I read a lot. I usually read a lot of books over the summer. I can't even remember what I read. I just .... I read weird stuff. Like, I'll read novels, I read magazines. I read Business Week, Time, Fortune, Forbes. I mean, I've found that deaf people .... deaf people who've done well, they .... one thing they have in common is that they like to read, it's been a great experience.

> I read the New York Times every morning. I eat breakfast in the cafeteria. I sit by myself and I read the paper. I read the sports and it's a good experience to understand what's going on in the world--with NAFTA with Mexico, what's going on in Russia, what's going on in Japan. I like to know what's going on out there. And I can't hear, I can't rely on hearing, so I have to read what's going on out there.

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Their fondness for reading may be an additional factor in the academic success of these students. This fondness for reading was found across all of the students participating in this study. It has also been noted that deaf students who have better academic performance usually have a reading level above that of the general population of deaf students. Their enjoyment of reading is probably linked to their college grades and to their verbal scores on the SAT, which are much higher than reported elsewhere (Walter, 1969) for deaf students graduating from high school.

Working Experiences During High School

The fact that 30 of the 33 students also said that they worked during the summer and/or after school, some since the start of high school, is an interesting observation. Their work experiences may have contributed to the self confidence expressed by many of these students in their interviews.

Using the data above it was possible to put together a composite student profile of the typical deaf student in this study.

A Composite Student Profile

The student is 22 years old, Caucasian, single, and female. She is a full-time, undergraduate student, living on campus, with a B academic average, and in her junior year. She was born deaf and has a 95 dB hearing loss in her better ear. She has good speech and a good command of English, and regularly wears a hearing aid. She also uses an FM system in the classroom. While her main mode of communication is speech and speechreading, the chances are about even that she uses, or is learning, some sign language. She considers herself "deaf" rather than "hearing impaired" or "hard or hearing." She is comfortable with her deafness and takes pride in what she has achieved. She is highly motivated and had set goals for a college education early in high school. She doesn't see her enrollment in a regular college as anything out of the ordinary.

She has loved to read since she was a young child and continues to read for pleasure in college as time permits. In high school, she held a full- or part-time job during the summer and continues to work during the summer to help pay some of her college expenses.

Her parents are both hearing. Both are college educated and one of them holds a graduate degree. They are employed in professional occupations and have an income around $90,000. She has lived in a middle class suburban neighborhood since she was born. She has had considerable parental support and encouragement in whatever undertaking she has attempted, including her enrollment in a regular four-year college.

Her entire elementary and secondary education was in mainstream settings where she had support and encouragement from her teachers. Her grade point average in high school was 3.5 on a four point scale. While in elementary and high school, she used neither an interpreter nor a notetaker; instead, she either took her own notes or borrowed her friends' notes when she was unable to take her own. She had speech therapy throughout

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elementary school and through her sophomore year of high school when she dropped it. She was enrolled in a college preparatory track and took honors/advanced placement courses. Her Scholastic Aptitude Test (SAT) scores were 551 verbal and 593 mathematics, giving her a total score of 1144. While in high school she had a small group of friends, all hearing, and was active in at least one extracurricular program. She applied to four colleges and was accepted by three, one of them being the college of her first choice. She made her decision to enroll in her present college after visiting the college and feeling comfortable that it would be able to provide the support services she needed. While she does not perceive herself as such, due to her high SAT scores and GPA in high school, she would be classified as an high academic achiever.

Discussion of the Profile

We need to be careful and not assume that this profile fits all deaf students in regular postsecondary institutes. None of the interviewed students precisely fit this profile. For example, 30% of the students who participated in this study were male. Three of the students were graduates of schools for the deaf, and two of the sets of parents were deaf. Not all of the students came from highly educated or upper SES families. Nor did all of them use speech and speechreading as their main mode of communication in high school.

While we must be cautious in generalizing beyond this group of students, the data suggest that education and economic levels of the family, and the use of speech and speechreading, are related to successful mainstreaming at the elementary and secondary levels. This in turn probably contributes to the deaf student's choice of a regular college for his/her undergraduate education.

The histories of hearing loss among the interviewed students appear to be relatively similar to those of deaf students reported elsewhere. Twenty-seven of these students had hearing losses in excess of 90 dB, and their mean hearing loss was 95 dB, well within the profound range. As a comparison, the mean hearing loss of students who entered one major postsecondary program for deaf students in 1994 similarly was 95 dB (Annual Report of the National Technical Institute for the Deaf, 1994). Also, like students in special postsecondary programs, a substantial majority of these students were either congenitally deaf or became deaf prior to entering school.

The Scholastic Aptitude Test (SAT) scores of the students in this study compare favorably with the norms for most hearing students entering college, whose national average in 1993 was a verbal score of 424, and a mathematics score of 478, for a total SAT score of 902 (Statistical Abstract of the United States, 1994). These scores in turn are dramatically above the scores of most deaf students entering special postsecondary programs (Walter, 1969) who reported a mean of 281 verbal score and a mean of 392 for the mathematics score. This resulted in a mean SAT score of 673. This is not to suggest that similarly gifted deaf students do not enroll in four-year colleges which offer special programs for deaf students. Undoubtedly many do, but not in the same concentration as the students interviewed for this study. Nor should it be inferred that all, or even

most, deaf students enrolled in other regular four-year colleges and universities exhibited similar academic profiles; however, again, many likely do.

DISCUSSION OF THE RESEARCH FINDINGS

Decision to Attend a Regular College or University

Students expressed three main reasons for enrolling in a regular college or university rather than in a college or university which featured a special postsecondary program.

First, most of these students had become accustomed to being mainstreamed throughout their entire elementary and secondary education and felt comfortable continuing in a "hearing" educational environment. They did not see themselves as belonging in a special program where there would be a large number of deaf students, an environment with which they were not familiar.

> No, because I don't sign, and they are primarily signing. I've been brought up in a hearing world. All my friends have been hearing; my family is hearing. And I just feel like I would have felt very out of place and I didn't feel that there was a need for me to when I can function fine in a regular environment.

> The reason that I decided to go to _____ rather than another college such as one with specific assistance or a deaf school is because I am much more comfortable in the hearing world.

> I actually did consider going to the college for the deaf, but I didn't really seriously consider it as if it would be a realistic possibility for me. Since I was mainstreamed all my life, I wanted to keep on going with a mainstream college.

Second, they felt they would not be academically challenged in a special program, even if their classmates were hearing students. Their high schools prepared them well for postsecondary education, many of them having experienced advanced placement or honors courses, and they felt they would be academically ahead of their deaf peers in a special program and would not find their courses challenging.

> The services--they weren't like Gallaudet or RIT--but I felt they were adequate and mainly the big thing was I liked the environment. I liked the school. I picked _____ because it was one of the best schools. I almost felt I had to go there. I did very well on the SATs, I was a National Merit, and did well in classes. It was almost expected of me to go there.

Third, they saw their prospects in graduate education and in their future careers being better if they graduated from a "name" college. The indications were that students interpret "name" in a variety of ways, even within this sample. They were, however, more uniform in picturing special programs as under challenging.

> Because if you were a big law firm employer in Los Angeles, would you be more impressed with a degree from _____ College or would you be more impressed with a degree from Gallaudet University? I tend to think at this point, or in the near future, that the guy will be more impressed with the degree from _____, which is the reason why I decided to come to a regular college, as opposed to a college for the deaf.

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I knew my social life at NTID would not be like real life. Maybe there would be some connections to the deaf community, but if I went somewhere like _____, then I'd meet like the Prime Minister of Canada's daughter or the President of Nigeria's daughter. Those are the kind of connections. This is real life.

These students' colleges ranged from large state universities to small private colleges, and they were enrolled in a wide array of majors. The reasons that these deaf students gave for selecting their particular college or university were probably similar to those of other students, including financial considerations, an attractive program, far enough away from home but not too far, liking the environment, or having a relative or friend who attended the same college.

There was no indication from most of the students that they selected these particular colleges or universities because they knew there were other deaf students already on campus. More often than not, when there were several deaf students on the campus, they did not know each other or have a particular interest in establishing contact. Each student had his or her own group of friends and, if there were other deaf students within that group, this happened more by chance than by intention.

There were exceptions, however. A small number of deaf students did make contact with other deaf students, either at their own institutions or at other institutions where they were aware of their presence. Some established contact with deaf students on other campuses through the use of the Internet; this was demonstrated by the sharing of Internet addresses with each other. It appears that they developed a network of friends among themselves through the use of E-mail.

Parenthetically, of the 33 students, 31 made no effort to establish contact with the deaf community where their college or university was located. The two exceptions established only limited contact.

For most of these students, their decision to attend a particular postsecondary institution was based in part on whether or not the institution would provide needed support services. These students were aware of the need for support services in college, and some had already become accustomed to their use in high school. For some of the students, it was as simple as having appropriate seating or sharing the notes of a fellow student. For others, there was a need for a wider range of services including the use of interpreters, FM systems, notetakers and tutoring. Some students found that prospective institutions were not prepared to provide the needed services or did not provide them with satisfactory assurances, leading them to decide not to enroll in a particular college or university based solely on the fact that they would not have the support services they needed.

> _____ I rejected because the handicapped program was really terrible there. When I visited _____ and spoke to the people there they said that they could not provide me with the support services I needed. When the swimming coach at _____ heard about this he was furious because he wanted me on the team. He wrote a letter to the president of the university, but I had already decided to come to _____.

> It was hard. My mom had to fight. She had to get them to agree to give me the notetakers, stuff like that. Because I was one of the first to go there. I didn't think about those things. I was thinking, '_____ very challenging, a very rigorous environment.' I didn't think about

notetakers. Basically I wanted to go to the best, to one of the best schools in the country and learn. But yes, notetakers were important to me.

_____, I didn't want to go there because it's a very small group. I know it's an excellent education. I know it's a good school, but they wouldn't have interpreters.

In a way, in a way, because I knew that the resources here were very good. And I had talked to _____, who is the head of the Learning Assistance Center, where they have the notetakers and Phonic Ear, anything that you need. And I knew the resources were very good and they seemed very helpful and reliable in supporting my hearing loss. So I think it was a factor in a way , because I was looking for a school where they accepted disabilities and they accepted, like, people who had handicaps and needed resources.

Satisfaction With Decision to Attend a Regular College or University

Whether hearing or deaf, a large proportion of college students who withdraw from college do so during, or on completion of, their freshman year (Foster & Walter, 1992; Tinto, 1987). If the research had included interviews with deaf students who had withdrawn from regular four-year colleges and universities, these interviews would probably have disclosed numerous sources of dissatisfaction on the part of deaf students. As indicated in the review of the literature, Foster and Elliot (1986) interviewed deaf students who had transferred from regular two and four-year colleges to a postsecondary institution which included a special program and a large enrollment of deaf students. Complaints of the transferring students included dissatisfaction with teachers, support services, the college environment, and its social life.

I'm really, really glad that I decided to come here. I've made some really good friends. The people at the school are really what determined my decision to come here. The people here are the kind of people that I would want to know. The atmosphere of the school is very friendly. The people seem very receptive to others. And, as far as the programs of the school, I found that whenever I need any kind of assistance, I receive it in any way, shape or form.

However, all of the students participating in this study were returning students. Sixteen were in their sophomore year, four were in their junior year, and the remaining thirteen were in their senior year. When questioned, all of the students indicated they were satisfied with their decision to attend a regular college or university. None of them regretted the decision or wished he or she had attended a special program.

The fact that these students have continued to stay in college supports the belief that they were not only well prepared academically and had the reading ability to handle college work, but also that they had made an adjustment to college life. Nevertheless, numerous students were dissatisfied with some aspects of their support services.

Yes, I think I am very satisfied with my decision. I think I've grown a lot, I've participated more now. I am group coordinator and President of my Amnesty International chapter, I'm very articulate. I work a lot with the faculty and the alumni and the students. I work in groups a lot. I'm very vocal and I get a lot done. Yes, I'm very satisfied now. I've grown a lot and I'm very satisfied now about my performance and how I'm interacting with people.

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It was reported elsewhere (Kluwin & Stinson, 1993) that deaf students who have a positive mainstreaming experience in high school are more likely to enroll in a regular college or university than are students who have a negative mainstreaming experience. It would be expected from the literature (Antia, 1984; Foster & Elliot, 1986; Gresham, 1986) that deaf students who had a negative mainstreaming experience as evidenced by feelings of loneliness and isolation, difficulty understanding the teachers, and feelings of being left out of the social activities of their high school, would be those most likely to enroll in a special program.

Yet, in the course of this study, several deaf students had expressed feelings of isolation when talking about their high school years in mainstream settings. These students had the option to attend a special postsecondary program for deaf students where they would have had deaf peers and all the support they needed; yet, they still chose to attend a regular college. These students gave several reasons for not selecting a special program.

First, they perceived that they would have a clean slate in college; i.e., be in a new environment where nobody knew them. They could work on having a more positive experience in college than they had in high school. In other words, they chose to become proactive and integrate themselves into the academic and social activities of their institutions.

> I'm a junior now, so I've been here for a little over two years. I've had a very positive experience here. I've had my ups and downs just like everyone else, When I came to college, I felt good about the fact that I had a clean slate. I could start all over and just be myself and, like I talked about high school, people pretty much have a pre-conceived idea of who you are, and especially when you're in a big high school. So I wanted to get over that when I came to college and be able to be myself, to show people who I am. And fortunately I've been able to do that.

> So when I got to _____ I decided that I was going to tell people that I was deaf, and people knew who I was. They knew that I was different in some way. And people saw me signing and they said, 'Oh, tell me the sign for this or for that.' A lot of people wanted to learn to sign, so we set up a club, a sign club, and we were all learning to sign at the same time. So it really helped me become more of a leader.

Second, like the other deaf students interviewed, these students were mainstreamed from an early age and thus may have seen themselves as "belonging" in a regular college environment rather than a special program. *Third*, these students also wanted to obtain a degree from a "name" college or university rather than from a special program for the same reasons stated above.

On a more speculative level, it is also possible that the negative social experiences these students had in high school made them more determined to succeed during their postsecondary education, and better able to detect and avoid the pitfalls associated with their previous mainstreaming.

The findings from this research suggest that deaf students, who enroll and remain in a regular postsecondary institution, are able to make the transition from high school to college much as other students do.

> I talked with them at the beginning of a semester. And I'd say I had a notetaker and I might misunderstand something and I might have to ask a question. .... for the most part, they were very supportive. They understood what I wanted. And they encouraged me. In the

beginning, I'm sure they probably thought, 'Okay, he's an average student.' But I felt good and by the end of the year, I was the best student in the class. They never had a deaf student before so it was hard. But later on, they needed to expect more from me than everybody else because I was one of the best students.

Fall of my freshman year went pretty smoothly, it wasn't a very hard transition. I don't know why, but it wasn't. It wasn't that difficult for me.

While many of the students said they did not have a problem in making the transition from high school to college, others needed to develop appropriate coping strategies. For some students, this included learning to accept the fact that, while they might have been outstanding in high school with straight A's, they were now "just another student" and perhaps, even, an average student. By the sophomore year, these students had made the necessary adjustments to college, learned how to study, were using support services that they might not have taken advantage of in their freshman year, and were participating in the life of the college.

Not any more than anyone else, I still feel uncomfortable getting a notetaker. But I have one person in my nursing classes who's wonderful. She takes notes in all of my classes, and she's been my saving grace. And, in terms of getting adjusted, it was just like everyone else, I think.

In my first two years, it was very hard for me to maintain the levels that I was used to in high school. I was so used to making straight A's. Now I was in the middle instead of being at the top and I had a hard time adjusting. I made A's and B's, a mixture. But now that I'm in my third year I'm getting the hang of it and I'm getting back to straight A's. .... don't be afraid to ask for help. Everyone has the same frustrations, the same problems.

These students appear to have a strong internal locus of control. When they faced insensitive instructors, problems with obtaining support services, and coping generally with the environment as a deaf student in a "hearing" institution, they assumed responsibility for resolving problems. It is possible that deaf students cited in the literature (Foster & Brown 1986; Murphy & Newlon, 1987) as being isolated from their hearing peers and unable to cope in a regular college or university, tend to have an external locus of control which distinguishes them from the students who remain and succeed in regular colleges. However, for now at least, the influence of locus of control among deaf students on successful mainstreaming at the college level remains hypothetical.

The students' satisfaction with their decision to enroll and persist in a regular college or university may be rooted in their ability and willingness to take personal responsibility in developing friendships among their hearing peers, and in resolving problems as they arise throughout their four years of undergraduate studies. If this is so, such traits may well remain of value to them throughout their entire lives.

Experiences and Adaptive Strategies in College

Contrary to the researcher's expectation that some, if not most, deaf students would feel isolated and left out of the social mainstream of college life, these students are enjoying their present college experiences. In view of the literature (Brown & Foster, 1989; DeCaro & Foster, 1992; Farrugia & Austin, 1980; Foster &

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Elliot, 1986, 1987; Murphy & Newlon, 1987; Saur, Layne & Hurley, 1981; Saur, Layne, Hurley, & Opton, 1986; Walter, Foster & Elliot, 1987), it was surprising to find the degree of participation in extracurricular activities and the range of activities in which these students are involved. Furthermore, while participating in extracurricular activities, these students still managed to keep in good academic standing by maintaining a B average. Their academic success can probably be attributed in part to the fact that they have developed good study habits and were well prepared for postsecondary work. They accepted the responsibility for their academic success or failure. They also recognized the importance of support services to their academic success and did not accept the failure of support services to provide them with what they needed.

> I think now I've learned different ways of studying. I've learned how to be more efficient, more productive. And I've learned that there's some classes that you have to study differently .... some classes you have to do all the readings for, and there are other classes where you don't have to. You can get by without doing all the reading, just picking out the most important things to read that will help you the most. I've learned how to be more efficient, more productive.

> I feel like it's improved because I know what to expect from my classes and I know how to organize my school work. When I have a notetaker, I can't study from a notetaker's notes. I have to re-write the notes myself. And that helps .... it can be a little bit of a hassle.

> Last semester I needed to have a tutor for one of my classes because I had no interpreter. .... but after that, because I couldn't get the interpreter for my section at night, I just decided it would be better to have the one-on-one tutor anyway. And then I saw the tutor that I used from last semester last week and I said 'I'm lost with this other tutor.' It really helps to be one-on-one.

The academic characteristics of these students are extraordinary, relative to standardized achievement norms for deaf students nationally (Allen, 1994). However, the students themselves do not seem to see anything out of the ordinary in their being enrolled and faring so well in a regular four-year postsecondary institution. Perhaps this reflects their mainstreaming in high school; these were reported as normal high school experiences, perceived as substantially similar to what hearing students experienced.

No doubt, aided by their accumulated history of mainstreaming, they have come to accept being mainstreamed with hearing students as a normal part of their lives. They do not identify themselves with deaf people as a community or have the pressing need to interact with other deaf students. They are comfortable with themselves as deaf people in a hearing world. This does not imply that they do not have deaf friends, or avoid contact with other deaf students. It simply means that their deafness is a normal part of themselves, one they have become comfortable with, and, while causing some problems, it is not a major barrier to their obtaining an education in a regular postsecondary institution.

> I have a more active life here than in high school. I am on the _____ varsity swimming team, I have a hearing boy friend, I also have deaf friends in the community, I really enjoy my life here. The swim team members have been great and they always are so supportive of me. I never feel left out of things here. I participate in class a lot now, more than I did in high school. Like the other day I was in Expository Writing class and this person was talking

about something and I disagreed and he looked at me like, 'What? You challenged me??' and I said, 'Yes, I did.'

They participate in some sort of extracurricular activity in college, and many appear to be more active in college than they were in high school. They do not see their participation in these activities as anything out of the ordinary. For example, one student who has a 93 dB hearing loss and wears two hearing aids plays the violin in a strolling music group. She sees her musical activities just as something she has done since early childhood and not as something special. Another student with an 89 dB hearing loss is on her college downhill ski team, plays on the women's lacrosse team, and is also on the school's track team. Like other deaf students she sees these activities as just something she enjoys as part of her life. Other activities the students were involved in ranged from leadership positions in college organizations, membership on the debating team, writing and editing for their college newspaper, and coaching a swim team for disadvantaged children.

> I never really considered myself a leader until I was in college and people started wanting me to be their leader and asking me to be presidents of clubs and looking up to me and looking to me for answers and advice. And that really surprised me, because I grew up, like I said, I grew up with very low self-esteem. And I worked so hard to be as good as everyone else. And all of a sudden people are looking up to me. And that is a very strange experience.

These students have developed strategies which have enabled them to participate fully in these extracurricular activities. Some deaf students just accept the fact that they will not hear something and take it in stride. For example, some deaf students who play football (four in this case) frequently commit offsides, but they know that is just something that is going to happen and it doesn't change the way they play the game.

In developing strategies in academic areas, students seem to regard what they do as a normal part of their lives. If they have a problem with an insensitive instructor, they will resolve the problem themselves. For example, they will confront the instructor in a cooperative manner and try and work out a joint solution to the problem. If this strategy does not work, they will back off and take another course of action such as taking a different class. They recognize that there will always be problems associated with their deafness no matter what they do. They have learned to accept this as part of their lives and developed strategies to help them with these problems as they arise.

While most observers would view these students as high academic achievers, as stated earlier, these students view themselves as normal college students who are required to meet the requirements of their college like any other students. This sense of normalcy is one of the students' characteristics that was found throughout the interviews. Their responses played down their being special in any way; they said they were just like any other student at their college.

It was also found that some students do not want any attention directed at them that will make them stand out as different. For example, several deaf students indicated they did not use an interpreter in the classroom because they thought this would identify them as being different from their classmates.

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Regardless of whether they use interpreters and other support services, the students are not preoccupied with their deafness. In fact, they go about their daily activities like the rest of the students. If one overheard their conversations, more likely than not they would be talking about some social event, their girl or boy friend, a tough course they were taking or plans for the weekend. It would be most unlikely that their conversations would be related to their deafness, deaf culture, or problems they are having as a deaf student in a hearing environment.

Quality and Adequacy of Support Services: Students' and Service Providers' Perspectives

It would be nice if deaf students enrolling in a regular college or university could find all the support services they needed in place and waiting for them. Regrettably, recent laws and regulations notwithstanding, this is far from true.

Several facts regarding support services have came to light from these findings. *First*, deaf students enrolling in regular colleges and universities are often not aware of the differences in the need for services between the high school and college environments. Whereas in high school they may have been in courses with a single required textbook and able to obtain their notes from the blackboard or a friend, they may now be in a lecture hall with 200 or 300 other students and a professor whose lectures do not parallel a particular textbook and who may not use a blackboard. Often they cannot sit next to someone they know from whom they can borrow notes. Furthermore, they probably have not only multiple textbooks, but required readings as well in order to satisfy course requirements. These students enter this environment without really understanding the need for support services, how to obtain them, or how to utilize them to their advantage.

Some students reported their regret at not making use of the support services and technologies that were available to them. Some speculated that they would have done better had they used an oral interpreter but, because they were not accustomed to using one, did not take advantage of the service. Others in their junior or senior year, who had only recently begun to use support services, looked back with regret that they had not taken advantage of these services earlier in their college career.

> And in my sophomore year I decided that I would give it a try. And I did and it worked well. And now I use the notetaking service. When I first got here, I wouldn't use the support services and now I do. The second thing is that when I got here, I had some trouble making friends because people had trouble understanding what I said. I made friends, but it was more difficult. And, especially I had problems meeting women, meeting girls. But, but, you know, as my speech has gotten better, I've had less problem with that, too.

It is obvious that many deaf students entering regular colleges are not adequately equipped with information that would enable them to understand the need for, how to obtain, and how to use support services.

Second, deaf students may enroll in a regular college or university after inquiring about one or more support services, only to find after being assured that these would be provided and beginning classes, that these services were not in place. Administrators may not be aware of the difficulty or the cost of obtaining the

needed support services. They may assume that, if a deaf student needs an interpreter, the college can simply call a local interpreting referral service and obtain one on short notice. They may not be aware of a shortage of trained interpreters in their area, or the cost of these services. Administrators may also assume that any hearing student with a satisfactory academic record can provide notes for the deaf student on a voluntary basis. They are not aware that a voluntary notetaker is not always a satisfactory source of notes for a deaf student. Other problems in providing support services may arise because administrators have insufficient information about the special needs of deaf students, or the resources required to meet these needs.

Third, deaf students are often unaware that colleges, unlike high schools, do not have the responsibility to identify the students with disabilities. Deaf students in regular colleges must take the initiative to make their needs known to the appropriate persons. Often, without giving it further thought, students may expect their college to automatically provide interpreters for their classes. When they discover this does not happen, they blame the college for not meeting their needs. For example, they may wait until the day before classes begin to inform a service provider that they need an interpreter and notetaker. Requests often cannot be met on such short notice and the student is left with the feeling that the college is not attempting to meet his or her needs.

On the other hand, some students have also reported that they personally had to obtain an interpreter for their class, or other special services. This has happened either because a service provider did not follow through on a promise to obtain the needed service, or did not know how to obtain it. Taking responsibility for obtaining interpreters puts an unreasonable burden on students who are already under considerable pressure from coursework, and forces the student to assume what should be a staff role.

> When I first came here, I think they had a lot to learn because _____ was here and he was trying and trying and trying, but he had a lot of people who were fighting him. And most of the time I got whatever I needed. But he had a lot of trouble getting it.

> But I asked if she found interpreters for my two classes. And she was positive. She said, 'Oh, we found one. We're waiting for the other one.' Okay. So, the first day of class, I go to my three-hour graphics arts class. No interpreter. I'm there three hours, nothing. So I go to the Student Life Office and I said, where were my interpreters? .... 'Oh, no. We can't find an interpreter for that class.' I said, 'Well, you know, are you going to find one?' 'No, no, no, no.' 'You didn't even call me and tell me!' And it was that night. She said, 'Well-l-l .... I don't think we're going to find one. Maybe, maybe but she won't be here the first night.' So that night I didn't go to the night class.

The findings also indicated that the students often had to take on the responsibility for finding their own interpreters, or waiting an unreasonable time for the service providers to find an interpreter for their classes:

> It's been a pain in the butt. I have to plan my schedule. Then I have to call and inform the Massachussets Commission for the Deaf and Hard of Hearing (MCDHH) or MRC (Massachussets Rehabilitation Commission). I don't count on the administration to do that here. MCDHH says I should call MRC, but MRC tells me I should call MCDHH. So I get a different story. So I wind up calling MCDHH and giving them the schedule, but I can't always trust them to get it done either, so I also wind up calling interpreters on an individual

basis and I ask them, 'Do you want to interpret for me?' So I've spent a lot of time with that and, like, during the year while I'm studying I'm also doing that at the same time.

I'm the student and I can't make all the phone calls to make the arrangements. It was really their job in some ways, but I did learn more because I did that. I helped arrange some of the services for myself.

Students also reported that instructors were often insensitive to their needs and sometimes did not want to bother to make any special accommodations for the deaf student, or even in some cases made it clear that they did not want a deaf student in their class.

I had a professor last semester who I couldn't hear at all and I asked him to wear a microphone that connects to mine and he wouldn't wear it. .... So I had to copy notes from a friend of mine who was taking the class all semester. But he (the professor) wouldn't wear a microphone. He wore hearing aids himself, and I was surprised that he wouldn't do that.

Oh, there's a class that I'm taking right now. And the teacher doesn't use the book at all. Everything is from her own notes, and everything on the test has to be in her words and very often I don't exactly understand what her words mean. .... They refuse to give me their notes. They think it's not fair to the other students. They think the other students would complain that it wasn't fair. That's the reason they've given.

In some cases, this insensitivity on the part of their instructors has caused deaf students to drop classes or rearrange their schedule. Dependent on speechreading for communication with her instructors, one student said:

There have been times when the professor has said, 'I'm not going to look at you.' They've said, 'Please don't come to this class. I don't have time to look at you.' So I said, 'Fine,' and I walked out and got a different class instead. It wasn't worth the trouble of battling with the professor all semester.

On the other hand, as one student said when asked if her instructors were sensitive to her needs: "that's a human condition, so it varies from person to person." This is very true, numerous students reporting that their instructors were sensitive and understanding:

But I think all, I think because I'm at a small, Catholic college, and my classes are very small, all my professors know about my hearing loss and all of them are aware. So they know how important it is for them to look at me and for me to look at them for speechreading. I guess because they're standing near me, it's almost like they serve as an oral interpreter for me, in a way.

Fourth, service providers are trying to do their job under very difficult circumstances. They may be aware of the regulatory requirements for providing support services to deaf students, but the college's ability to comply may be beyond their control. For example, if the college or university is located in a rural area where no interpreters are available, there may be little the service provider can do. Also, even in urban areas, they may be faced with a situation in which the demand exceeds the supply.

Fifth, there can be conflicting views on the part of a student and a service provider on the quality of services being provided. Students who have eventually obtained a needed service may have had to wait indefinitely before something was done. Some students complained that they did not have an interpreter in class for several days, or even weeks, at the beginning of the semester. Some also complained about the skill of an interpreter, indicating it was not adequate to meet the interpreting requirements of the course. For example, some students indicated that their interpreters did not have sufficient knowledge of the subject matter being presented to be able to interpret it intelligibly. Some students reported they had to wait a long period of time before their residence rooms were equipped with needed equipment such as flashing door signals.

> Well .... interpreters, they're skilled .... yeah, except maybe one of them. Probably need more practice, but I didn't want to say anything because another one would be hard to find.

> I did have problems last year, last semester. They couldn't find an interpreter for me. I needed an interpreter for these two classes. And then a week before school started, I called her just to catch up and see if it was all set and she said, 'No.' I said, 'What?? I let you know a month ago that I needed an interpreter for my classes!' 'Well, I'm sorry.' And I'm like, 'What's going on here?' No one could find an interpreter, so I asked a friend of mine who was not an interpreter, but she knows sign. She was not great, but what could I do? I needed someone to help.

On the other hand, service providers for these same students often stated that these students did not inform them of their needs until the last minute, thus making it very difficult to meet these needs until several days or even weeks had passed.

> They can't come into this office the day before an event and say, 'I want an interpreter,' and expect to get one. I mean, they need to know that their responsibility .... in order to make us help them, includes, most importantly, letting us know what their schedules are.

While students may think it was the service providers' responsibility to take care of all their special needs, their service providers might describe these students as being immature and overly dependent, stating that the students wanted the service providers to take on the role of their parents and resolve all of their problems for them.

> .... when we have a deaf student who really is reluctant to accept suggestions for support, especially if they're not doing well in classes, if their grades are poor, and they're really reluctant to be identified as deaf or be different from their peers. That tends to be a problem, but the older the student becomes, the less of a problem. It's especially with freshmen and sophomores. They're worst in that area. Juniors and seniors know by now, 'Okay, this is what I need to get through school. I just have to accept my deafness and work with it to get me through school.'

> Some of the students expect me to just take charge of everything, but I don't do that. I figure there has to be a two-way learning experience. They can't expect me to be mom and take them by the hand. I expect them to be assertive in their role here as a student. .... So they really need to figure it out for themselves. I make the suggestion: 'This is what we have. This is what is recommended for you. You decide what you want. If, as you go along, you find out it's not working, let me know, and we'll sit down and together come up with a solution.' They do have a responsibility. I am not going to do it all for them.

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Most of them are very cooperative. It's particularly difficult for first-year undergraduates who have just left home. They may have had all their services provided by their families and don't know how to advocate for themselves. And don't know how to take the responsibility for getting their needs met. They start out by treating us as their parents. We try to tell them how they can be more effective by establishing relationships with their faculty members too, so that if things aren't working out well, then they can handle it.

It is evident that there are some conflicting views on both sides regarding the quality and adequacy of support services. In my interviews with a service provider in one large university, I was told that there was no problem in obtaining interpreters. All he/she had to do was to call the agency in the area and a certified interpreter would be provided. Interviewing a student in the same university later in the day, I was told that it was difficult to find interpreters and that some of the student's interpreters were very poor in their skills. In this instance, a student and a service provider were seeing the situation from two different perspectives. However, other students reported being satisfied with the services they were receiving. They had no problems obtaining interpreters and their notetakers were more than satisfactory.

It is clear that circumstances vary from campus to campus. A deaf student has no way of really knowing if a particular college or university that he/she may be considering can provide the support services he/she may need. It is suggested that students interview the service providers and, perhaps, another deaf student before choosing a college. The colleges and universities may say they will provide the necessary support services but this cannot be taken for granted. Some institutions are doing a better job than others; some are limited in what they can provide by budget constraints and by limited resources in their area.

Q: You mean the interpreters don't find another one to cover for them?
A: Who are they going to find? There is no one else. The other interpreters all have
       students that they're working with, so are they going to leave their students?

It's very difficult in this area. As you know, as you move further north, there are fewer and fewer interpreters, and it becomes difficult sometimes for the scheduling. But, yes, the University provides sign interpreters.

There is a shortage of interpreters in _____ County and because of the lack of a large pool of interpreters, it is difficult to provide interpreters for the students. Right now we have only one student who needs a sign language interpreter; however, if we had another student enrolled who also needed a sign language interpreter I really don't know where we would find one. We would be stuck, and although we would love to have more deaf students enrolled in the _____ we just cannot find interpreters to support them.

It also became apparent that some service providers are not aware of all the resources that are available to provide services for deaf students. This was made clear in the fact that many service providers had never heard of the real-time speech to text steno/computer services now being used with deaf students in an increasing number of colleges and universities. At the same time, credit must be given to some service providers who are very creative in meeting the needs of deaf students in their institutions. For example, one who bought a used laptop computer and hired a graduate student to sit next to the deaf student; this was a substitute for the more expensive real-time speech to text equipment.

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In general, there is cooperation between the service providers and the students. Often the students understand the difficulty the service providers have in obtaining the service they need. Most service providers say they are trying their very best to meet the students' needs and, at the same time, meet their numerous other responsibilities. In the absence of standards of some kind, there is really no clear picture of the quality of services for deaf students in regular colleges and universities. However, it is clear that they can vary from excellent to unacceptable. Deaf students, planning to enroll in a regular college or university, need to carefully investigate the services they can expect, as well as the quality thereof. In turn, the student should inform the service provider of specific needs for services so there can be mutual understanding and cooperation.

RECOMMENDATIONS AND CONCLUSIONS
Recommendations

Implementation

It became clear, from a review of the literature, that there is relatively little published information available about the educational backgrounds and experiences of deaf students enrolled in regular four-year colleges and universities. What information is available is outdated, related to mainstreaming in the context of special programs, or, in many cases, more applicable to students who are hard of hearing rather than deaf. Deaf students, who are in high school and beginning to consider their options for postsecondary education, would benefit from such information. This information would also be useful to these students' parents, counselors and teachers.

It has become obvious from this study that deaf students considering postsecondary education often fail to anticipate important differences between high school and college, and what these differences mean in terms of support services. For example, in high school, students may not need a notetaker because of small classes and the ability to copy notes from the blackboard. In college, however, they may find themselves in a lecture hall with 200 or 300 other students and an instructor who does not use the blackboard but lectures from his/her own notes.

Deaf students also need to know what to ask about the availability of support services, and their responsibilities for effectively utilizing the services. Deaf students and their parents also need to clearly understand their rights and responsibilities, and the rights and responsibilities of their college, under Section 504 and the Americans with Disabilities Act (ADA). Colleges and universities, in turn, need to understand their respective rights and responsibilities under the same two laws; likewise they need to inform prospective deaf students of the special services they are prepared to provide them.

In addition, deaf students and their parents are often unaware that other deaf students, who are enrolled in or have graduated from regular four-year colleges and universities, have already faced similar problems while in these institutions. Many have already developed adaptive strategies for handling these problems. Deaf students who are considering enrollment in regular four-year colleges and universities, along

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with their parents and their counselors, need to be aware of these students and their strategies. Successful deaf graduates of these postsecondary institutions can be instructive and serve as excellent role models.

This study has also made it obvious that key administrators, faculty, and staff are often not aware of the diversity among deaf students, and the differences in the kinds of support services they may need. Often, if a college has had, or presently has, a deaf student, it is assumed that all deaf students who wish to enroll in that institution will be similar and that a new deaf student will need the same services. Indeed, this may not be so. Service personnel also are often unaware of the resources in their geographical area, and unfamiliar with developing technologies, which could help meet the needs of these students. These personnel should be kept up-to-date through workshops, conferences, reference materials, and other resources.

Perhaps this primary research will provide a foundation for resolving some of the problems of providing support services to deaf students in regular four-year colleges and universities. It should be helpful as a resource in setting standards and improving specific services. For example, service providers and students should have a clear understanding of each other's responsibility in obtaining and providing the needed services.

Future Research

As indicated earlier, caution must be exercised in generalizing to a broader population from 33 deaf students in 18 colleges and universities. Nevertheless, this study did disclose more profoundly deaf students, with prenatal or early onset of deafness, enrolled in regular colleges and universities than I had expected to find. Under the present political and social conditions, it is likely that the number of deaf students attending regular four-year postsecondary institutions will continue to increase.

This study provided information about why some deaf students choose to attend a regular four-year college or university rather than a special program. It also provided insight into the students' characteristics and backgrounds that seem to be associated with their success in a regular four-year postsecondary institution. This study indicated that there were some characteristics of these students which can be associated with their success in regular postsecondary institutions. Two particular variables observed among many of the students in this study were: (a) strong and consistently high levels of motivation and (b) their acceptance of personal responsibility for success and failure; these suggest an internal locus of control.

A follow-up study would help to determine if one's internal/external locus of control is predictive of, and contributes to, success or failure of deaf students in regular four-year colleges and universities.

Because this study furnished no new information about the characteristics and backgrounds of deaf students who enroll in these colleges and universities and subsequently withdraw without obtaining a degree, further research is needed to distinguish between "successful completers" and their less successful counterparts. The quality and adequacy of support services should also be factored into this research.

A substantially larger study should be undertaken addressing these and other remaining questions and issues. A large stratified random sample of deaf students should be used to select the students for this study.

Deaf students who are enrolled in all college levels, not just in the sophomore year or above, should be included. Also, students who withdrew and/or transferred to special programs should be included.

A review of the literature has indicated that there is no accurate estimate of the number of deaf students enrolled full time in regular four-year colleges and universities. The available studies do not distinguish between two-year and four-year institutions, nor do they indicate the degree of hearing loss or age at onset among the students studied. There is a need for a larger study to derive a means of determining an accurate estimate of the number of deaf students who are enrolled full time in regular four-year colleges and universities. Degree of deafness and age at onset should be factored into this research.

Finally, it would be of great interest to conduct a follow up study of the 33 students who were interviewed for this effort, after they have completed their formal education and continued on in their personal lives and careers, to cast light on how their lives have been affected by their decision to attend a regular four-year college or university.

Conclusions

The purpose of this study was to provide background information and answer four questions about deaf students enrolled in regular four-year colleges and universities. It was recognized that a small sample would simply help to lay a foundation for future research. It is believed that this study has accomplished its purpose, and will not only lay a foundation for future research, but stand on its own as a valuable source of information about deaf students enrolled in regular four-year colleges and universities. This study has provided us with insights on a remarkable group of high academic achieving deaf students.

The 33 students interviewed for this study shared many similar characteristics that may be conducive to the success of all deaf students enrolled in regular four-year colleges or universities. Several, including motivation, goal orientation, and internal locus of control, warrant greater attention than has been given in the past. Others such as oral/aural communication, family variables, and prior mainstreaming experiences were predictable.

These students offer three primary reasons for their decision to attend a regular four-year postsecondary institution, rather than a special program. First, they have been mainstreamed all their lives. They feel comfortable in the hearing world and do not see themselves as belonging in a special program with a large group of deaf students. Second, they are very well prepared academically for postsecondary education, and feel they would not be academically challenged in a special program. Third, they feel that a degree from a "name" college or university will provide greater opportunities for graduate studies and future careers than a degree from a college with a special program.

The students' satisfaction with their decision to attend a regular four-year college or university can be attributed to their academic ability to make the transition from high school to college, their emerging friendships with hearing peers, and their development of adaptive strategies. Being content with the quality of,

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and the ability to utilize the available support services, adds to the students' satisfaction with their decision. Also, they have learned how to handle their own problems and take responsibility for resolving these problems when necessary.

They are motivated to participate in extracurricular activities, and to do well in their academic studies. They are proactive in integrating with their hearing peers and feel they are part of their institution.

The quality and adequacy of support services for these students varies from campus to campus, largely because of the unequal distribution of support personnel, such as interpreters, in different geographical areas. There is also no standard by which to measure the quality or adequacy of the services, and their service providers are often not aware of the resources or technical assistance that is available for deaf students in their area.

Although service providers often come to their position without any preparation, or the background to serve disabled students, they quickly learn on the job. They are often caught in the middle between wanting to provide the needed services, and being limited in doing so by the extent of their resources. It can be concluded that these people do make sincere efforts to meet the students' needs; when difficulties do arise, it is often because of problems beyond their control. Not all of the limitations come from the college or the service providers. The lack of cooperation on the part of some students can also cause problems in providing service.

This study has provided us with a picture of a small and selective group of deaf students who have been successfully mainstreamed in elementary and secondary school, and who continue to be successful in the mainstream of a regular four-year postsecondary environment. These students are very intelligent and mature, and comprise a special group of academically high achieving deaf students. While numerous factors beyond their personal control contribute to their success, the students' own efforts, persistence, and determination to do well may provide the main driving force behind their success.

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Interview Guide for Students

NOTE: This is not a questionnaire, but a guide for the interviewer to use during the interview to ensure uniformity among the interviews and coverage of all areas for each participant.

Interview Protocol

° Set up tape recorder and have all necessary forms ready for students prior to their arrival.

° Welcome students and thank them for giving their time. If possible, meet students in lounge or coffee house prior to interview.

° Introduce self and interpreter.

° Allow the students to read the consent form, if not already having done so. Ask the student if they understand the form, if there are any questions, and if they have read and understood the Principles.

° Ask the students to sign the consent form and fill out the demographic data sheet.

Type of Interview

The interview will be open ended and informal, allowing the participants to describe their experience, background, perspectives, and thoughts without interruption. The role of the interviewer is to listen, ask for clarification where necessary, and check the guide to see that all the necessary information is obtained. Similar topics should be covered in the same order and format, so that coding and pattern recognition can be achieved. Questions will be paraphrased if the students do not understand the question as phrased, but the content will not change.

Introducing Self

It will be important to develop rapport with the students being interviewed for this study. Spradley (1979) defines rapport as:

> .... a harmonious relationship between ethnographer and informant. It means that a basic sense of trust has developed that allows for the free flow of information. Both the ethnographer and the informant have positive feelings about the interview, perhaps even enjoy them. However, rapport does not mean deep friendship or profound intimacy between two people. .... Rapport can exist in the absence of fondness and affection (p. 78).

My own deafness may be useful in developing rapport with deaf students, yet I am aware that my background, experience, views, and opinions may be different from those of the deaf people I am interviewing. In introducing myself, I will explain to the students that I have been profoundly deaf since age six and, like them, attended regular colleges and universities for my undergraduate and graduate studies. I will tell the students that I am not familiar with the present environment, which is perhaps different from when I was an undergraduate, and explain to them that I am not there to collect data about deaf students in regular colleges

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but to learn from them about their own experiences. This introduction will be made in an informal setting. I plan to meet the students in the lounge, or some other informal place, prior to the interview and get to know them on an informal basis. During my pilot study (Menchel, 1993) I was able to meet the students for lunch, coffee, or dinner prior to doing the interviews, which helped the students to be comfortable in sharing their experiences with me, and helped me to develop rapport with them.

During an interview, I may restate what was said using the same terms that the student used. This will prompt students to speak in their own everyday language which will help avoid reinterpreting and will later help the transcriber understand what was being said. An example is given here:

Q: When you talked with hearing people they understood you?

A: Not really.

Q: Not really, oh, what did you do if they did not really understand you?

A: Repeat.

Q: Repeat? You wouldn't write it down?

A: Nope, I would not write it down, I would repeat until they understood.

Q: Oh you didn't need to write it down, Okay. You understood them?

A: Yep, if I didn't understand them, I asked them to repeat.

First and Second Research Questions

○   Why do some deaf students decide to attend a regular college or university instead of a special program?

○   After a year or more of enrollment in a regular college or university, what reasons do these students give for being satisfied or dissatisfied with their decision?

Note: Allow the student to talk without interruption, but ask questions as needed, for clarification and assurance that all aspects of the high school experience are covered.

Main Topics to be Covered

○   Scan the demographic data sheet and check to be sure that all information has been provided. Use the demographic data sheet to open the interview by asking the students if they were mainstreamed in both elementary and secondary school.

○   Continue by asking the students what year they are in college (i.e., sophomore, junior, or senior) and ask them to reflect on their high school experience.

○   During this part of the interview, ask the students to reflect on friends that they had in high school, parental and other support, participation in academic and extracurricular activities, social life, best friends in school, the kind of support services they had, if any, and other related topics that are typical of the high school experience.

Other Aspects to be Covered

o   Self-confidence, how developed, over time or always had it.

o   Deafness as a motivator, compare with peers, prove self.

o   Goal setting, type of personality now and in high school.

o   Reading habits, enjoyment of reading.

o   Communication experience, feelings about high school, feeling of isolation or inclusion, meaning of success to them, best and worst thing they remember about their high school experience, and other topics.

o   Decision to attend a regular college, what was involved in making decision, aware of the special programs such as those offered by Gallaudet, NTID, CSUN, etc.

o   Factors in selecting the college they are attending, importance of support services in making decision, experience visiting other colleges and universities, feeling of being welcomed, included, provided with support services, right program.

o   Satisfaction or dissatisfaction with decision they have made to attend a regular college.

o   Given the opportunity to do it all over again, would they do the same thing or something different.

Summary: Let the students reflect on the whole experience of the transition from secondary school to their present environment, how they feel now, and how they felt in the first year, and what they learned from their experience.

Third Research Question

o   How do these students describe their college experience in terms of integrating with hearing peers and in their academic and social participation, and what, if any, adaptive strategies have they developed?

Main Topics to be Covered

o   Ask students to describe interaction with peers, participation in academic and extracurricular activities, sports, overall satisfaction, friends made, how made, social life.

o   Ask students to share their experience in postsecondary institutions to date, and how they felt on arriving the first year.

o   Ask what they learned from the first year that has been helpful in later years, and what would they do differently looking back on it now.

o   Ask about developing strategies, length of time it took to develop strategies, developed by self or with help from others, use of service providers to develop?

o   Ask how students feel about their participation in informal give-and-take in classroom, participation in extracurricular activities, boy/girl-friends, social life, participation in sports.

Other Aspects to be Covered

o   Progress now and in first year.

o   Perceptions of inclusion or isolation, participation or non-participation, friendship or loneliness, acceptance or rejection.

o   Sensitivity of professors, peers, and administrators.

o   Feelings of optimism or pessimism, reason for feelings.

o   Persistence vs. stubbornness.

o   Impressions of success, failure, happiness.

Summary: Let the students reflect on their overall experience at this time in their academic career, and on how things are going from their own perspective; describe the enjoyment and frustrations they have had with peers, professors, administrators, and their academic studies; articulate kinds of feelings they have had and the goals they seek after undergraduate studies; list strategies they developed to succeed in this environment. Clarification of some answers from the first research question and additional detail may be asked here as well.

Fourth Research Question

o   How do their descriptions of the quality and adequacy of support services differ from the descriptions provided by the service providers in their college?

Main Topics to be Covered

o   What is the student's perspective of the quantity and adequacy of his/her support services?

o   What are the student's feelings of satisfaction or dissatisfaction regarding the support services?

o   How did the students learn about the support services and how do they obtain services they need?

o   What services do the students use and who is responsible for obtaining services?

o   How do the students compare the services they are receiving with what they had, if any, in high school?

o   What is the student's perspective of the sensitivity of instructors, administrators, and the institution regarding providing and using support services?

o   If they had the opportunity, how would they improve the services?

o   What is their perspective of the perfect setting at a regular college for a deaf student?

Summary: Participants should describe how they feel about the support services they have been receiving and any problems they have had; discuss strategies they used to overcome any problems that they may have encountered in obtaining or using services; give an over all view of the support services provided, or not provided, by their institution.

Interview Guide for Service Providers

NOTE: This is not a questionnaire, but a guide for the interviewer to use during the interview so there will be uniformity among all of the interviews and coverage of all areas for each participant.

Interviewing Protocol

° Introduce self and interpreter.

° Thank subjects for time they are giving me.

° Ask for permission to set up tape recorder and plug in.

° Create a comfortable informal setting.

Type of Interview

While it will be on a professional level, the interview should be informal and open ended allowing the participant to describe his/her experience in providing services to deaf students. At the same time, the interview should be such that the service providers will be able to comfortably, openly and honestly describe their ability to provide these services. The role of the interviewer is to listen and ask for clarification where necessary, and to check that all the necessary information is obtained. In order to obtain the data needed for coding, and to achieve some type of pattern recognition, each interview should cover similar topics in the same order and format.

Introducing Self

I will introduce myself and explain my background. I will explain I am profoundly deaf and that although I can speech-read, I may not always be able to understand them; therefore, I will use an interpreter to facilitate the interview process. I will tell them that I have attended regular colleges over a span of 30 years or more, and have experienced the changes that have taken place over the years. At the same time, I will tell them that I am unaware of the situation at their institution and want to learn from them how they provide services to deaf students and how they perceive the reception of the students to the services.

First Objective

Obtain data about the service provider's background, how he/she came to their present responsibility, and how long he/she has been in their current position. This data will provide information about their backgrounds and perspectives as service providers.

Education and Previous Work Experience

○   Provider's degree and major, work experience prior to entering service provider position, reason for taking position, years as service provider.

○   Presence of deaf or disabled people in family, or as friends outside of students.

○   First experience with a deaf student.

○   Present experience with deaf students.

○   Enjoyment /disappointments with job.

○   Personal satisfaction and rewards with job.

Second Objective

Identify the number and type of students that the service provider has to serve. Identify different types of students with disabilities that are at the institution and the type of services that have to be provided. Focus on services available for deaf students and the different types of services these students request. This will give an overview of the variety of services required and requested, and how these services are provided.

Overview of Office of Service Providers

○   Number of students with disabilities the office serves, size of staff, training staff receives or special background required for position, different disabilities office serves, largest group of students with disabilities, institution's special equipment available to students with disabilities.

○   Length of time office for disabled students has existed, reason for location of office.

○   Degree of support from administrators.

○   Expense and difficulty of providing service for small number of disabled students vs. a large number.

Focus on Deaf Students

○   Number of deaf students served by office, method of contacting and identifying students with disabilities.

○   Deaf students who do not require or want any service, not "identifying" themselves as "deaf."

○   Kind of interpreters needed, ASL, Signed English (SEE), Cued Speech, Oral, other. Interpreters trained in Educational Interpreting or having certificate from Registry of Interpreters for the Deaf?

○   Sign language usage by staff, Telephone Typewriter (TTY) in office, training for use of TTY, special services for deaf students, difficulty or ease of obtaining interpreters, types of interpreters used, presence of full-time interpreters on staff, ways deaf students use this office, normal process for requesting service, difference in processes for academic service and extracurricular activities.

Third Objective

Identify problems that the service providers might have providing services to deaf students. Identify the responsibilities of the students and the service providers. Determine difficulties, if any, and student cooperation with the office of service providers.

° Kinds of cooperation and difficulties the office has with deaf students, why cooperation or difficulties exist, special problems that might arise occasionally, repeated problems from year to year.

° Students' appreciation of support services, special consideration and cooperation between students and service providers.

° Variety of deaf students within the college student body, most difficult and easiest areas to provide services to deaf students.

° Support and sensitivity from administrators, instructors, or others in providing services for the deaf students.

° Strategies used by the office when interpreters cannot be provided, other services such as notetakers, copying, tutoring, and transcribing services for the deaf students, voluntary or paid.

° Funding from the state or federal government to support these students (i.e. VESID), whether all funding is provided by the institution, whether funding is a general budget item or a line item.

Other Areas of Responsibility of Service Providers

° Assistive devices in student housing, captioned films in classroom, assistive devices on campus, amplification devices in classrooms, cooperation with building administration for incorporation of signal lights, etc.

° Mediation between deaf students and others if necessary, provide counseling service, placement service.

° Other areas of responsibility the office has beyond providing support services for students.

Demographic Data

Personal Data -- Self and Family

1. Name _____

   Permanent Address

   Address _____City _____

   State _____ Zip _____ Phone Number _____ Voice ___ TTY ___ Both ___

   School Address

   Address _____City _____

   State _____ Zip _____ Phone Number _____ Voice ___ TTY ___ Both ___

   E-Mail Address _____

   Sophomore ____   Junior ____   Senior ____

2. Place of Birth _____ Date of Birth _____

3. When did you lose your hearing?   (a) Born deaf ___   (b) Lost hearing at _____ (age)

4. What is your hearing loss? _____ dB, or how you would characterize your hearing loss?

   (mild, severe, profound, etc.) _____

5. Do you consider yourself deaf, hard-of-hearing, or hearing-impaired?

   Deaf ___   Hard-of-hearing ___   Hearing-impaired ___

6. Are your parents deaf or hearing?

   Mother: ____ Deaf ____ Hearing   Father: ____ Deaf ____ Hearing

7. Mother's occupation _____ Father's occupation _____

8. Did your parents go to college?

   Mother ____ (Y/N)   Father ____ (Y/N)

   If your mother or father went to college what was the highest degree they earned?

   Highest degree: Mother _____   Highest degree: Father _____

9. What is the estimated range of your family's income (combined income of Mother and Father)?

	<	$50,000	____
Between		$50,000 and $70,000	____
		$71,000 and $90,000	____
		$91,000 and $110,000	____
		$111,000 and $120,000	____
		$121,000 and $130,000	____
		$131,000 and $140,000	____
		$141,000 and $150,000	____
	>	$150,000	____

Past Education Information

10. Where did you go to elementary school? _____

    Mainstream? ____   School for the Deaf? ____   Name of School(s)

    Grade Attended ____   Grade Attended ____   _____

    Public? ____ Private? ____   Public? ____ Private? ____   _____

11. Where did you go to secondary school (high school)?

    Mainstream? ____   School for the Deaf? ____   Name of School(s)

    Grade Attended ____   Grade Attended ____   _____

    Public? ____ Private? ____   Public? ____ Private? ____   _____

12. Did you have a resource room in elementary school? ____ Yes ____ No

    Did you have a resource room in high school?   ____ Yes ____ No

13. Did you graduate from high school? ____ Yes ____ No   What year did you graduate? _____

14. What was your Grade Point Average in high school? _____ (GPA or A,B,C etc.)

15. What program were you enrolled in high school? _____

    (College Preparation, General, Vocational)

16. Did you take the Scholastic Aptitude Test (SAT) for college admission? ____ Yes ____ No

    If you took the SAT, what were your scores on the: Verbal ____ Math ____

17. How many colleges did you apply to? ____   How many accepted you? ____

18. What is your current major? _____

Communication

19. What is your main means of communication?

    ____ ASL   ____ Signed English with Voice

    ____ Signed English with no Voice   ____ PSE with Voice

    ____ PSE with no Voice   ____ Finger Spelling

    ____ Speech and Speechreading   ____ Writing

    ____ Other (describe) _____

20. Of the above, have you always used this method of communication or did you recently begin using it?

    _____ Have always used this method of communication.

    _____ Recently began using it.

21. What are your career plans after you obtain your Bachelor degree?

    _____

    _____

Developing Career Planning and Placement Strategies

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of
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Successful Job Development and Placement Strategies with Deaf and Hard of Hearing College Students

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For work to be authentically human, it must be about a search, too, for daily meaning as well as daily bread, for recognition as well as cash, for astonishment rather than torpor; in short, for a sort of life rather than a Monday through Friday sort of dying.
— Studs Terkel

INTRODUCTION

Since June 1992 I have served as the Employment Services Coordinator for the Regional Education Center for Deaf Students (RECDS) at Seattle Central Community College (SCCC) in Seattle, WA. Through a variety of creative job development and placement strategies, "job ready" deaf and hard of hearing students at SCCC are successfully finding and retaining gainful employment in their chosen fields upon graduation. I would like to share with you some of our success stories, along with some of the serious barriers and challenges we still face in assisting deaf students and recent graduates in their job search efforts in the Puget Sound area.

This paper will focus on our employment services for deaf and hard of hearing students at SCCC, including specific examples of the types of major challenges we still face. Still to be addressed are ways to overcome these barriers and challenges, particularly in the context of the dramatically changing American workplace, and how these profound and widespread changes especially impact deaf students. The U.S. workplace is becoming ever more demanding of the types of skills deaf students have traditionally been weak in – written English, critical thinking skills, and problem-solving skills. As a result of rampant corporate "downsizings," the growing demand for temporary rather than permanent workers, and the generalized loss of long term job security as we once knew it, there is an ever greater need for all individuals to take full responsibility for managing their own career paths. The question is, are our students ready for "Workforce 2000?"

First, I'd like to give you a little overview on why the Employment Services Coordinator position was created at Seattle Central. What documented needs were we responding to? Second, I will describe the range of direct employment services RECDS provides to our students/recent graduates. Third, I will describe the analogous types of direct services we provide to Puget Sound area employers in terms of educating them about deafness and introducing them to our "job ready" students. When qualified, job ready graduates meet deaf-educated employers, some exciting success stories happen!

I will also discuss briefly how on a case-by-case basis we sometimes coordinate RECDS's employment services with Vocational Rehabilitation (VR) and/or other agencies with whom our students may be affiliated.

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These interagency partnerships allow for a maximizing of employment services to students--with the different members of the "employment services team" offering different valuable pieces to the overall employment plan. Similarly, I will touch on how we coordinate coordination RECDS's employment services in the context of a mainstream community college setting. In other words, how do our students have access to and take advantage of campus wide employment-related services--such as the SCCC's Cooperative Education & Career Placement Office, or the college-wide Career Fair? Finally, I want to discuss a variety of barriers to successful employment we have observed. Some of these limitations are on the part of students -- such as a lack of "job readiness," or weak English skills. Others, are barriers on the employer side -- such as attitudinal barriers and fears about hiring deaf workers, or culturally biased testing procedures. While yet another class of barriers has recently emerged because of how incredibly quickly our world and society is changing. In an "Information Age" with a global economy we *all* need to be computer literate and we *all* need to be English literate. Employment opportunities in the traditional hands-on trades are quickly disappearing. Generally speaking, these trades are either becoming highly automated and new skills and technologies need to be learned to perform them competitively, or they are being shipped abroad to other countries where labor is much cheaper. With all these points in mind, how can we best prepare deaf college students to be gainfully employed in today and tomorrow's workplace?

Why Employment Services Are Needed

RECDS was established in 1969 as one of four federally funded post-secondary regional education programs for deaf students. Over the last 27 years, we have provided a wide range of direct support services to students, including: classroom interpreting, notetaking, tutoring, academic and personal counseling, and an extensive college transition ("prep") program. Nevertheless, it was typically seen that students would graduate or leave SCCC and generally be unemployed or seriously underemployed. And if they were employed, it was often was in a position unrelated to their majors. In other words, deaf students were coming to college, selecting majors, successfully graduating, but then not finding work in their chosen fields, or not finding work at all. Some were continuing to rely on SSI and SSDI for subsistence living, and were not becoming productive members of society. In some cases, VR had supported students through several years of vocational training with a clear employment goal in mind which never came to fruition.

While we at SCCC did not keep formal statistics on this phenomenon, it was an obvious and recognized problem. And our situation at SCCC was far from atypical. Nationally, it has been well documented that people with disabilities are by far the most unemployed and underemployed of any minority group. Across the country, students with disabilities are entering colleges in record numbers, but they are not yet entering the workforce in correspondingly high record numbers. In 1950, it is estimated there were only about 250 deaf college students nationwide, whereas in 1990 there were an estimated 10,000! While higher

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education opportunities for students with disabilities have greatly increased in recent years, employment opportunities for such graduates have not kept pace.

Accordingly, the RECDS Employment Services Coordinator position was created in 1992 to address this unemployment and underemployment problem vis-á-vis the deaf and hard of hearing student population at Seattle Central. Over the past 4 years, we have on the one hand developed a suite of employment services for students -- to assist them in developing the job search skills and savvy they need to market themselves effectively to prospective employers. And on the other hand, we have developed a suite of direct services to area employers -- to introduce them to our pool of qualified job seekers and to educate them about deafness. As of December, 1995, more than 50 REDCS students/graduates had been employed or placed in Cooperative Education internships in more than 40 Puget Sound area companies. For some of these students it was their first work experience ever. For some of these companies it was their first experience hiring a deaf employee.

Types of Employment Services Available to Students

RECDS offers a wide range of employment services to current, mainstreamed students and recent graduates. We are a district-wide Center and thus serve deaf students on three different Seattle Community College campuses -- North, South, and Central. Together, the three campuses offer an array of more than 100 fields of study.

Training in Lifelong Learning Skills:
- Self-assessment of one's transferable skills, accomplishments, personal assets
- Professional resume development and resume updating
- How to effectively fill out job applications
- How to write successful employment letters
- Interview skills training
- Presenting oneself professionally
- Training on how to research companies/how to network
- Negotiating the job offer
- Special issues for deaf job seekers -- how to use an interpreter appropriately, understanding your rights under the ADA, how to talk about communication issues during the interview, etc.

Individual employment tutoring is available for students needing extra help with any of the above.

Individualized Job Development and Placement:
- Job development -- for part-time or full-time work
- Cooperative Education worksite placement

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- Community Service worksite placement
- Introductions to specific employers
- Setting-up job interviews
- Post-placement follow-up at work/internship sites

Group Job Search Services:
- *Job Preparation Course* (2-credits)
- Scheduled series of campus recruiter visits/informational interview sessions for "job ready" students
- *Job Search Support Group*
- *Climbing the Career Ladder* support group — offered evenings for working deaf adults
- Special workshops on employment issues, such as "What are Employers Looking for and Why?" "Sexual Harassment in the Workplace," "The Transition from College to Work," and "The Role of VR in the Employment Process."

Additional Services:
- Maintaining a current job listings bulletin board
- Maintaining informational files on numerous Puget Sound businesses for student use in researching their job search
- Educating students on how to take advantage of other employment resources on campus (i.e., College Work Study, Computerized Career Library, Career Fair, etc.)

To receive any of the above employment services, students must sign a formal "Employment Services Contract" with the Employment Services Coordinator. The contract lists the policies they must agree to in order to receive services — such as arriving on time to appointments, informing the Employment Services Coordinator at least 24 hours in advance if they need to cancel a job interview, etc. Students understand that if they violate the contract, they will have further employment services suspended. The only way services can be restored is if the student requests a meeting with the Director and me to appeal the suspension. Each case is handled individually.

Job Preparation Course

We strongly recommend this 2-credit course for all student nearing graduation, especially those who will be seeking immediate employment, and not transferring to 4-year programs. Taught in ASL, this course covers all the standard aspects of job search, such as resume development and interviewing skills. But, in addition, it covers a number of topics of special interest and importance to deaf job seekers: how to appropriately use an interpreter in a job interview; understanding one's rights in the job application and hiring

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process under the ADA; how to successfully counter prospective employers' fears about on the job communication, telephone usage, etc. This course is especially exciting because students learn to effectively critique each other and provide valuable feedback to each other. Peer feedback is sometimes more effective and carries more punch than instructor feedback. Some of the more difficult, but essential, concepts to get across to our students include: a) identifying their personal success stories and accomplishments; b) grasping that they need to look at the job interview from the employer's perspective, *not* their own (i.e., how they will meet the company's needs, not how the company will benefit them); and c) recognizing the special transferable skills and personal assets they have developed in various aspects of their lives, and figuring out how these same qualities can be of great value to employers.

Last year, each student participated in a total of four mock interviews -- all of which were videotaped. By receiving copies of their four sequential mock interviews (with the immediate feedback also videotaped), students could track their progress. It is hoped that by keeping their videotapes, students will find them to be a useful refresher tool in years to come when they have long since left SCCC and find themselves interviewing for future positions. Another highlight of this course has been inviting successful deaf professionals to visit the class -- either to assist with mock interviews, or to make presentations on important issues such as: work ethics, getting off of SSI, or how to have the "American dream." "Dress for Success on a Student Budget" has been another favorite, presented by professional buyers for Nordstrom's Rack in the Seattle area.

Several video clips from last year's job preparation course were shown as part of the presentation. These brief segments were intended to give the audience a sense of the value of mock interviews and also how helpful it is to have inspirational deaf professionals come speak to the class.

Recruiter Visits

A very effective follow-up to the job preparation course, has been scheduling a series of on-campus recruiter visits at our Center. These visits serve several key functions simultaneously. They: a) provide students with additional "real world" interview practice; b) expose students to human resource representatives from a variety of public and private organizations, thereby giving students an appreciation for the different types of employers, work environments, and corporate cultures that exist; c) educate recruiters in an extremely positive and eye-opening way about a previously untapped pool of highly qualified and polished job candidates; and finally, d) do indeed lead to actual job placements. By touring our Center, meeting with our Director, learning how to conduct interviews using interpreters, and meeting our "job ready" students, many recruiters find the experience makes a profound impression on them. Often they remember our students by name, and keep them in mind for future job openings as appropriate positions arise.

Cooperative Education Placements

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Our highest job placement priority is to work with graduating students and recent graduates (up to one year post-graduation) and to assist them in finding gainful employment related to their fields of study. However, job preparation for competitive employment at RECDS begins long before graduation. One of these early job preparation steps is to take a Cooperative Education (Co-op Ed.) work experience. Students who have declared majors are strongly encouraged (and for some majors they are actually required) to undertake at least one Co-op Ed. work experience. We find these internships are enormously helpful in making students more employable upon graduation.

Co-op Ed. internships serve several very important functions. They: a) allow students to see if they actually like the type of work their course of study is preparing them for (better to find out now, and make a mid-course change, then wait until after graduation); b) provide students with "real world" experience that simply cannot be duplicated in the classroom; c) furnish students with concrete work experience in their field to put on their resume *before* graduation; d) generally provide a source of professional references and letters of recommendation that will greatly assist students when seeking employment post-graduation; and e) sometimes lead to a permanent position at the internship site.

While some Co-op Ed. internships are paid, most are unpaid. All students earn college credit in their majors. Students must develop a series of measurable "learning objectives" for their internship which they will be evaluated on at the end of the quarter. At SCCC, Co-op Ed. is generally done on a part-time (i.e., 10-25 hours/week) basis during the academic year while students are also taking courses. Additionally, students can sign up for more full-time Co-op Ed. placements during the summer quarter -- which can be in the Seattle area, or elsewhere. We emphasize to students that from the employer's perspective a "work experience is a work experience," and they don't care if you were paid for it or not.

Community Service

For students who have not yet declared majors, and do not have strong work histories prior to coming to SCCC, community service is an effective way to gain work skills, add to one's resume and, at the same time, gain a better sense of what they field might like to pursue. Students may earn 2-credit hours (pass/fail) by performing community service in any non-profit or public organization. While these unpaid work experiences are less structured than Co-op Ed. (i.e., no formal "learning objectives"), they still offer students an excellent way to: a) add valuable work experience to their resumes; b) gain a better sense of what type of work they are drawn to and are suited for; and c) develop professional references and letters of recommendation.

TYPES OF SERVICES AVAILABLE TO EMPLOYERS

The good news is that since the passage of the Americans with Disabilities Act (ADA) in 1990 and its initial enforcement in 1992, it appears that employers have become very interested in learning more about deafness and hiring deaf workers. Along with a national movement towards diversity in the workplace, there

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seems to be a fair degree of receptivity on many employers' parts, that may not have been quite as evident prior to the ADA.

Many larger companies now have "ADA Coordinators" and "Diversity Managers" in their Human Resource (HR) departments, who are interested in visiting about our program and meeting our qualified students/graduates. "Diversity Job Fairs" are popping up all over. In the Seattle area alone, we have at least five major diversity fair each year that are specifically aimed at bringing candidates of diversity together with HR recruiters. One of these, *Access '96*, is held at the Seattle Center each year and is specifically for people with disabilities.

In addition, I attend at least three other diversity groups that meet regularly -- Puget Sound Diversity Network, Eastside Diversity Taskforce, and the South Puget Sound Diversity Taskforce. These are excellent places to network with just the diversity business recruiters who are especially interested in meeting our students, and working with us regarding reasonable job accommodations, and other types of post-placement follow-up to ensure that our students are successfully integrated into the workplace.

The bad news is that at this same time the United States workplace is changing very fast, and in ways that are not auspicious for many of our students. For instance, employment opportunities are growing fastest among small businesses, and slowest among large corporations (many of which are "downsizing"). Many of these small businesses are not even covered by the ADA because they have fewer than 15 employees.

Services to Employers

- Introductions to qualified and job ready RECDS candidates
- Scheduled business recruiter visits to RECDS to meet qualified and job ready students/recent graduates
- Half-day and full-day workshops at SCCC: *Working Together: Deaf & Hearing People*
- Presenting on-site workshops to educate potential employers on hiring and successfully integrating deaf employees into their workforces
- Presenting on-site orientations in specific departments where RECDS students have just been hired to facilitate co-worker communication and getting the placement off to a good start
- Evaluating the possible need for job accommodations for specific positions
- Assistance in locating and arranging reasonable job accommodations
- Informing employers of RECDS's evening classes in *Computer Literacy* and *Workplace English* and the *Climbing the Career Ladder* support group offered at SCCC and conducted in ASL to assist deaf adults advance their workplace skills and competencies
- Assistance in setting up sign language classes in the workplace
- Referrals to other Deaf Community resources as needed (e.g., interpreter referral service, TTY relay service, places to buy TTYs and other assistive devices, etc.)

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- Providing post-placement follow-up services and consultation as needed on an on-going basis. (Cases are not "closed" after 60 or 90 days; relationships with employers are long-term.)

Interagency Service Coordination

A number of our students are funded by VR or may be receiving some employment services other sources (e.g., Washington Vocational Services; Training, Assessment & Placement Program; Employment Security; Workforce Training; International Rescue Committee). Service delivery can be maximized for students by establishing case management teams in these instances -- because different players can contribute different types of support services.

A case in point was that of a deaf woman from Bosnia who had emigrated to the United States as a political refugee with her teenage niece. Before I met her, she was already connected to both the International Rescue Committee (IRC) and to VR. The IRC had assisted her with living arrangements, and getting her and her niece on public assistance. VR had helped her with getting hearing aids and had referred her to RECDS's evening ESL classes for foreign deaf adults. When I first met this woman, she had no English skills and no ASL skills. What she had was good Croatian lipreading skills, Croatian Sign Language skills, and more than 16 years of work experience as an electronic assembler. Putting all the pieces together:

1) RECDS was able to work with this individual (using a Croatian foreign language interpreter) to develop a professional resume and arrange for a job interview with an employer willing to give this individual a chance based on her solid work history.

2) IRC provided a Croatian foreign language interpreter for meetings with me and for the job interview.

3) VR provided on the job support by supplying a job coach and an ASL tutor after this individual was hired so she could quickly develop the English and ASL skills she would need to work successfully as an electronic assembler in an American company.

This story and a number of our other placement successes are profiled in our new publication *Deaf Portraits: College to Career*. Copies are available from the Regional Education Center for Deaf Students.

Intra-Campus and Inter-College Coordination

RECDS is a federally funded program that provides support services to deaf and hard of hearing students in a mainstream community college setting. RECDS is not a degree-granting entity. Thus, deaf students must learn how to navigate through our campus to have access to campus-wide services -- such as registration and financial aid. There are a number of areas on campus where accessibility to employment services specifically arises, and over the past four years we have worked hard to make these programs more accessible to our students. These include: Cooperative Education & Career Placement Office; Work-Study Program; Workforce Training; Computerized Career Library; and International Student Services. Some of

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these programs have purchased their own TTYs, and/or now list a centralized campus TTY number on their brochures so that deaf students can call them directly. Most have learned to list that interpreters are available upon request (with sufficient lead time) for the events they sponsor. Staff members from these offices have made special presentations to RECDS students subjects such as: "How to Apply for Work Study Funds?" "Employment Opportunities for International Students," and "What is Cooperative Education?"

Another valuable key to successful job placement for our students is to work closely with the faculty in their respective programs. The Seattle Community College District offers more than 100 different fields of study. Making employer contacts from scratch in fields as diverse as Accounting, Biotechnology, Commercial Photography, Computer Technology, Culinary Arts, Diesel Mechanics, Drafting, Graphic Design, Human and Social Services, Office Occupations, and Opticianry, to name a few, is daunting. Sometimes faculty are in the best position to offer job leads in their respective fields, and since they work directly with our students, they are in the best position to have a realistic sense of their skill levels vis-á-vis the industry standards. Having students get letters of recommendation from faculty in their majors is also very effective.

BARRIERS TO SUCCESSFUL EMPLOYMENT

Students' Barriers to Success

Lack of Job Readiness. Students sometimes come seeking employment, but they do not yet have appropriate workplace skills or understanding. While they may have good academic standing, and perhaps even good technical skills, they may still not be employable for other reasons. This often manifests itself with students who fail to follow the Employment Services Contract. For instance, if a student repeatedly shows up late or simply skips appointments with the Employment Services Coordinator, it is not possible in good conscience to recommend this student to a prospective employer. When students have unacceptable excuses for why they are late (i.e., excuses that would be unacceptable in the workplace such as "I ran out of gas." "I lost my keys." "I missed the bus." "My mother needed me to baby-sit my brother."), it is also not possible in good conscience to recommend these students to prospective employers.

Some students, perhaps because of having been overprotected for so many years by family and school systems serving deaf youth, have little understanding of what is expected in the workplace. If they grew up in hearing families where there was not good communication with their parents, these students may have missed some key concepts regarding the world of work. These concepts might include: chain of command; taking direction from a supervisor; going through proper channels to resolve problems; understanding that it is generally *not* appropriate to discuss your personal problems with the supervisor; and the need to "pay one's dues" to climb the career ladder.

As with college students anywhere, many RECDS students are young. At age 20-25 many young adults are not fully ready to say good-bye to college life and take on the adult responsibilities of full-time employment. There may also be the issue of leaving the security of the campus, particularly a "deaf-friendly"

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campus and the fear of going out into the "real world" where they may be the only deaf person in their new workplace. Sometimes young people need to take time off, to travel, to experiment, to make mistakes, and to "find themselves." Students such as these may come seeking employment, but it soon becomes clear that their hearts are not fully in it when many other things start taking priority over their job searches.

The primary way we identify these types of students is through the Employment Service Contract. Students who are not job ready, tend to eliminate themselves by violating the terms of this agreement. There is then an objective and verifiable method for putting on hold serious job development and placement efforts until students are more fully committed to finding work and keeping it.

Another category of students who are not job ready are those who need to deal with other issues first -- such as anger management, independent living skills, or personal hygiene and comportment. Some students may have an additional disability which could also significantly impact their employability (e.g., clinical depression). When students are not job ready for these reasons, RECDS tries to work closely with VR to make referrals to those community-based organizations that can provide the types of one-on-one work skills building, pre-employment training (e.g., community-based assessments, supported employment), and counseling that RECDS does not offer.

Inadequate English Skills. At the community college level, an ever-increasing number of degree and certificate programs are requiring students to successfully complete higher levels of college English to graduate. Within the Seattle Community College District in recent years, increased English standards are being required for students to enter vocational programs such as Carpentry, Auto Body Repair, and Baking. For other majors, such as Printing (now called "Graphic Imaging and Printing"), Graphic Arts, and Photography, the even higher level *English 101* is now required for graduation.

We observe that many of our students are having a tough time with these new, more stringent English guidelines. It is not unusual to see deaf students who have successfully completed all degree requirements in their major, but who either: a) need to defer graduation for several quarters because they have not satisfactorily completed their English requirements; or b) opt to graduate with a certificate instead of a full Associate of Applied Science (AAS) degree because they could not, or chose not to, complete the English requirements.

This same trend is widespread at vocational schools as well. For examples, in the Seattle area, what was formerly called "Lake Washington Voc Tech" has been renamed "Lake Washington Technical College." Along with the name change has been a significant stiffening of the English and math requirements in almost all degree-granting programs.

There are real and practical reasons for these tougher requirements; the world is changing. Many career paths that did not previously require high level reading and writing skills (i.e., the traditional trades) now do -- particularly because of the ubiquity of computers in virtually all sectors of the modern work world.

According to a recent article in *Gallaudet Today* (Fall, 1995) entitled *Literacy: Key to the Future*, "...As we approach the 21st century and as technology becomes increasingly important in the workplace,

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workers are finding that they must look back to two basic skills still necessary for them to succeed--reading and writing." Or as Terry Coye, Coordinator of Gallaudet University's new *English Literacy 2000* program points out in the same article, "The nature of work is changing. People need to use and create information, not just modify it and pass it on." At Gallaudet, strong recommendations have been made, and are expected to be adopted, that the University should increase its admissions standards in terms of applicants' English reading levels because they are "...the best predictor of success in college."

General Knowledge Gaps. Not surprisingly, since deafness generally leads to a profound lack of access to general information, some of our college students have large gaps in their general knowledge base. For example:

- One student wanted to know why money was coming out of his paycheck each week. While he had heard of "taxes," he really didn't understand what taxes were, what they were for, and how they worked.

- On his resume, one student listed his phone number as "TTY/V," even though both he and his housemate were deaf and used only the TTY. He did not understand that this could confuse a potential employer if he/she called on voice and got TTY beeps which in turn could seriously hurt his job search efforts.

- Many of our students, even though they use computers daily and have taken numerous computing classes, still seem to have a poor grasp of some very fundamental concepts. They often don't fully understand the difference between hardware and software, what an operating system is, or the difference between an operating system and a software application.

Disincentives. Perhaps the most pervasive barrier to students finding and maintaining gainful employment is the disincentive posed by federal entitlements. Sometimes students graduate college and show little interest in looking for work. They seem used to living a student lifestyle on a limited income, and just continue to do so after they graduate. Sometimes students appear to have black and white thinking about SSI/SSDI. Namely, they believe that if they work at all, even part-time or over the summer, that they will be immediately and permanently cut from SSI and SSDI. Often students do not have a good understanding of how their SSI/SSDI benefits are calculated, or the types of exceptions that are possible if they are working only temporarily or part time. Similarly, they are not aware of set-aside plans after they are employed (i.e., IRWE and PASS) that might allow them to convert their SSI/SSDI benefits into major personal purchases, such as a car or a computer, that would make them more independent wage earners. Much more educating of students is needed in this area.

"SSI Syndrome" can have a significant impact on student motivation. One student was offered a full-time summer job at $10/hour in his major. This was an incredible opportunity for him. Yet when he was told he had been offered a high-paying summer position, his first response was that he didn't want it. Initially he said the job was "too far" away and he didn't want to commute. Then, he said it was "too late" in the summer

to take a job (it was mid-July and he had already given up on expecting to find a summer job). Then finally this student said, "SSI."

Unrealistic Expectations/Lack of Understanding "The System." Another barrier to gainful employment is that students sometimes have unrealistic expectations of where they fit in the labor market. Today's employers are demanding more and more high level skills from job candidates even for entry level jobs. I see many more advertised positions requiring bachelor's degrees that never used to, such as secretarial positions. A two-year associate's degree equates to "entry level." Students sometimes need to be willing to take a job at a lower level or pay scale than desired simply "to get their foot in the door." And to advance in the company, one must be willing to put in the time to "pay one's dues." It is a slow and painstaking process.

College's Barriers to Success

Is There a Double Standard for Deaf Students? One tragic hallmark of deaf education in the United States has long been that teachers and educators tend to hold significantly lower expectations for deaf students than their hearing peers. In 1988, the federally appointed Commission on Education of the Deaf, chaired by Dr. Frank Bowe, presented its report and recommendations to the U.S. Congress and the President. In 1988 the Commission found that overall state of deaf education in this country to be "abysmal."

That perpetuation of a double standard for deaf students sometimes continues into college. There are instructors who feel sorry for deaf students may grade them more leniently. There are instructors who do our students a grave disservice by passing them and letting them graduate even when they are not close to being competitively employable in their chosen fields. This gives students a false and inflated sense of their skills and abilities, and sets them up for some very rude and painful awakenings down the road.

Do Students Understand and Know How to Use Available College Resources? Students sometimes do not know how to successfully navigate through "the system." They may not be fully aware of resources available to them and/or may let valuable opportunities slip by. Some of these missed opportunities include:

- Not understanding about financial aid, and the tips on how to successfully apply for it

- Not understanding about the federal and state work-study programs and how becoming eligible for work-study greatly increases a student's chance of getting a job on or off campus since the employer pays just a small percentage of the salary

- Not understanding student reporting responsibilities to VR, to ensure continued support and eventually job placement assistance

Employers' Barriers to Success

Attitudinal Barriers and Fears. While there is much focus among employers today about hiring candidates from diverse backgrounds and while the ADA has certainly heightened many employers' sensitivities about not discriminating against a large segment of the job pool, there is still much educating to be done. We find our

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half-day and all-day workshops, *Working Together: Deaf & Hearing People,* are tremendously well-received and well-attended. These workshops provide a safe and supportive environment for employers to learn and ask questions about deafness and Deaf Culture, participate in a variety of sensitivity training exercises, learn some basic work-related signs, and to generally develop a much better appreciation for how to bridge the communication gap between deaf and hearing workers.

Testing procedures. Some companies have standard testing procedures that all applicants must take to considered for employment. Unfortunately, some of these written tests may unfairly screen out otherwise qualified deaf applicants (and probably other individuals as well for whom English is not their first language) because of their English level. In other words, they end up testing the job candidate's English skills rather than the subject matter they are really looking for. In some cases, alternative forms of testing that are not culturally biased are needed.

One example of this is the "ethics testing" that a number of large employers now use to predict who will be a loyal and honest employee. In this type of test, applicants are given many hypothetical situations and asked what they would do. When administered to a general population, these tests enjoy a very high ability for predicting who will be a successful employee. However, when Associated Grocers gave their ethics test to a group of 13 deaf applicants last year, only one of the 13 passed. These individuals were applying for general stockroom positions -- jobs that would not require high level English reading and writing skills.

At Nordstrom stores applicants must pass a business math test to be considered for anything but the most entry level positions. The business math test is partially composed of word problems, and almost all deaf students who have taken the test have failed it. Again, it is important to separate out what part of the test is assessing math and problem-solving abilities versus what part is testing English skills. A future goal is to work with these and other companies to help develop alternate testing formats (i.e., videotaped in ASL) when appropriate.

Concerns about Worker Safety. Despite facts and figures to the contrary, many employers are still nervous about deaf workers and safety issues. Some cases are very poignant. One former student has been working part-time for United Parcel Service for more than three years. He is an excellent employee who has twice been named "Employee of the Month," and would normally have been promoted to a full-time driver long ago based on his excellent work performance. But the driver position required a Commercial Drivers License (CDL), and the CDL requires passing a hearing test. This individual is still stuck in a catch-22. Even though he drives his van to work and back every day, UPS is not legally able to allow him to drive one of their vans on the job.

Again, more education is needed to alleviate employers' initial fears and to inform them of straightforward and rather inexpensive accommodations that will make the workplace safer for *all* workers -- such as visual fire alarm systems, strobe lights on fork lifts, flashing lights of office machinery and other types of equipment, use of a "buddy system," use of alpha-numeric pagers, etc.

Lack of Thinking of Alternative Ways to Do the Job. Sometimes employers are used to thinking of a job being done in just one given way (i.e., the job includes some phone work), without necessarily having analyzed fully which job duties are truly "essential" and which are "non-essential." By sitting down with the employer and openly discussion the demands of the given workplace, we have found it is often possible to come up with a modest restructuring of job duties that works for everyone. The key is to start the dialog and to engage the employer in some creative thinking.

Telephone Impressions. Unfortunately, the telephone still presents a formidable barrier to RECDS students who attempt to undertake the job search process on their own. Despite the availability of a 24-hour TTY relay service and/or the availability of telephone interpreters, employers do not tend to respond well to direct telephone calls from our students. Generally, students who attempt to call employers directly for the first time through either the relay service or through an interpreter meet with rejection. Like it or not, we find that employers are still not familiar enough nor comfortable enough with operator-mediated or interpreter-facilitated calls to have this be an effective means for a first contact with a potential employer. Following an interview, the use of the relay service and telephone interpreters is fine. But that initial first impression to an employer is critical, and the telephone represents a significant disadvantage to a deaf candidate. However, if the employer has a TTY line, then this seems to be an effective and positive way for the student to make contact with the potential employer, providing the student has good English skills.

CONCLUSION

It has been very gratifying and exciting to see so many of our RECDS students/graduates enter the job market in a wide variety of fields. Especially thrilling is seeing our students break into fields and industries that have traditionally not been well-represented by deaf people. For example, last June our first student graduated from SCCC's Biotechnology program and is now working full-time at Targeted Genetics as a research technician. He is their first deaf employee. Next week this graduate and I have been invited to speak to a group of human resource managers from at least 20 more Puget Sound biotechnology companies specifically on the topic of how to hire and successfully integrate deaf employees into this fast-growing industry.

Another recent graduate is now a full-time computer service technician at Active Voice Corporation in Seattle where he is their first deaf employee. At one of our recent Working Together: Deaf & Hearing People workshops aimed at employers, this graduate and his supervisor were part of an employee/employer panel discussion. They shared with workshop attendees what steps they had taken thus far to make workplace communication and integration happen. This RECDS graduate currently teaches a weekly sign language class to his co-workers at Active Voice. These and many more of our success stories are highlighted in a new RECDS publication entitled Deaf Portraits: College to Career.

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At the same time, however, there are still many barriers and challenges that lie ahead. There are barriers on the student side, barriers on the employer side, and brand new barriers cropping up due to the sweeping and dramatic changes we are currently witnessing in the overall structure of the U. S. workplace. English competency is more important than ever, and employers are demanding more than ever. By the year 2000, it is predicted that 80% of all jobs will require the equivalent of at least a 2-year college degree. Incredibly rapid technological advances are changing the very nature of how we do our jobs and where we do them (i.e., telecommuting). These are all factors we must consider when thinking about the employment future for our students.

Career Success of Deaf and Hard of Hearing Graduates:
Preliminary Findings of a Ten-year Study

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Colleges and universities periodically do alumni surveys to obtain feedback on the quality and relevancy of their education. These surveys often focus on information about the educational, occupational, and economic attainments of the alumni which are important in demonstrating the "economic pay-off" of their education. This information is often helpful to college administrators and service providers for such purposes as justifying requests for public funding and guiding institutional planning and development. During an era of cuts in state and federal money for education, documenting program success through such means as alumni surveys takes on added significance.

Surveys of deaf and hard of hearing alumni have been conducted by Gallaudet University (e.g., Rawlings, Karchmer, King, and Brown, 1985) and the National Technical Institute for the Deaf (NTID) (see Marron, 1982; and Schroedel, 1982, for example). Fisher, Harlow, and Moores (1974) reported results from a survey of deaf and hard of hearing alumni from three two-year postsecondary programs. A few alumni surveys have focused on national samples, including Crammatte (1987) and Schroedel and Watson (1991).

Although an exhaustive review of alumni surveys is beyond the scope of this manuscript, three observations can be made. First, among deaf alumni from various alma maters, the type and level of occupation they are employed in depends in part on the type of college attended and level of degree earned. For instance, surveys of deaf alumni from Gallaudet University and NTID provide some contrasting information. Rawlings, et al. (1985) found that 42% of Gallaudet's graduated alumni had eventually completed either a master's or doctoral degree and 52% worked in four occupations: elementary or secondary teaching, postsecondary teaching, counseling, and school or program administration. In comparison, 81% of graduates from NTID between 1969 and 1979 had either vocational or associate's degrees and 74% worked in professional, technical, or clerical occupations (Marron, 1982; Schroedel, 1982). With type of college having this effect, one must be careful in making conclusions about alumni from different colleges.

Secondly, time is a factor in comparing studies done in different years with different alumni. Time confounds comparisons between the results of alumni surveys conducted at different points in time with different participants. Alumni surveys tend to provide snapshots of the participants (that is, information collected at one point in time), rather than information collected over time from the same participants.

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Thirdly, it was found repeatedly that deaf males on the average earn 30% a year more than deaf females (Armstrong, 1981; Brown; 1987; Crammatte, 1987; Fisher, Harlow, & Moores, 1974; Rawlings, et al., 1985; Welsh & Walter, 1986). In a national study of 116 deaf alumni from 33 special colleges, deaf males earned $3,700 a year more than deaf females (Schroedel & Watson, 1991). This pattern goes back at least to the 1960s (Quigley, Jenne, & Phillips, 1968) and continues into the 1990s (Rawlings, King, Skilton, & Rose, 1993). It exists even though deaf females are generally more likely to complete bachelor's and master's degrees than are deaf males (Schroedel & Watson, 1991). This pattern is just the tip of an iceberg representing a set of complex topics in gender and employment. These topics deserve broad and deep examination.

Purposes

What is needed to address questions about career trends for alumni who are deaf or hard of hearing in general, rather than from one institution, is a survey of alumni graduating at the same time from representative postsecondary programs and who have been tracked over time for information. This article reports on the results of such a project. It focuses on (a) early career attainments such as employment status, pay, job satisfaction, and promotions ten years after embarking on a career, (b) comparisons of alumni attainments for 1989 and 1994 to observe any relative changes, and (c) comparisons of career attainments of males and females to determine the extent to which gender is related to career success in such areas as pay, benefits, and advancement.

METHOD

Sample

The sample consisted of 325 deaf and hard of hearing participants. Two-thirds of the sample (67%) considered themselves to be deaf, with the remainder (33%) reporting themselves to be hard of hearing. The large majority were White (92%) and participants were about equally distributed in terms of gender (53% female and 47% male). Regarding marital status, 55% were married, 37% single, and 8% divorced or widowed. Average (both mean and median) age was 32 years (ranging from 28 to 60). About one in four (26%) participants had continued their education by earning a degree beyond the one they had received at the initiation of the project ten years earlier. The current distribution of degree levels included vocational (29%), associate's (20%), bachelor's (32%), and master's or higher (19%).

Procedures

Participants were members of the graduating classes of 1983, 1984, and 1985 from 47 special postsecondary programs, including two- and four-year colleges and technical institutes. Prior to graduating during their final year on campus, individuals in the classes of 1984 and 1985 were invited to participate in the longitudinal study and were informed that this was voluntary (Schroedel & Watson, 1991). Five years later,

follow-up surveys were administered to those individuals in the classes of 1984 and 1985 who had agreed to participate; additionally, to increase the sample size, members of the class of 1983 were later invited by mail to participate in the five-year follow-up study. Subsequently, a ten-year follow-up survey was administered to alumni in all three classes who had completed the five-year follow-up survey. Results presented here are based on the combined results from the five-year follow-up survey administered in 1988/1989 and the ten-year follow-up survey administered in 1994. When each survey was administered, participants were informed of the voluntary basis of their participation and that their individual responses would be confidential. Details about each survey are presented below.

Five-year Follow-up Survey. Five years after graduation, about 83% of participants completed mail survey forms which gathered comprehensive work history information, personal and family information, and information about their work environment, use of social services, and additional educational attainments (El-Khiami, 1993). A total of 490 deaf and hard of hearing alumni completed the five-year follow-up questionnaire.

Ten-year Follow-up Survey. The ten-year follow-up survey gathered personal and family information, additional educational attainments and quality of life information, plus detailed information about employment status, current job, and job satisfaction. Mail and phone efforts to trace the 490 people who participated in the five-year follow-up survey yielded a sample of 400 potential participants (82% of the 490). Four mailings of the ten-year follow-up survey questionnaire netted a response rate of 80%, or 325 completed survey forms from the 400 traced alumni.

RESULTS

Data from the 10-year follow-up survey are in the process of being analyzed. Preliminary findings in three general areas will be discussed. The three areas to be addressed are as follows:

a) Current employment status of survey respondents and work-related information;

b) Comparisons of selected attributes of respondents' work situations five and ten years after completing their degrees; and

c) Exploration of gender differences on selected employment characteristics.

Employment Status

The large majority of the participants were employed (84%), with 5% unemployed (but searching for work), and 11% not in the labor force (see Figure 1). Over half of those not in the labor force (60%) were raising their family; other reasons given for not searching for work were "going to school" (30%), "can't find a job" (8%), or "too sick" (2%).

Among the employed respondents, most reported that they worked for a private business (51%), while others worked for government (23%), school systems (17%), or service programs (9%). Also, most of the

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employed participants reported receiving job benefits: with 88% receiving annual leave, 84% health insurance, 84% sick leave and 71% a retirement pension program. When asked about sources of income, 84% cited a job as a source of income. The percentage of participants who reported receiving other sources of income ranged from a high of 11% for money from parents to a low of 2% receiving welfare/food stamps (see Figure 2). Thus, the large majority of respondents were economically self-sufficient.

Five- and Ten-Year Comparisons

The median annual job-related income in 1994 for employed participants fell in the $20,000 to $25,000 category, up from the median annual income for 1989 which fell in the $15,000 to $20,000 category. Incomes are unadjusted for inflation. When asked if they were satisfied with their jobs, a combined 86% indicated that they were either satisfied or very satisfied, and 14% were dissatisfied. Essentially identical figures were obtained for these participants with respect to their job satisfaction five years earlier.

As an additional way to characterize participants' jobs, jobs held in 1989 and 1994 were classified by occupational category, as presented in Figure 3. Most participants in 1994 worked in professional, technical or managerial occupations (53%), with 24% in clerical or sales occupations, 15% in crafts or machine operative occupations, and 8% laborers or service workers. The percentages of participants working in each of these four occupational categories had not changed substantially since the five-year follow-up survey (1989), although there was an increase in the percentage of participants working in professional, technical, or managerial occupations (where 46% had worked five years earlier) and a corresponding decrease in the percentage of participants who had been working in clerical and sales occupations (where 32% had worked five years earlier).

Gender Differences in Employment

The third focus of this paper is the topic of gender differences in employment and the differences in work-related outcomes between males and females during 1994. Preliminary analyses suggest that males are reporting outcomes which appear somewhat more favorable than those reported by female participants. With respect to annual salary, the median annual salary for males ($25,000-$30,000) exceeds that for females ($20,000-$25,000). Thus, males were earning about $5,000 more a year in income, or about 20% more than females. Moreover, somewhat more males than females reported receiving each of four types of benefits. The corresponding proportions of males and females receiving each of four job benefits were: health insurance (males, 88%, females, 80%); retirement pensions (males, 72%, females, 69%); annual leave (males, 93%, females, 83%); and sick leave (males, 88%, females, 80%). About the same proportion of men (31%) and women (27%) indicated that they supervise other workers.

More men than women indicated that they had received promotions: specifically, 38% of the men and 24% of the women reported receiving two or more promotions during the past five years, 20% of the men and 22% of the women reported receiving one promotion, and 42% of the men and 54% of the women reported

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receiving no promotions. From another perspective, the proportion of males with two or more promotions was somewhat more than 25% larger than their female counterparts.

The disparities in earnings and job benefits between males and females in this study are even more perplexing after one compares the educational attainments of the two groups. As presented in Figure 4, the proportions of females with bachelor's or master's degrees exceeds those of males. Despite overall higher educational attainments, females lag behind males in economic attainments, a condition which has persisted for some time across the nation. A possible explanation for this condition is that higher levels of education do not necessarily guarantee entry into higher paying occupations. Several occupations which require two-years of technical training offer highly competitive wages, relative to occupations requiring more advanced degrees. Thus, a higher degree does not necessarily qualify a person for a better paying job. As shown in Figure 4, the percentages of males with either vocational or associate's degrees are larger than for females, possibly accounting for the higher earnings of male participants. Nevertheless, because educational attainments clearly do have an impact on occupational attainments (as discussed earlier), it is all the more important to find that the less favorable employment outcomes reported by females do not seem to be a result of lower educational attainments.

In a preliminary effort to understand why the male participants appear to have experienced somewhat more favorable outcomes than the female participants, two possible explanations have been considered. First, a greater number of females than males worked in part-time jobs: 6% of males and 18% of females worked in part-time jobs. Part-time jobs tend to have lower hourly pay and fewer benefits. Future analyses will examine the relationships between number of hours worked, job benefits, and wages between males and females. Secondly, it is possible that female workers have entered jobs which tend to pay less and tend to offer fewer benefits. With respect to occupational category, males seem to work in the more lucrative occupations. According to Figure 5, for example, 22% of the males and 7% of the females reported working in crafts and machine operative occupations, which tend to offer high pay and good benefits. Conversely, fewer men (19%) than women (29%) reported working in clerical or sales occupations noted for their relatively low pay and relatively modest benefits. In the professional, technical and managerial occupations, men (51%) and women (55%) were employed at about the same frequency, as was true for men (8%) and women (9%) who reported working as laborers or service workers. Similarly, it is possible that men have been hired by companies which tend to offer better pay and benefits. More men (57%) than women (46%) work for private business, and more men (27%) than women (18%) work for government agencies. Conversely, more women (23%) than men (11%) work for school systems, and more women (13%) than men (5%) work for human service programs. Government agencies and private businesses may provide better pay and benefits than service programs and school systems. These difference may account for the generally more favorable work outcomes that males have reported compared to females. Additional analyses are planned to further explore this possible explanation.

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Discussion

Ten years after college most of the respondents in this survey were doing well in life. The large majority were economically self-sufficient; 84% had income from a job. Median income for 1994 was in the $20,000-$25,000 bracket, about $5,000 higher than five years earlier. A majority (53%) worked in professional, technical, or managerial jobs. This percentage for 1994 was larger than for 1989. The fact that 26% had received another degree in the past ten years contributed to these career attainments. In several comparisons, respondents were doing better economically and occupationally in 1994 than in 1989. A conclusion to be reached from these findings is that the educational and occupational success of these alumni justifies continued support for public investment in education. These alumni are productive citizens making worthwhile contributions to society.

One of the problem areas identified by the survey was the finding that females were earning about 20% less than males, were less likely to get job benefits, and reported fewer promotions on the job. The pay differential is well documented in the literature; however the findings from this study show that gender differences favoring males extend beyond differences in pay. Adding to the perplexity of the topic, it was found that females were more likely to complete bachelor's and master's degrees than were their male counter parts. Among the prospective explanations for these differences were: (a) females were three times more likely to work in part-time occupations, and (b) females were less likely to work in jobs with better socioeconomic quality (for example, fewer females than males worked in private business or for the government where better jobs may be available).

Several recommendations are offered for postsecondary service providers on the question of gender gaps in employment. One practical suggestion is to encourage more females to enter college majors in technical and scientific fields where they are under-represented (Schroedel, 1987; Schroedel & Watson, 1991). Another suggestion is to inform deaf college students about better employment prospects in expanding growth jobs of the future. Information on these jobs is available in Geyer and Schroedel (1995) and Schroedel and Geyer (1996).

Figure 1
Employment Status 10 Years after Graduation

Not in Labor
Force
11%

Unemployed/
Searching
5%

Employed
84%

Figure 2
Sources of Income 10 Years after Graduation

• Jobs	84%
• Parents	11%
• SSDI	9%
• Medicare	6%
• SSI	5%
• VR Services	4%
• Unemployment Insurance	4%
• Welfare/Food Stamps	2%

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Figure 3
Occupational Category 5 and 10
Years after Graduation

Legend:
- Then (1989)
- Now (1994)

Categories: Professional, Technical, or Managerial | Clerical or Sales | Crafts or Operators | Laborers or Service Workers

Figure 4
Occupational Category 10 Years after Graduation by Gender

Professional, Technical, or — 55% / 51%
Clerical or Sales — 29% / 19%
Crafts or Operators — 7% / 22%
Laborers or Service Workers — 9% / 8%

Legend:
- Female
- Male

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Figure 5
Highest Degree Attained 10 Years after
Initial Graduation by Gender

Male

Voc.
35%
M. A.
14%
A. A.
21%
B. A.
30%

Female

Voc.
23%
A. A.
20%
M. A.
23%
B. A.
34%

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Deaf Supervisors of Hearing Employees: A Profile in Progress

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Abstract

Deaf and hard-of-hearing postsecondary graduates from a national technical college were surveyed to identify who among them were supervisors of primarily hearing employees. The sample was selected based on past job information they provided and referrals solicited from the college community. Questions about current job title, span of responsibility, communication modes, and supervisory experience were included to identify graduates who met our supervisor criteria. A profile of these graduates is provided along with discussion of the positive and negative aspects they associated with supervising other employees. Outcomes from this phase of the study will be used as a guide to exploring the results in more depth during interviews with deaf and hard-of-hearing supervisors.

Introduction

A substantial body of literature has been written in the last several decades relative to deaf and hard-of-hearing workers[1] and their careers. Their circumstances have been examined in terms of unemployment rates and underemployment (Schein & Delk, 1974; Barnartt & Christiansen, 1985; Schroedel, 1987; MacLeod-Gallinger, 1989; Welsh & MacLeod-Gallinger, 1991; Foster & Welsh, 1991; MacLeod-Gallinger, 1992; Steffanic, 1992; Compton, 1993); as well as lack of career options and career mobility (Crammate, 1968, 1987; Vernon, 1970; Walter, Welsh, & Riley, 1988; Welsh, 1989; Steffanic, 1992; Compton, 1993; MacLeod-Gallinger, 1992; Mowry & Anderson, 1993). On-the-job accommodations, access to appropriate employment, as well as communication and cultural issues, have been the focus of numerous articles and books relative to deaf and hard-of-hearing workers as well (Schroedel, 1987; Jamison, 1987; Foster, 1988; Foster, 1992; Mowry & Anderson, 1993; Davila, 1993; Mangrubang, 1993).

Legislation both relating to education and labor, have ameliorated some of these circumstances. Most recently, the Americans with Disabilities Act (ADA, 1991) has opened the way for deaf and hard-of-hearing persons and others with various handicapping conditions for greater access to the workplace. Earlier attitudes towards hiring deaf or hard-of hearing workers have been described as "permissive", at best, i.e., "yes, we will hire them but don't expect any accommodation; progressing to "accomodative", which involves restructuring the job somewhat to get around the communication difficulties"; to "facilitative", whereby organizations actually institutionalize special

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[1] In this paper the use of the descriptors, "deaf" and "hard-of-hearing" are used. These include anyone who meets the hearing level required by NTID for admission and support services for deaf students. The criteria is a 70 decibel puretone average, i.e., a hearing loss of 70 dB or greater in the better ear.

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programs within to expand accommodative measures (Jamison, 1987). This is where the ADA, new technology, and awareness in the workplace are moving, i.e., becoming more pragmatic and assistive versus merely acquiescing to hiring workers with special needs. Deaf and hard-of-hearing persons are also learning more about what their on-the-jobs needs are, and feeling more confident about expressing these needs to their employers.

Research on alumni of the National Technical Institute for the Deaf (NTID), one of Rochester Institute of Technology's eight colleges suggests that they are performing very well in many aspects of their employment (Walter, Welsh, & Riley, 1988; Foster, 1992). In particular, postsecondary education has had a consistently positive effect on labor force participation, occupations, earnings, and certain types of career mobility (Welsh & Walter, 1988; Schroedel, 1987). However, there is less data regarding the degree to which NTID alumni are moving into positions of management, particularly when those positions involve direct supervision of employees in settings other than those serving deaf and hard-of-hearing people.

Despite the problems that exist for deaf and hard-of-hearing workers, we know that there are some who either currently supervise hearing employees, or have in the past. The objective of this study is to determine the characteristics and circumstances of NTID alumni who have become supervisors or managers in the course of their employment. The term "supervisor" herein is defined as an employee who directly supervises the work of others, including the performance of such functions as hiring, evaluation, and when necessary, termination. Further, the focus is on deaf and hard-of-hearing supervisors working in environments that are not staffed by or serving primarily deaf and hard-of-hearing people, that is, in what is sometimes described as the "hearing" versus the "deaf" sector of employment.

This paper will focus on results of the first phase of the study which involved identifying, locating, surveying, and profiling potential supervisors among NTID's alumni. The information derived from this initial phase will inform the second phase, when in-depth interviews will be conducted with alumni who fit our defined criteria of a deaf supervisor, and who have expressed a willingness to discuss their experiences.

Methods

Identification of Potential Supervisors. Several strategies were used to identify NTID/RIT alumni who might be supervisors or managers on their jobs. The primary sources of potential supervisors were derived from analyses done using NTID's Alumni Feedback Questionnaire data base; solicitation of the NTID community for names of alumni whom they thought were currently supervisors or managers on their jobs; and an announcement about the study in NTID's Alumni Newsletter.

The Alumni Feedback data file contains information provided by alumni via reiterated surveys sent to them since they have graduated. These surveys have varied in content, but each contained a core of questions including continuing educational activities, employment status, occupations, industries and in some instances, earnings. The Bureau of the Census (1990) occupational codes are used to categorize jobs alumni report on their Alumni Feedback surveys. Potential supervisors were selected by the occupation coded on their most recent questionnaire response.

The NTID faculty and staff were contacted via electronic mail to ask them to please share the names of any alumni they knew of who possibly met our criteria for supervisor or manager on their jobs. They were very responsive to our request. In addition to some of the same names we had also selected from our data base, they provided numerous other alumni prospects. The newsletter announcement let alumni know that the study was being conducted, and if they were interested in participating, to contact us and provide their current address.

Additionally, when completed surveys were returned, information such as last reported occupation and industry, highest degree conferred by RIT, and employment status, was extracted from existing alumni data bases to help verify, compare, and interpret answers alumni gave to similar questions on the supervisor surveys.

The Sample. The combined strategies to identify potential supervisors among NTID/RIT alumni resulted in 213 names. All but ten, for whom addresses were incorrect/unknown, were successfully contacted, resulting in a final sample of 203 potential supervisors.

Current address data files were used to develop the mailing list. Letters were sent with each questionnaire explaining the rationale for the study and how the information gathered was intended to be used to help other students and alumni. Additionally, they were informed that when the study was completed, all who responded would receive a summary of the results. The explanation and request was sent out via our Alumni Relations Officer, with his signature. The authors also signed the letters and were identified as co-investigators of the study.

An incentive was offered to encourage participation. Each potential respondent was informed that five participants would be randomly chosen to receive a gift certificate from a well-known national catalog company who, it was noted, was one of the first to provide a TTY[2] number for customers. Those who responded by a certain date would be eligible for the drawing. In the interim, a reminder mailing was done regarding the survey sent. After the drawing, the winners as well as other participants were informed of the results of the drawing for the gift certificate. A second questionnaire mailing was also done approximately four weeks after the first to give non-respondents another opportunity to complete and return a questionnaire. There were a total of 121 responses to the survey, yielding a 59.6 percent return rate.

The Survey Instrument. The instrument was designed to gather detailed information in a variety of areas including employment history, continuing education experiences, primary job responsibilities, number of other deaf and hard-of-hearing workers at ones' place of employment, scope of supervision (be it of people and/or projects), and past supervisory experience. It also included open-ended questions designed to explore with respondents elements of their work experience, such as strategies they use to communicate with employees and positive or negative aspects of being a supervisor.

In addition to questions pertaining to employment, occupations, supervision, communication methods used, and education, respondents were also asked to provide any telecommunication means by which we could contact them.

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[2] TTY is used in this paper for describing the original teletype machine developed for deaf and hard-of-hearing persons for phone communications. It is the term preferred by many deaf persons. TDD is a more general term which means telecommunication device for the deaf. This term is used in the paper when a respondent specifically used the term "TDD" in comments they wrote on their questionnaires.

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Places to list phone number (TTY/Voice), electronic mail address, and a facsimile number were provided on the questionnaire.

Because names and social security numbers of alumni were used, and the personal nature of some questions asked, the survey instrument had to be reviewed and classified by the college's Institutional Review Board relating to use of human subjects in research. The study was classified as requiring informed consent and therefore, signatures were required by respondents in order for their information to be used in the study (see Appendix A: Employment Experiences Survey).

Results

General Characteristics of the Sample

Nearly two thirds of respondents were male, and a little over a third, female. The majority of the alumni who responded were currently employed (92.6%). Nine alumni who did not have jobs at the time they responded to the survey, had either been laid off from their jobs or had quit. One person stated that s/he was in the process of setting up a business, and no one said they had been fired from their last job. Two individuals were unemployed, but actively looking for work.

Seven individuals were technically out of the labor force; that is, they did not currently have jobs, nor were they actively looking for jobs. Three checked that they were not working because they were going back to school; four checked family responsibilities that required their not being in the work force; and two checked that they were too ill to work. A couple of respondents checked more than one reason for being out of the labor force, which explains why there were nine reasons checked instead of one each for the seven who were out of the labor force.

Although one individual had been in the same job for as long as 26 years, and another only one year, half of the respondents had been in the same job for six years or less. This makes sense in view of the fact that nearly half of them also reported that they had made job changes since the last time they responded to an alumni feedback questionnaire. Among the job changers, about two thirds indicated that these were promotions for them. And for the entire sample, nearly 69 percent indicated that they had had at least one promotion during their career. A little over a quarter each noted that the promotion was either initiated by the individual (28.2%) or by their manager (25.6%). Nearly half indicated that the idea of promotion was shared. Promotions and job mobility will be dealt with in more depth during the interview phase of the study. However, looking at this sample of deaf college graduates thus far, stagnation on the job appears not to be a predominating factor (see Slide 2).

A little over 13 percent of the respondents had made changes in both their jobs and industry or company since they last provided information to NTID. In these cases the percentages of females doing so were somewhat greater than for males. Three times as many employees made job changes versus changes in the type of industry in which they worked. This suggests either upward or lateral mobility within one's place of work, or a change to another company or business that engages in the same line of work.

Alumni were also asked if they were owners of a business. Of the 23 individuals who reported owning their businesses (21.6%), three quarters were men. There were two individuals (one male and one female) for whom this business was a secondary enterprise, and not their primary source of income (see Slides 21-23 for the name of businesses owned).

Respondent Profile

Type of job responsibility. Alumni were asked if they (1) supervised other employees, (2) supervised projects, or (3) worked as part of a team. Many respondents checked more than one of the three conditions. Since it is possible in reality to do all three as part of one's job, respondents were counted as potential supervisors, unless they specifically did not check that item on the questionnaire. This did not prevent identification of persons who met our criteria for supervisor, because there were additional, qualifying questions on the survey that allowed distinctions to be made as to who were and were not truly supervisors or managers of people.

Individuals categorized themselves about equally as being supervisors of others (38.4%), part of a team (37.5%), or as project leaders (33.0%). And among those who reported that they owned their businesses, a little over half also classified themselves as supervisors (see Slide 2).

Numbers of Deaf Employees at Place of Work. The range was very wide for the number of deaf and hard-of-hearing persons at a respondent's place of work. There were as many as 600 in one instance, and none at the other end of the spectrum. However, fifteen was the mean number of other employees who were deaf at their places of work. Similarly, numbers of other employees who used sign language averaged twenty three. But more than half of the respondents reported that they worked in environments where there were neither any other deaf or hard-of-hearing persons, nor other users of sign language. Even when there were other deaf and hard-of-hearing employees at their places of work, almost three quarters of respondents said they didn't actually work directly with them. Therefore, the majority were interacting and doing business primarily with hearing individuals (see Slide 3).

Types of Businesses Where Employed. The businesses and industries where respondents are employed for the most part reflect their educational backgrounds and training versus any particular sector of the marketplace. There are some small concentrations in government departments, which has been a major employer of deaf and hard-of-hearing persons. A variety of employers typified the lists for both men and women, although there are differences between the two (see Slides 15 to 20).

Business Ownership. As mentioned previously, 23 respondents reported that they were owners of a business. Most often these were services or consulting businesses, and a few were wholesale or retail sales (Slides 21 to 23 list these for males and females by job title and business).

Continuing Education. Alumni were asked about any kinds of additional education they have had since graduating from college. All but 10 respondents reported some form of continuing education. Over half (53.7%) cited on-the-job training, and almost as many (43.0%) said they had taken courses toward a degree. Many (38.0%) indicated that they took courses specifically to update their skills. Others simply took courses that were of personal interest (24.0%).

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Nine individuals were currently in school. Certainly these NTID/RIT graduates demonstrate recognition of the need for life-long learning. This can also be interpreted as an indicator of career mobility in that they are either keeping current in their fields or seeking new opportunities (see Slide 4).

Among those who had taken courses toward a degree there were two associate's, ten bachelor's, 16 master's, and three doctoral degrees earned. This amounts to 28.9 percent of the sample. The programs in which these degrees were earned are contained in Slides 24 and 25.

Supervisors and Non-Supervisors

In addition to being asked if they were currently supervisors on their jobs, alumni were also asked if they were supervisors in a previous job. Forty-three respondents indicated they were currently supervisors of others; 26 of whom reported that they had also held supervisory positions in a past job, and 17 were new to supervising. There were 61 (50.4%) who reported having been supervisors in the past.

For this phase of the study, individuals were categorized as supervisors based solely on self identification as such in their current jobs. All others were categorized as non-supervisors. When individuals are selected for in-depth interviews in the next phase of the study, both current and past supervisory experience will be taken into account. Moreover the selection criteria will include a minimum number of employees supervised, supervision of either exclusively hearing, or a mix of deaf and hard-of-hearing and hearing employees. Experience at hiring and evaluating others will also be criteria.

Supervisors (43) and non-supervisors (78) of people were compared for number of deaf employees and number of employees who used sign language at their places of work, and how many deaf and hard-of-hearing employees they worked with directly, communication modes used on the job[3], and their perceptions about the positive and negative aspects of being a supervisor (see Slide 6 for an overview of Current Supervisors).

Work Environment. On the average, current supervisors were responsible for 14 other employees, although the median number supervised was six. A very small percentage (2.2%) worked exclusively with other deaf or hard-of-hearing employees. More than half worked (55.6%) with hearing individuals only. Less than half (42.2%) supervised a mix of deaf and hard-of-hearing, and hearing workers.

As mentioned earlier, more than half of the respondents worked in places where there were neither any other deaf or hard-of-hearing persons, nor other users of sign language, and therefore were most often interacting with hearing workers. However, there was a significant difference between the two groups in numbers of deaf employees with whom they worked directly. Almost three times as many supervisors (42%) reported that they worked directly with one or more deaf persons than did non-supervisors (14%). The mean numbers, medians, and ranges of deaf and

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[3] Communication modes used overall versus those used most often are discussed in terms of supervisors versus non-supervisors only. They were not presented in the general profile section because our focus for this variable in particular was to demonstrate not only variety of use but differences between the two groups.

hard-of-hearing employees at their places of work, and number of other employees who used sign language were essentially the same as for the sample as a whole (see Slide 10).

Communication On-the-Job. Several examples of types of communication were included in this question. Respondents often cited these, to which they added other modes also used by them at work. Then they were asked to indicate which of these they used most often. The preferred method(s) were not as easily pinned down as originally thought. Some respondents listed the same methods for both cases. This generally suggests that they are flexible and adaptive, using whatever works best in any given situation. Upon closer examination however, differences emerged between communication modes used overall and most often, and between supervisors and non-supervisors (Slides 7 and 8 lists these).

Supervisors and non-supervisors used a wide variety of methods. Both cited phone/tty as a primary communication tool, followed by speaking. Facsimile, e-mail, interpreters, and relay followed in frequency of use. The most notable difference between supervisors and non-supervisors occurs with use of signing and writing to communicate on the job. Supervisors cited both methods significantly more often than non-supervisors. Moreover, supervisors cited the use of gestures and lipreading more often than non-supervisors. In general, supervisors appeared to have more tools or equipment available, as indicated by reported use of pagers, voice mail, video conferencing, and electronic notes.

A slightly different distribution occurs for methods most often used. Speaking tops the list for both groups. Supervisors also used signing quite often, more so than electronic mail, writing, or interpreters. Other than high use of speaking, non-supervisors tended to rely on electronic mail and writing. They also used interpreters only slightly more often than supervisors. Phone/TTY and facsimile played a larger role among non-supervisors (see Slide 9).

Opportunity to learn more specifics about the communication challenges deaf and hard-of-hearing supervisors face in their daily working environments will be provided by way of interviews with selected supervisors. Still, we can glean some insights into the communication issue through analyses of comments made relative to positive and negative aspects of supervising. As one might expect, communication problems and strategies fell out as a primary theme.

Positive and Negative Thoughts about Supervising Others. Two open-ended questions "What do you think are positive..." and, "What do you think are negative things about being a supervisor or manager?" were asked of all alumni. Both positive and negative comments written by each respondent were typed verbatim into a file. First they were read and analyzed for common occurring themes or points. Categories were developed based on these themes. All comments were then scored for number of times a theme or point occurred.

Because communication is an integral component of supervising others, especially for deaf and hard-of-hearing persons, it was subjected to additional analyses in order to distinguish what were communication issues for any supervisor versus those specific to deaf and hard-of-hearing supervisors. Deaf-related versus general supervisory issues will be examined following discussion of the positive and negative aspects of supervising.

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Communication issues related to supervising were categorized under negative aspects. However, as we will learn later, many supervisors described ways in which they were able to take advantage of their position, to make communication a "positive" for them. Slide 11 contains the percentages of occurring themes for supervisors and non-supervisors.

Both current supervisors and non-supervisors thought that the "Opportunity to Lead" and "The Challenge" were key positive aspects of supervising. "Opportunity for Teamwork", however, was deemed a positive aspect by those who were not supervising, more than by supervisors. Having "More Exposure to Information" was cited almost equally by both supervisors and non-supervisors. The two groups differed quite a bit on the positive value they attributed to other aspects of supervising. The ability to "Exercise Vision" was valued more by supervisors, as was the "Opportunity to Educate." "Improved Self-Esteem" was less of an issue for supervisors than for non-supervisors.

Many of these differences were not great. But some of the non-supervisors had past experience as supervisors. Therefore it seemed useful to look at where these themes placed for individuals who had never been supervisors. Interestingly, this group perceived supervising as providing more in the way of personal satisfaction as opposed to enabling them to educate or influence others. For example, "Improved Self-Esteem", "More Job Satisfaction", and "More Perks" were high on the never-supervisors list of positives. "Opportunity for Teamwork" was cited much less often than among non-supervisors as a group (Slide 11).

Looking at the negative side of supervising, "Communication Difficulties" ranked first among the groups. "Problems with Employees" was second most cited as a negative, followed by "Administrative Burdens", and "Stress". Supervisors and non-supervisors mentioned other categories at about the same frequency, except as concerned "Bias toward Deaf Persons" which supervisors viewed as less of a problem compared to non-supervisors. In fact, those in the position to "know", as it were, were less likely to mention deafness-related issues as negatives than were non- or never-supervisors. One possible explanation for this finding is that perspectives based on actual experience are often different than those based on speculation. On the other hand, it could also be that individuals who had aspired to supervisory positions, but were unable to achieve their goal, believed that "Bias toward Deaf Persons" was a major contributing factor (Slide 12).

Of the total number of possible responses regarding supervising, 100 positive and 98 negative responses were given. Some persons wrote only one comment, while others offered several comments in response to the questions. Responses were further broken down into four broad categories: (1) positive comments not related to deafness, (2) negative comments not related to deafness, (3) positive comments related to deafness, and (4) negative comments related to deafness. Within each of these categories, comments were further analyzed for recurring patterns and themes.

The first category consists of positive comments that were not related to deafness. Respondents described both benefits of being a supervisor or manager, and the qualities they felt were important in a supervisor/manager. Respondents mentioned many types of benefits to being a supervisor. Many said they appreciated the opportunity to improve their organization, or to help it grow. Others focused on material or personal benefits, such as increases in

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pay, responsibility, professional growth, status, leadership opportunities, self-esteem, and visibility within the company. Still another type of benefit involved enjoyment derived from working with others, e.g., mentoring and guiding other employees, and teamwork. Lastly, some respondents said that being a manager provided greater access to information and professional networks within the organization, and several said they liked the opportunity to get to know and work with upper management. Examples of qualities deemed important in supervisors included effective communication, assertiveness, fairness, patience, technical competence, and the ability to work well with others.

The second category of response was **negative comments not** related to deafness. By far the most frequently mentioned negative aspect of being a supervisor was personnel issues, including responsibilities for hiring, evaluating, disciplining, and possibly terminating employees. Others complained about the long hours expected of managers, a condition which was exacerbated when it occurred without additional pay. A third kind of negative comment involved reflections on the pressures and stress associated with management, including social isolation and having to make difficult decisions. Several mentioned the increased level of responsibility as a negative factor, as well as the administrative aspects of supervision, including meetings, policies/regulations, and paperwork. Lastly, several respondents said they felt the politics involved in management was a negative aspect of the job. Examples of qualities which were described as negative in a manager included poor communication skills, a negative attitude (failure to praise, looks for flaws, critical, demanding), a lack of authority, presence, or decisiveness, failure to support growth in one's employees, and favoritism.

Positive comments related to deafness comprised the third category. They tended to focus on two areas - attitude and communication. Several respondents felt that, as a deaf or hard-of-hearing supervisor, they were able to provide a positive role model for deaf and hard-of-hearing people as well as hearing people to show others that "deaf can do it." Other positive responses related to attitude included the opportunity to spread an awareness of deaf culture and the power to influence company policy and direction with respect to deaf or disabled persons.

Respondents also offered positive comments associated with communication. For example, several noted that as supervisors they have more control over communication and are able to "enforce" effective communication. In a similar vein, a respondent said that his/her employees are taking sign courses and learning how to use a TDD. Another said that s/he has more "control" over communication, and that the employees "listen to" him/her more now, rather than the other way around. Other examples of positive comments related to communication include being able to get technology and services to support communication (TTY, e-mail, interpreters), having a staff assistant who "listens" for the deaf person, and the notion that deaf supervisors have more time to focus and become better observers than hearing supervisors because they "don't need to communicate as much."

The final category focused on **negative comments related to deafness.** Again, comments involved either communication or attitude. Some people were very general in discussing negative aspects of communication, noting simply that there was "too much communication," "communication hardship," "miscommunications," or "communication barriers." Others were more specific.

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Several people commented on problems with support services. In this vein, some cited difficulties scheduling interpreters or finding money in the budget to pay them, and one person said that it was difficult to control a meeting even with an interpreter. One respondent complained that s/he was not able to get everything at meetings without a notetaker because people sometimes mumble, while another said that the typing skills of the notetakers was sometimes poor. Many said that the phone presented problems - some simply observed that they could not use the telephone with voice, while others said that customers were not always patient or willing to use the relay service.

Several respondents focused on difficulties associated with interpersonal communications with particular people or under specific conditions. For example, one person had difficulty handling communication with upper management, while another described difficulties getting complete information from business partners. A third person said that when the interpreter was not present, the "hearing employees forget you're deaf." A fourth responded pointed out that it is difficult to communicate with new employees, and that it takes time to teach them sign language sign language; the alternative (finding a hearing employee who knows ASL and can be trusted) is even more difficult.

Negative comments pertaining to attitude focused on attitudes of hearing co-workers or company management. Several said that it was difficult for deaf people to get promoted because there was a lack of trust, faith, understanding, sensitivity, acceptance, or knowledge on the part of hearing management. For example, one person said that hearing people think that deaf people can't handle management responsibilities such as meetings, or don't want to spend the money for interpreters. Another person commented that "employees don't like having a deaf or hard-of-hearing person over them, upper management (hearing people) doesn't like the idea of deaf or hard-of-hearing people being the 'experts' in the field of deafness—they don't like to listen to a deaf person and/or don't accept a deaf person's management style."

Profile/Summary

General

Two thirds of respondents are men; one third women. The majority are currently employed (92.6%) and had been in their jobs an average of six years. Nearly half had made job changes since last responding to an alumni survey. The majority of respondents (68.6%) had had at least one promotion during their years of employment. Therefore, they were either laterally or upwardly mobile. Nearly a quarter were owners of a business (75% men).

Approximately a third each of the respondents noted that they supervised others, worked as part of a team, or supervised projects.

Half of the respondents worked in environments where there were neither any other deaf or hard-of-hearing persons, nor users of sign language. Even when there were other deaf and hard-of-hearing employees, nearly three quarters indicated that they did not work directly with them.

Twenty eight percent of the respondents had earned additional degrees and nine were currently enrolled in school. Most had received some kind of additional education. In order of frequency, the types of continuing education received were: on-the-job training; courses toward a degree; courses specifically to update skills; or simply courses for

personal interest. It appears that on the whole, these alumni recognized and pursued the need for maintaining and updating the skills required to succeed in their careers.

The jobs and places of work reported by these alumni are reflective of the instructional programs in which they had earned degrees, versus specific sectors of the market place. And there was a considerable variety of sectors and industries represented.

Current Supervisors (N=43) Versus Non-Supervisors (N=78)

Communication On-The-Job. Fifteen different modes of communication were cited by both supervisors and non-supervisors. Those ranked as the top five for supervisors were: phone/TTY; speaking; signing; writing; and equal use of e-mail and facsimile. For non-supervisors the top five differed somewhat: phone/TTY; speaking; fax; e-mail; and interpreters.

The modes of communication most often used followed a slightly different order of frequency, but were in greater agreement. For supervisors, the order of most often used mode was: speaking; signing; e-mail; writing; and interpreters. For non-supervisors the order was: speaking; e-mail; writing; signing; and phone/TTY. Although use of interpreters among non-supervisors ranked sixth on their list in order of frequency, in terms of actual percentage use, both used interpreters equally often. Supervisors used phone/TTY's at a much lower frequency than did non-supervisors. In contrast, supervisors used sign language more often than non-supervisors. Based upon the data and comments written regarding the communication aspect of supervising, more frequent use of sign language by supervisors can be attributed to two primary factors. First, they reported working more often with other deaf employees than did non-supervisors. Second, several supervisors commented that they have greater decision-making power as to the communication modes to be used between them and the individuals they oversee.

It is important to emphasize that even though speaking was cited as the number one most often used mode of communication by supervisors and non-supervisors on-the-job, a variety of methods were used frequently by both groups.

Positive and Negative Aspects of Supervising. Supervisors and non-supervisors agreed that "Opportunity to Lead", and "The Challenge" were the top two positive aspects of being a supervisor. For supervisors, "Opportunity for Teamwork", "Exposure to Information", and "Opportunity to Educate" ranked third, fourth, and fifth as positives. Non-supervisors ranked "Exposure to Information", "Improved Self-Esteem", and "More Job Satisfaction" as third, fourth, and fifth in their view of positives. Although there were differences in the rank ordering, in actual percentages most of the other categories were prioritized similarly. Greatest disagreement occurred for the themes, "More Perks" and "Improved Self-Esteem", which non-supervisors perceived as positives of supervising more than did supervisors. Another theme, "Opportunity to Educate", was viewed as more positive by supervisors than by non-supervisors.

The non-supervisors group contained both individuals who supervised in a past job as well as those who had never supervised others (never-supervisors). Therefore, never-supervisors were analyzed separately to see if their perceptions differed substantially than those who had supervisory experience. In fact, the never-supervisors ranked

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"Improved Self-Esteem", "More Job Satisfaction", and "More Perks" highest on their list of positive aspects of supervising. Clearly, these individuals valued personal enhancements as being the positives of having a supervisory position much more than those who were or had been supervisors.

As for the negative aspects of supervising, supervisors and non-supervisors were most divergent with regard to the issues of "Bias toward Deaf". Non-supervisors viewed this presenting a greater problem than did supervisors. And those who had never supervised saw it as a primary obstacle. In contrast, supervisors felt that having "Total Accountability" was more of a burden that came with a supervisory job.

Finally, responses regarding supervisory or management experiences included both comments unrelated to deafness and comments related to deafness. Comments in the first group focused on many areas, including personal as well as general considerations. Comments in the second group focused on communication or attitude.

Questions to Pursue

Further analyses have been done to identify alumni respondents who meet our criteria of "supervisor", defined as "an employee who directly supervises the work of others, including the performance of such functions as hiring, evaluation, and when necessary, termination", and "deaf and hard-of-hearing supervisors working in environments that are not staffed by or serving primarily deaf and hard-of-hearing people, that is, in what is sometimes described as the 'hearing' versus the 'deaf' sector of employment".

At present, forty alumni respondents who meet our criteria have been identified. Our plan is to contact them and set up interviews with as many of them as possible. This will enable us to pursue more in-depth exploration regarding their supervisory experiences. Some of the questions we want to pose are listed on Slides 13 and 14. They consist of background and demographic information, while others are specific to the work environment and strategies used to deal with communication and accommodation issues.

We are now seeking input from other professionals who work with deaf and hard-of-hearing individuals regarding important questions they think should be added to our current list.

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EMPLOYMENT EXPERIENCES SURVEY

Name: _____ Date: _____
       (please print)

Your signature means that you have read the cover letter. It also means that we can use the information from this questionnaire. Please sign it.

Signature _____ Phone: (_____) _____
                                        □ Voice □ TTY □ Both (check which one)

                                        Fax: (_____) _____

                                        E-mail: _____

EMPLOYMENT

1. Are you employed now?

    □ No. (Please go to question #9)

    □ Yes. How long have you been in your present job? _____

    Have you made any job changes since you last sent us information about yourself?

    □ No. (Please go to question #2)

    □ Yes.

    Was your job change (check the one that is true for you):

    □ A different job at the same company? Name of new job: _____

    □ The same type of job, but in a different company or type of business?

        Kind of business or company: _____

    □ A different job in a different company? Name of new job: _____

        Type of company or business: _____

    Was this job change a promotion for you?   □ Yes   □ No

        If yes, whose idea was the promotion?

    □ Yours   □ Your manager's   □ Both yours and your manager's

    If not a promotion, did you want it to be a promotion?   □ Yes   □ No, not really

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2. Do you manage your own business? ☐ Yes ☐ No

If you manage your own business, what kind of business is it?

_____

_____

3. In your present job or business, do you (check which one is true for you):

☐ Supervise any other employees? If yes, how many? _____

☐ Hearing   ☐ Deaf   ☐ Both

Have you ever hired another employee? ☐ Yes ☐ No

Have you ever done employee evaluations? ☐ Yes ☐ No

☐ Supervise project activities, but not other employees?

☐ Work as a part of a team, but do not supervise a project by yourself or supervise other employees?

4. What is your job title now? _____

5. How do you communicate on your job? Please list all the methods you use (for example: signing, speaking, writing notes, phone - voice/TTY, E-mail, FAX, interpreters, etc.)

_____

_____

_____

6. How do you communicate **most often** on your job?

_____

_____

_____

7. Are there any other employees in your company who are deaf or hard or hearing?

☐ No   ☐ Yes, there are _____ (how many?).

Do you work directly with any of them? ☐ Yes ☐ No

8. Are there employees in your company who use sign language?

☐ Yes. How many use sign language? _____

☐ No.

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9. In any past job, did you supervise other employees?

☐ Yes. How many? _____

      ☐ Hearing   ☐ Deaf   ☐ Both

      Have you ever hired another employee?   ☐ Yes   ☐ No

      Have you ever done employee evaluations?   ☐ Yes   ☐ No

☐ No.

10. In your career, have you ever received a job promotion?   ☐ Yes   ☐ No

11. What do you think are **positive** things about being a supervisor or manager? (Even if you have never been a supervisor or manager.) Please explain:

_____

_____

_____

12. What do you think are **negative** things about being a supervisor or manager? (Even if you have never been a supervisor or manager.) Please explain:

_____

_____

_____

CONTINUING EDUCATION

13. Have you taken any courses or training since you graduated from RIT/NTID? Check which ones you have taken:

    ☐ Courses toward another degree

    ☐ Courses to update skills, but not for a degree

    ☐ On-the-job training/courses

    ☐ Courses just for personal interest or fun

    ☐ No additional courses or special training since graduation

14. Did you earn any other degrees(s)?   ☐ Yes   ☐ No

If yes, what degree(s)? _____

Where did you earn the degree(s)? _____
                                             (school or facility)

What year did you earn the degree(s)? _____

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CURRENTLY UNEMPLOYED

15. If you are not currently employed, why not? (Check which is true for you):

☐ I was laid off from my job.

☐ I was fired from my job.

☐ I quit my job.

☐ I am trying to set up my own business.

☐ I can't work right now because:

    ☐ I am going to school. What are you studying? _____

    ☐ I have an illness or disability. What kind? _____

    ☐ I have family responsibilities and can't work outside of the home.

    ☐ Other reasons? (Please explain) _____

    _____

    _____

We thank you for giving us this information. We hope the information will be helpful to other NTID/RIT graduates like yourself. We will send you a copy of the results when we finish our study. (Remember to sign your questionnaire before returning it.)

The Sample (N = 121)
Females = 35.5% (43)   Males = 64.5% (78)

Currently Employed:	92.6% (112)	
Not Currently Employed:	7.4% (9)	
Circumstances:	Laid Off	(6)
	Fired	(0)
	Quit	(4)
	Setting Up a Business	(1)
		9*
Not Looking for a Job:		
	In school	(3)
	Illness	(2)
	Family Responsibilities	(4)
		9**

* Two were looking for work and another was also in school and looking for work.

** More than one reason for not looking for a job could be checked. Therefore, those out of the labor force total more than seven.

1

Employed

Years in current job:
      Mean 7.4 years
      Median 6.0 years
      Range 1.0 to 26.0 years

Job changes since last reported?
      Yes   54.6%
      No   45.4%

Have ever received a promotion:	68.6%
Supervise others:	38.4%
Work as part of a team:	37.5%
Supervise projects	33.0%

2

Work Environment: All Employed Respondents

Work directly with other deaf employees?
      No = 74.1%
      Yes = 25.9%

	Mean	Median	Range
Number of deaf employees at place of work	15	1	0 to 600
Number of employees who use sign language	23	1	0 to 600

3

Continuing Education

Types

On-the-job training	53.7%	(65)
Courses toward a degree	43.0%	(52)
Update skills	38.0%	(46)
Personal interest	24.0%	(29)
No continuing education	8.3%	(10)

4

Continuing Education (continued)

Other Degrees Earned:

Associate's	5.7%	(2)
Bachelor's	28.6%	(10)
Master's	45.7%	(16)
Ph.D.	8.6%	(3)

* Although 35 alumni reported having earned other degrees, 4 did not specify what they were.

5

Current Supervisors
(N = 43)

Females = 27.9%   Males = 72.1%

Number of employees supervised:

Mean	Median	Range
14	6	1 to 80

Hearing status of those supervised:

Deaf Only	Hearing Only	Both Deaf and Hearing
2.2%	55.6%	42.2%

Do you hire employees?	Yes = 86%
Do you evaluate employees?	No = 90.7%

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Communication Modes Used on the Job

	Supervisors	Non-Supervisors
Phone/TTY	86.0%	72.2%
Speaking	74.4%	70.2%
Signing	69.8%	50.4%
Writing	62.8%	49.6%
E-Mail	58.1%	52.1%
Fax	58.1%	52.9%
Interpreters	55.8%	51.2%
Relay	23.3%	19.8%

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Communication Modes Used on the Job (continued)

	Supervisors	Non-Supervisors
Lipread	14.0%	8.3%
Gestures	14.0%	8.6%
Pager	14.0%	8.6%
Electronic Notes	9.3%	8.6%
Voice Mail	11.6%	8.6%
Video conference/Letters	9.3%	4.1%
Real-Time Display	7.0%	4.1%

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Most Often Used Communication Modes on the Job

	Supervisors	Non-Supervisors
Speaking	65.1%	56.7%
Signing	37.2%	24.8%
E-Mail	16.3%	19.0%
Writing	16.3%	18.2%
Interpreters	11.6%	12.4%
Phone/TTY	7.0%	11.6%
Fax	7.0%	9.1%
Relay	2.3%	3.3%
Gestures	2.3%	0.8%
All of the Above	4.7%	3.3%

9

Work Environment:
Supervisors vs. Non-Supervisors

	Supervisors	Non-Supervisors
Work directly with other other deaf employees:	42.0%	14.0%
Number of deaf employees at place of work:		
Mean	12.6	14.1
Median	1.0	0.0
Range	0 to 200	0 to 600
Number of deaf employees who use sign language:		
Mean	25.8	18.7
Median	1.0	0.0
Range	0 to 200	0 to 600

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Positive Aspects of Supervising
Supervisors vs. Non-Supervisors

	Supervisors	Non-Supervisors
Opportunity to Lead	36.4%	30.6%
The Challenge	26.0%	24.8%
Opportunity for Teamwork	18.9%	12.4%
Exposure to Information	15.6%	15.7%
Opportunity to Educate	13.0%	9.9%
Ability to Exercise Vision	11.7%	8.3%
Improved Self-Esteem	10.4%	13.2%
More Job Satisfaction	9.1%	10.7%
Serve as a Role Model	7.8%	9.1%
More Perks	5.2%	9.1%

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Negative Aspects of Supervising
Supervisors vs. Non-Supervisors

	Supervisors	Non-Supervisors
Communication Difficulties	27.3%	27.3%
Employee Problems	19.5%	15.7%
Administrative Burdens	11.7%	12.4%
Stress	10.4%	10.7%
Total Accountability	9.1%	7.4%
Long Hours/Meetings	9.1%	10.7%
Politics	7.8%	8.6%
Bias Toward Deaf	3.9%	8.3%
Isolation	1.3%	1.7%
Misc. Other Problems	7.8%	8.3%

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Some Interview Questions

Education and occupations of parents/guardians?

Did you have supporters/mentors for your educational and career paths? Who?

Was becoming a supervisor a goal for you? Always or later on?

How long had you been working before you became a supervisor?

What barriers did you encounter in your career? How did you overcome them?

What strategies do you use routinely to overcome communication difficulties?

13

Some Interview Questions (continued)

What accommodations has your company made for you to improve your ability to do your job?

What advice would you give other companies relative to deaf employees?

What would you do differently if you could do it over again?

14

Types of Industries or Businesses of Employment – Males

Landscape and Horticulture	2
Agricultural Services	1
Construction	1
Manufacturing - Misc. Non-Metal Materials and Stone	1
Manufacturing - Computers and Related Equipment	4
Manufacturing - Electrical Machinery, Equipment & Supplies	1
Radio & TV Broadcasting	1
Telephone Communications	3
Radio, TV, & Computer Stores	1
Eating & Drinking Places	1

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Types of Industries or Businesses of Employment – Males (continued)

Miscellaneous Retail Stores	1
Electric Light & Power	1
Sanitary Services	1
Wholesale Hardware, Plumbing, Heating Supplies	1
Retail Motor Vehicle Dealers	1
Furniture and Home Furnishings	1
Banking	2
Credit Agencies	1
Insurance	1
Real Estate, Real Estate Insurance Officers	1
Computer & Data Processing Services	2
Business Services, n.e.c.	4

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Types of Industries or Businesses of Employment – Males (continued)

Engineering & Survey Services	1
Hotels & Motels	1
Laundry, Cleaning, & Garment Services	1
Theaters & Motion Picture Services	1
Miscellaneous Recreation & Entertainment Services	1
Offices & Clinics of Optometrists	1
Health Services, n.e.c.	3
Colleges & Universities	3
Accounting, Auditing, Bookkeeping	1
General Government, n.e.c.	2
Justice, Public Order & Safety	1

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Types of Industries or Businesses of Employment – Males (continued)

Public Finance, Taxation & Monetary Policy	2
Management & Public Relations	1
Administration of Human Resources	4
Administration of Environmental Quality and Housing	4
National Security & International Affairs	4
TOTAL	64

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Types of Industries or Businesses of Employment – Females	
Printing, Publishing (except newspapers)	1
Guided Missiles, Space Vehicles	1
Manufacturing - Photographic Equipment & Supplies	1
U S. Postal Service	1
Wholesale Lumber & Construction	2
Grocery Stores	1
Miscellaneous Retail Stores	1
Vending Machine Operators	1
Hospitals	3
Elementary and Secondary Schools	3
Colleges and Universities	4

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Types of Industries or Businesses of Employment – Females (continued)	
Education Services, n.e.c.	2
Social Services	2
Accounting, Auditing, Bookkeeping	2
Public Finance, Taxation, & Monetary Policy	3
Research, Development and Testing	1
Management and Public Relations Services	1
Administration of Human Resources	6
National Security and International Affairs	1
TOTAL	37

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Alumni Owning Businesses: Males

Job Title	Type of Business
Optometrist	Optometrist Office
Manager	Retail Furniture and Appliances
Manager	Interpreting Service
Manager	Carpentry (construction) Business
Director	Video/Film Productions
Services Manager	Wholesale Hardware Business
President	Captioning Service, Inc.
Landscape Contractor	Landscape/Horticulture Business
Landscape Architect/Contractor	Landscape/Horticulture Business
Artist	Screen Printing

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Alumni Owning Businesses: Males (continued)

Job Title	Type of Business
Multi-Media Specialist	Multi-Media Service
Owner/Operator	Kennel Management/Breeder
Crew Chief	Carpet Cleaning Business
Boating Captain	Chartered Fishing Trips
Programmer/Analyst	Consulting Business
Computer Systems Analyst/Scientist	Computing Consulting Business

* One other gentleman reported that he had his own consulting business in addition to his government job. However, he did not provide any details about the nature of the consulting work.

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Alumni Owning Businesses: Females

Job Title	Type of Business
Public Relations Specialist	Printing/Publishing Company (not a newspaper)
Supervisor	Vending Machine Business
Supervisor	Miscellaneous Retail Business
Social Scientist Consultant	Educational Services
Management Analyst Consultant	Management and Public Relations Service

* One woman operated a rubber stamp business in addition to her full-time system's analyst job with the government.

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Additional Degrees Earned: Instructional Programs

Program	Males	Females
Computer and Information Sciences	2	0
Computer Programming	1	0
Educational Administration	0	1
Educational Administration: Special Education	2	1
Architectural Engineering	1	0
Judicial Science: Legal Specialist	1	0
General Studies	0	1

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Focusing on Staff Development and Administrative Issues

Conference Proceedings
1996

Challenge of Change: Beyond the Horizon

Seventh Biennial Conference on Postsecondary Education for Persons who are Deaf or Hard of Hearing, April 17-20, 1996, Knoxville, TN

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Mentorship for the Working Interpreter

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Abstract

Interpreters employed with the National Center on Deafness (NCOD) are offered the opportunity to participate in an employee mentorship program. This program has proven to be highly effective as a means of professional upgrading and skill maintenance. The concept of a formalized mentoring program is new to the field of interpreting, and has created a ground-swell of enthusiasm.

During the academic year, interpreters of any level of skill may request a mentorship. At the beginning of the semester they are assigned to a Mentor, and participate in the process of program orientation, pre-diagnosis of skills, definition of goals and objectives, assessment, review of the mentorship experience, post-diagnosis and, finally, future recommendations. The mentorship team confers to develop mentoring and diagnostic strategies. Mentors may also participate as mentees to further enhance their experience.

This presentation will provide a complete overview of the employee mentorship process and provide you with the necessary information and background to establish similar programs.

Program Review

This mentorship program is designed to develop interpreter skills through an ongoing relationship between a mentor interpreter and a mentee interpreter. Additionally, the program provides an orientation to the role and function of the interpreter in the academic setting. The program is characterized by an experienced interpreter acting as a mentor to newly hired or continuing employees. This model has proven to be a successful method of training for the National Center on Deafness (NCOD) and is recommended as a model to other programs.

Purpose

* To continuously upgrade the quality of interpreting services provided at CSUN;

* To provide employees with the opportunity to build skills by participation in a long term, ongoing relationship with a mentor;

* To provide employees the opportunity to initiate a self improvement plan (while a mentorship may be recommended by a supervisor, the success rate is greater when it is employee initiated);

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- To provide newly hired employees with a semester-long orientation to the role and function of the interpreter in an academic setting guidance from a mentor is also helpful with tasks such as completing payroll documents;
- To offer employees opportunities to earn in-service credit (required for pay increases), preparation for certification, or certification maintenance;
- To provide individualized, private training for a full semester, free of charge to employees;
- To recruit potential employees; and
- To build collegiality.

History

In 1964, the NCOD program was established. The two interpreters that were hired mentored each other. The life long earning adage taught to us by Virginia Hughes has remained the philosophy of the interpreting staff at NCOD. As a result of hosting interns from various interpreter preparation programs, a NCOD staff interpreter requested that the same type of experience be arranged for her. She had specific skill building in mind, i.e. developing use of classifiers in the scientific curriculum. In 1984, NCOD began offering this experience, then called *practicum*, to its employees. Experienced interpreters were called *master interpreters* and the participants were called *practicum interpreters*. Our program has been in operation for over 10 years evolving to the current mentorship for the working interpreters of NCOD. Recently, we published our first handbook.

Criteria for Mentor Selection

Mentors must meet the following criteria:
- employment with the NCOD for a minimum of one year
- achievement of level 3 or above on the NCOD pay scale
- approval of the mentorship team
- demonstration of knowledge of the requirements for a successful interpretation
- reliability in attendance/work record
- ability to work well with others
- completion of an approved diagnostic training for mentors
- model and explain the policies of the NCOD and procedures of classroom interpreting
- assist other interpreters in improving their interpreting skills and professional behavior by modeling the necessary skills
- conduct training seminars on various aspects of interpreting offered by the NCOD

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- currently improve their own interpreting skills by working with another mentor interpreter, reading professional journals, attending seminars and meetings sponsored by professional organizations
- function as an exemplary interpreter to the university community. Be regarded as a model practitioner to interpreting colleagues
- possess or be a candidate for the currently recognized professional certification

Role of a Mentor

The mentor should be able to explain the policies of NCOD, procedures of classroom interpreting and respond to questions and concerns of the mentee. During the mentorship process, mentors provide the following services: diagnosis of interpreting skills, goal setting, provision of alternative suggestions for skill enhancement, and professional behavior. Mentors are expected to conduct seminars on various aspects of the interpreting process. The NCOD offers bi-monthly seminars, an annual three day symposium and various special programs that mentors are expected to attend. Mentors often request an opportunity to improve their own mentoring skills by becoming a mentee.

Mentor Training

Mentors may train by observing another mentorship process. They may request that another mentor observe them working with a mentee and provide feedback. Additionally, mentors are required to attend an annual diagnostic training session titled, "How To Mentor". Mentors are strongly encouraged to attend the Regional Interpreter Training Consortium's Mentor Training Program to enhance their skills. The mentorship team meets approximately three times per semester to discuss strategies.

Program Participation

The NCOD has approximately 11 mentors and 40 mentees each semester. Encouraging interpreters to participate in the program is easy and the experience of private, individualized training from experienced mentors is an inspiring learning opportunity. Further, the mentorship experience is an entire semester, free of charge and provides in-service credit toward a pay increase. Mentorships may also be customized to the interpreter's needs, such as, theater or conference mentorships.

Participants

Mentorship participants must be employees of the NCOD. For the new employee, mentoring provides an excellent orientation to CSUN. After the initial mentorship experience, employees may continue the program. Priority is placed on new employees, while seasoned interpreters may work on Sign-to-English skills or prepare for the R. I. D. evaluations.

Program Structure

The mentorship experience begins with the mentee arranging a pre-mentorship diagnostic videotape. The mentee may provide his/her own tape, allowing a chronological study of individual progress, or NCOD will provide a videotape. Deadlines for completion of tapes are strictly enforced. Interpreters failing to meet the deadline lose their reservation for a mentorship.

Two weeks prior to the start of the semester, all mentors meet and are assigned a mentee. The mentors receive the mentee's videotape and are briefed on the background of the mentee. Mentors then watch the videotape and diagnose the production of the mentee in order to prepare goals and objectives. One week prior to the start of the semester, a mentorship orientation is held. All first time participants are expected to attend for a full introduction to the mentorship experience. The meeting encompasses training that includes the full benefits of mentoring, including modeling of the mentorship process and tips on notetaking and observing. Following this training, mentors and mentees are introduced and meet individually. Key points of this first meeting include:

- discussion and goal setting
- completing the mentorship contract
- expectations
- reviewing the diagnostic tape
- strategies for the interpreting assignment
- establish a weekly meeting schedule

Mid-semester, mentors meet to discuss areas of concern, training techniques, strategies for successful interpretation processes and the progress of their mentees. At the end of the semester, mentees arrange to make a post-mentorship diagnostic videotape. This will be reviewed by the mentor to determine achievement of previously stated goals and to establish new goals for future training. This review will be made in writing, placed in the mentee's file, and a copy is mailed to the mentee.

Conclusion

Although each interpreter service program will have its own goals for its interpreters, the NCOD Mentorship Program has proven to be an invaluable training tool. We encourage you to consider establishing a mentoring process at your institution. We will be happy to assist you.

For further information, please contact:

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Time to Change Hats: The Changing Role of the Disability Services Provider

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As I wake up to face the day, I never know what role I'll play--
There is motivator, counselor, professor and nurse.
I'm supposed to be an expert on anything that hurts.
I'm a mathematical genius, a very wise and frugal spender,
A brilliant conversationalist, a faithful JSU defender.
Now as the Case Manager, I cover every base,
Every kid is passing, and every graduate placed.
I've been a brownie, a cub scout, and an eagle; I've mastered every test.
I've been a den mother, a band mother, a completely worn-out mother,
But I've ranked among the best.
My hair should always look just right, my skirt should never be too tight.
Fashion-wise, curvaceous, and witty; creative, energetic, thrifty and pretty.
I'm a politician--par excellent--wine and dine--quite delightful,
But because I keep expense accounts, I choke on every biteful.
Parents think I'm a saint at meetings, but maybe my IQ is just low.
Would Disabled Student Services really fold without me, and close its doors if I said no?
Let's see--there is my caseload and there is good ole LS 102,
Afternoon sessions, and conference calls at 2:00.
There're committees every Monday, and lunch at Tuesday noon;
Now they want me back at school for the PhD real soon.
I'm an expert comedienne--you can count on me for laughs.
Endorphines you know can save the day.
Jokes are nice, but better still would be a hike in pay!
I do plan to go to summer school and work on that degree,
But that's after all the kids leave home if it's 2023!
I'm a wife, a chauffeur, a mother, a psychologist and a sexy red-hot lover.
I'm a gourmet who really gallops from one job to another.
If I can keep my sanity, I'll do just fine.
But I need to ask one question--
Are all these hats really mine?

This poem portrays the many different roles in which we find ourselves. As parents, spouses, and professionals we have to change our hats frequently to meet the needs of our families. Because there is a crisis in education, we also need to expand our role from the dissemination of information to a much broader perspective. Our society faces many serious problems such as poverty, single parent homes, and alcoholism and its affect on the family. College students today face problems such as the epidemics of HIV and other sexually transmitted diseases, substance abuse, sexual assault, and unwanted pregnancy which are all related to behavior and relationships. It may not be so much a lack of knowledge in these areas as much as the absence of identity and personal values. Many problems in the classroom seem to be conflicts in interpersonal relationships and group dynamics.

What am I saying? The education professional needs to become more aware and responsive to the psychological and social needs of the student. "We are faced with the arduous task of educating disillusioned adolescents who have for a variety of reasons become 'homeless' in the sense that they are the living, breathing, symbols of the greatest single tragedy in America in this past generation -- the complete and tragic breakdown of the American family" (McGready, 1991).

There are no cookbook answers or magic cures to "fix" the problem as we approach the 21st century. The conclusion that we draw from this is not one of despair because we can't fix them all, but rather one of hope that we can make a deliberate will choice to make a difference in the life of one. Indifferent people don't make a difference. Are you making a difference?

You are in other peoples' tapestries whether you want to be or not. The question is do you want to be a vibrant color or insignificant thread? We at Disabled Student Services have recognized that the role of once "academic support service provider" has now evolved into "counselor" with a little "c." Through extensive training in Control Theory/Reality Therapy, we as staff members within DSS feel more skilled in a process which empowers students to take more control of their lives. Originally my training was to prepare me with skills to more effectively help my students. We could not afford to hire a counselor, so we decided to get training and become "counselors" ourselves.

The goals I have for today's session are:
- Define and explain the psychological model Control Theory.
- Model the skills involved in Reality Therapy (RT).
- Show how RT is a self-help tool used in growing personally, in coping with adversity, and in gaining more effective control of our own lives.

  Control Theory is a psychological model founded by William Glasser (1985) that contends:
- all behavior is total
- all behavior is internally motivated
- all behavior is our best attempt at the time to get our basic (genetically encoded needs met)

All we can do is behave; however, we have choices as to how we behave. Control Theory places responsibility on the individual to take effective control of his/her life.

. Control Theory in that tenet alone may be hard for some of us to swallow because we live in a world that says, "It's not my fault." If we admit that we choose our behavior, then we are held accountable for our choices. There are only two choices: victim choices and responsible choices. Life is like a rushing river, and we are in a boat. The white water moves everything down the river -- twigs, boats, people. We can go against the current and move upstream, but that takes action. We have to pick up the paddle called personal responsibility and start rowing. The choice "to go with the flow" is a victim choice and blame is frequently used in order to compensate for the guilt of irresponsible behavior such as poverty, abuse, alcoholism, etc.

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There are two kinds of people: balcony and basement people. What are you? What do you want? The first step in becoming the vibrant color that you want to be is to become proactive. All behavior is internally motivated, purposeful, and total, and is, at the time, our best attempt to get our needs met. People choose, machines react.

Become Proactive

What do you want? Recognize that you are the one who decides if you live with a stacked deck or if you deal your own cards. To live proactively means to make decisions based on what is responsible, right and reasonable regardless of how you feel. To live reactively means to make decisions based on how you feel regardless of what is responsible, reasonable and right. Your self-image controls your life.

Our wants drive our cars and we control where we go. We are in the driver's seat of our behavior car. Think of yourselves as a car that is being driven by an engine representing the 5 basic needs. Each of the four wheels represents a different part of our total behavior: acting, feeling, thinking, and physiology. Carry that a bit further in that where we go depends on our wants. We drive, using the steering wheel that represents our wants. However, our wants depend on what kind of fuel we have. Is the fuel quality or just generic?

Ironically, as we speak of cars, it was Henry Ford who said, "Whether you think you can or can't, you're always right." Your mind can only entertain one thought at a time. Fear is the emotional darkroom where negatives are developed. Remember that all behavior is total. Which behavior do you have the most control over?

What Are You Doing?

Now that you have decided that it is up to you to decide which hat to wear, it is time to consider what you are doing. Look at your roles. What are the behaviors associated with each role? What are you doing? Let's say you want to be in your students' balcony or quality world. How do we get there? As educational professionals, as parents, as friends, we cannot control anyone -- we can only influence, and the only way we can influence is to be need-fulfilling. There are two components to Reality Therapy: the counseling environment and the procedures that lead to change. Think for a minute about those who are in your balcony. How did they get there? The key word is involvement. They made an investment into your life. The key to a person's quality world in order to influence is called involvement.

Is What You Are Doing Working?

You know what you want, but are you getting it? In your private lives as well as your professional lives, in our relationships to your students and your clients, are you a strength builder/balcony person or are you a punisher? A buddy? A guilter? A monitor or controller? The question becomes, "Is what you are doing

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working?" Once we understand and accept the fact that we choose our behavior, we learn that we can choose more effective behavior.

What will you do differently?

If the what you are doing is not working, then changes should be considered. This is the planning stage. Why should our plan for ourselves or our students be simple, attainable, measurable, repetitive, immediate and consistent? Because many of our students, clients, and friends have what Glasser (1972) calls the failure identity. "A person with a failure identity is one who lacks a concept of himself as a loved and worthwhile individual and will not work for any long-term goals. Long term goals seem foreign to a person just trying to feel comfortable today and tomorrow" (Glasser, 1972). Therefore, it is during the planning stage that we must stage the atmosphere for success by making a plan so simple that the person can experience some measure of success. We must help students see that if they keep doing what they are doing, they will keep getting what they are getting and that is not what they want.

Another cardinal rule is RT is "Don't accept excuses." The only way we can get our scales of wants and needs balanced is to do what is responsible. When scales are out of balance, excuse-making is not a responsible behavior and has no weight on the scales. Reality therapy is a counseling technique that allows the counselor to be a strength-builder who helps clients clarify wants, evaluate present behaviors, and establish plans that lead to change.

Within Disabled Student Services, two of hats I wear are instructor and case manager/counselor. In LS102 I teach problem solving through Control Theory and have developed an approach to assist students using the acronym ACCEPT.

A -- accept that your choose your behavior, and you are responsible for its consequences

C -- clarify your wants

C -- connect your wants to your behaviors

E -- evaluate if your present behavior getting you what you want

P -- prepare a plan for change

T -- try it!

As case manager/counselor, I have the opportunity to apply the skills of Reality Therapy to the counseling environment. To help me remember the process, I use WII-FM.

W -- win through involvement

I -- investigate the quality world (what do you want?)

I -- investigate present behavior (what are you doing?)

F -- facilitate self-evaluation (is it working?)

M -- make a plan for change

Now what have we learned?

1)   We have learned that Control Theory is a psychological model that places responsibility on the individual. People are responsible for their behavior -- not society, not heredity, not past history. People can change and live more effective lives. People behave for a purpose: to mold their environment as a sculptor molds clay, to match their own inner pictures of what they want.

2)   We have learned about the behavior car. What are the 4 components of behavior? Which part do we have the most control over?

3)   We have learned to use questions to help us work through our own behavior as well as those of others.

4)   And lastly, we have learned that some of our hats may not be appropriate; and it is up to us to change them. A nurse's hat will not work at a demolition site. It's time to evaluate: if what you're doing is not working -- change hats!

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Leading into the 21st Century

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Our paper will focus on management and leadership as it applies to the world of work. We will be discussing the worker/manager relationship. However, the techniques, suggestions and ideas that we include will apply to almost any area of leadership that involves assisting in the growth and development of individuals.

Up front we want to clarify that we do not claim to be experts in the field of management/leadership. I became program coordinator in 1987, and a couple of years later Alois accepted the interpreter coordinator position. Mainly through the process of trial and error, we progressed to what we consider a quality management team. We are convinced of the value of teams and are now doing a lot of teambuilding with the staff.

What we plan to do today is share some of our learning experiences (what has worked for us and what has not). In addition, we will focus on some of the current, pertinent leadership and management information gleaned from courses, workshops, books and tapes.

From the beginning, we found that managing or leading was not as easy as we thought it would be. We therefore had a lot of "learning" experiences. The following five items are examples of "Bossing Bloopers":

- **Swim with the Shark**   "If you plan to swim with this shark, it is *my* way or *no* way."

- **Seagull in Flight**   "I'll quietly observe until I catch you doing something wrong. Then I'll fly in, dump on you, and fly off."

- **Little Red Hen Squawk**   "If you won't help me and do it my way, I'll just do it all myself."

- **Turtle In A Shell**   "If you have a problem, I'll just hide in my office, ignore it and hope it goes away."

- **Warm, Fuzzy Teddy Bear**   "I want everybody to like me. All my decisions about everything will be made to achieve your acceptance and approval. Let's have a warm, fuzzy workplace."

As program coordinator, I discovered that "bossing" techniques did not work. I persistently tried to find the right style. Fortunately, I had a supportive administrator who recognized that I truly wanted to become a good leader and develop a quality program. With his help I finally arrived at the conclusion that I could not make anyone do anything. My focus had been on trying to change them (the staff). What I was doing was not working, so I had to change me. Funny, when I became better, so did they.

Two major things happened that helped me make the change from the bossing/authoritarian type to more of a participatory style. I attended a program at San Diego State University and received a certificate in leadership training. I also received training at Mississippi College and became certified in Control Theory/Reality Therapy/Quality Management (CT/RT/QM).

During the two years that I was in training, Dr. William Glasser wrote and published *The Control Theory Manager* which integrated Control Theory with W. Edwards Deming's Total Quality Management. The idea of quality lead management came alive for me through this book. The training was the easy part. The continued process of putting what I learned into practice has been much more difficult. All along I had a vision--to provide high quality services to develop and maintain a successful model program; however, my dilemma was finding a way to manage people to produce quality services. How could I get the staff to accept the vision of a quality program as their vision, too?

One of the first things I learned is that we are all tuned to the radio station WII-FM -- What's In It For Me?. Workers will not see "what's in it for them" unless the work satisfies their basic survival and psychological needs.

According to Dr. Glasser, human beings are motivated to fulfill needs and wants. The human needs are common to all while wants are unique to each individual. The five basic needs as described by Glasser include:

1. Survival: the physiological need for air, food, shelter, etc.
2. Freedom: the need to make choices, to live without undue restraints
3. Power or Achievement: the need for accomplishment and recognition--a sense of being in charge of one's own life.
4. Love and Belonging: the need for involvement with people, to love and be loved, to affiliate and bond with other people
5. Fun: the need to enjoy life, to laugh, to see humor and to learn.

The more need satisfying the work is, the better the quality of the work. Think for a moment how your job meets your basic needs. Think what your employees would say about how the work meets their basic needs.

The word "quality" has been mentioned several times throughout the presentation so far. We really have not defined it yet. Someone said "It is like pornography, hard to define but you know it when you see it."

In *The Control Theory Manager*, Dr. William Glasser describes the conditions for quality in the workplace:

1. A warm, supportive work environment that builds trust;
2. Workers are only asked to do useful work;
3. Workers are encouraged to give input for improvement which promotes a sense of ownership;
4. Workers are asked to do their best; and
5. A self-evaluation process is in place.

How Do You Know If Something Is Quality?

The characteristics of quality are as follows:
- It always feels good.
- It can always be improved.
- It lasts.

We have discussed the conditions for quality in the workplace and the characteristics of quality. However, the way we manage people probably has the most effect on work quality. The bloopers in the beginning demonstrated that boss management does not produce quality. Lead management does.

A Comparison of Boss and Lead Management

In *The Control Theory Manager*, Glasser offers a comparison between boss-managers and lead-managers. *Boss-managers* set the task and the standards for what the workers are to do, usually without consulting the workers. Bosses do not compromise; the worker has to adjust to the job as the boss defines it or suffer any consequences the boss determines. *Lead-managers*, however, engage the workers in an ongoing honest discussion of the quality of work that is needed for the program to be successful. They not only listen but also encourage their workers to give them any input that will improve quality.

Boss-managers usually tell, rather than show, the workers how the work is to be done and rarely ask for their input as to how it might possibly be done better. *Lead-managers* show or model the job and work to increase workers' sense of control over the work that they do.

Boss-managers inspect the work or designate someone to do it. Because the boss does not involve the workers in this evaluation, they do only enough to get by; they rarely even think about what is required for quality. *Lead-managers* teach the workers to inspect or to evaluate their own work for quality with the understanding that they know what high quality work is.

Boss-managers create a workplace in which the workers and managers are adversaries because coercion is used to try to make the workers do as they are told. *Lead-managers* continually teach the workers that the essence of quality is constant improvement. The lead-manager's main job is as a facilitator -- doing everything possible to provide the workers with the best tools and a friendly, non-coercive, non-adversarial atmosphere in which to work.

Lead Management During Times of Change

We think that a change to lead management is vital if we are to survive and thrive in the 21st century. Why? In case you haven't noticed, the 1990's has been a time of rapid, unpredictable, nerve-shattering change. The old ways and rules that worked in a slower paced world are no longer effective.

In the past one could start with a company and remain until retirement even if the work performance was mediocre. Loyalty was rewarded with job security. This is no longer true. The trend today of downsizing, merging, cutbacks, layoffs, and budget slicing has directly or indirectly affected most of us.

We are also witnessing changes in work styles, economic conditions, technology, corporate structures, global communications, lifestyles, and environmental responsibilities. Robert Kriegel and Louis Patler, the authors of *If It Ain't Broke, BREAK IT!* stated, "The one thing we can count on as we approach the twenty-first century is the certainty that rip-roaring change will challenge our understanding and shake up the basic foundations of the world around us" (1991, p. xv). ·

Shifting Paradigms

How can we prepare ourselves and our workers for the changes that are coming at us at a dizzying rate? Morris Shechtman (1994), author of *Working Without A Net: How To Survive And Thrive In Today's High Risk Business World*, advocates the need for some paradigm shifts. The first paradigm shift emphasizes that caring for people is not synonymous with taking care of people. *Caretaking* means that you do things for people that they are perfectly capable of doing themselves while *caring for* means that you challenge people to be the best they can be.

Another paradigm shift is that we need to change our attitudes toward change. People resist change, not wanting to move out of their comfort zone -- the old ways of doing things. However, without change, people and organizations stagnate. Quality cannot be maintained without constant improvement.

Four Phases of Change

We must learn to embrace change and deal with the conflict that results from it. Scott and Jaffe, authors of "Coping With Four Phases of Change" in *The Pryor Report*, indicate that at any given time we or any one of our workers may be in one of the following four phases of change and may need assistance in successfully moving to the next stage. As lead managers we need to remember that exchanging the familiar for the new, even if it is better, means the "death" of something familiar. There is a need to allow for mourning and recovery. These phases include:

1. Denial -- lack of reaction, withdrawal, focus on the past
2. Resistance -- anger, blame, anxiety, depression, apathy
3. Exploration -- concern about details, confusion, energy, new ideas, lack of focus
4. Commitment -- cooperation, better focus, anticipation of next challenge

Think of a change that you or one your workers are experiencing now. Which phase does it represent? Is there someone that you work with that you think is incapable of change? Shechtman says, "People's ability to change is not a function of capacity but of choice. The question isn't whether people can change, but whether they choose to change" (1994, p. 21).

Mistakes

It is necessary to believe that mistakes are investments. According to Bishop W. C. Magee (in Paulson, 1991, p. 5), "The man who makes no mistakes does not usually make anything." Mistakes can be referred to as learning experiences; however, since "learning is defined as a change in behavior. You haven't learned a thing until you can take action and use it" (Shula & Blanchard, 1995, p. 177).

Success and Failure

"We think of them as opposites, but they're really not. They are companions, the hero and the sidekick" (Laurence Sharnes, in Paulson, 1991, p. 7). Think about your greatest job success. Did you achieve it without any mistakes or failure?

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The third paradigm shift is that we must redefine what constitutes acceptable work, moving from adequacy to peak performance, or quality. Mediocrity and mere competence (getting the job done to get a paycheck) is no longer considered acceptable in this high risk business world. Peak performance for quality is required of *all* workers.

As leaders and managers, how can we best facilitate these paradigm shifts? We advocate the process of moving from boss management to lead management. This is a move that is necessary if we are to produce and maintain quality that will allow us to "swim with the sharks without being eaten alive" to survive and thrive as we enter the 21st century.

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The Unwritten Curriculum: Teaching Deaf Students in the '90s[*]

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Introduction

My first rendezvous with deaf students[1] at the post-secondary level came in the mid-seventies at a time when I was contemplating my own career and hadn't a clue what Deaf culture was all about. Until then, I had spent my entire life immersed in a hearing and speaking society, but I was not a lost and deaf soul because of this. I didn't see this as a search for an identity -- I had spend too many years preparing myself to assume full responsibility for all I did, and all that would happen to me. I wasn't about to start apologizing or looking for my antithesis. It was obvious to all that I wasn't a part of the Deaf community and to sign SCHOOL ME BEFORE? WHY IMPORTANT TO YOU? was about as far into ASL[2] as I was able to go. But there I was tutoring deaf students, many my own age and many for whom Deaf language[3] was at that core of their linguistic repertoire.

The deaf students who I tutored took great pains to render their thoughts into a form of language that I could understand. This was the irony of the situation. We sat at the table because of their call for help in subject matter in which I excelled. Bur after each session it was hard to tell who was most grateful for the lesson. The students put me on a fast track to the Deaf community and while I studiously devoured all opportunities to learn more about who these Deaf people were I wasn't so sure that I was having an impact on improving their ability to learn the material at hand.

It wasn't until a few years later, that a Deaf associate at the school for the deaf where I was then teaching pulled me aside and provided a few insights. She welcomed me to the Deaf world. She laughed at how naive I was when I first started out and confided that she and other Deaf people never held me as a confidant. I only became one of them after I had endeavored to learn Deaf signs and to assimilate Deaf culture. I asked her if that meant that most Deaf people distrusted non-deaf people and she said that was usually the case if the non-deaf person made no effort to understand the Deaf way of life. She then named a few non-deaf teachers who she said were good to the Deaf community. The element these teachers all had in common was not fluency in ASL as none of them were. Nor was it involvement in Deaf community activities -- they all had their own lives and were not expected to partake in the social events of the Deaf community. The common element was simply good teaching. They all shared wide respect from their peers for their commitment to helping deaf children learn. They empathized with the Deaf community but they were not experts of Deaf culture. Teaching was their area of expertise.

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[*] This presentation was made in June, 1994 in Atlanta, Georgia at *Tools for Language: Deaf Students at the Postsecondary Level*, a PEC-sponsored mini-conference.

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Why are we here? Presumably because we want to teach and to teach well. We may not be innocent of clamoring for the extrinsic rewards of teaching. Salary, vacation time, hours of employment are important but intrinsically we want to have a positive effect on a deaf person's education. So what's all this talk about Deaf culture and using ASL? As we carve out the last few years of the 20th Century, culture-speak is becoming intertwined with many aspects of teaching. Teaching can no longer occur untouched by the linguistic, ethnic, or physical characteristics of the students. Our students may be deaf but acknowledging their hearing loss no longer suffices as an adjustment to their learning styles. Good teachers are knowledgeable about their students place in society. They acknowledge their own limitations, strive to improve, and make the changes necessary to continue to be effective teachers. The purpose of this paper is to take a broad look at the cultural mosaic that deaf students bring to the classroom and identify some strategies that teachers can take to be sensitive to this multitude of cultures.

Who Are the Deaf Students?

The term "Deaf" is taking a foothold in our consciousness. Most of us will define a Deaf person as being someone with a hearing loss who is also part of a culture that uses a sign language. Events and entities associated with the Deaf population are similarly named which give us such terminology as Deaf community, Deaf culture, Deaf folklore, Deaf sports, and Deaf way. Conversely, for the sake of this paper, "deaf" takes on a generic audiological definition in its reference to the condition of having some degree of hearing loss.

The reader is referred elsewhere to learn more about the people and culture associated with the Deaf community.[4] My goal in this paper is not to debate the social and psychological parameters defining Deaf culture or the social and linguistic foundations that urge us to use ASL as an instructional tool. I assume the legitimacy of their role in the education of deaf students. My present concern is the extent to which teachers must embrace Deaf culture and ASL. But before we get to that discussion there are a few misconceptions that must corrected.

Is any deaf person who uses ASL also a Deaf person? Are all students enrolled in a program for deaf students also Deaf? Must a deaf student be Deaf? To some people the answer to all of these questions is yes. Such a narrow stance does little justice to improving our understanding of the diversity within the deaf population. There are many deaf people who are fluent in ASL but have little to do with the Deaf community. They are comfortable in their interactions with people who are not deaf and who speak. Many students enrolled in a deaf program may be there because there are no other educational options for them (COED, 1988). Some of these students might be more accurately identified as hard hearing while others might be profoundly deaf but still use English as their first language. For these students the best educational practices might be those that allow them to use their English skills to attain higher academic levels.

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Recognizing deaf students for the individuals they are is an important step towards appreciation of their cultural and linguistic makeup. The following funding principles can be used to help teachers recognize and accept diversity as found in the population of deaf students.

- Teachers' and others' understanding of the culture of deaf people (Deaf, deaf, hard of hearing, late-deafened, etc.) is evolutionary and it is not always possible to generalize from one group of deaf people to another,

- It is the thoughts and actions of Deaf people that provide the definition of what it means to be "Deaf."

- There are many options to succeeding in America as deaf person.

- The greatest support that teachers can give to deaf students learning to define who they are is to be there for them while taking care not to impose their own perspectives.

- Exposure to Deaf culture is important, however exposure to other cultures and providing deaf students with the opportunity to assimilate norms and values associated with the culture of the home or the dominant society is not a denial that students are deaf.

- Teachers need to foster an appreciation for cultural and individual diversity for themselves and their students.

- Teachers must maintain honesty and open-mindedness so as not to abuse their position which allows them to impart cultural norms and values.

- Teachers need to be proactive in their efforts to increase the representation of culturally diverse groups in the education process.

Who are the deaf students? We will just let each one in their own way answer that question for us.

The Multicultural Deaf Student

Post-secondary education needs to consider the ethnic and linguistic diversity of their deaf students (Nash, 1991). African American, Hispanic, Asian Pacific and other minority deaf students demand that education institutions retain a staff that is sensitive to their culture:

> Compared to their White peers, minority deaf students are not only less likely to attend postsecondary programs, but they are also more likely to attend rehabilitation vocational rather than academic programs. . . Many minority deaf students appear to be uncomfortable at predominantly White colleges and lack role models on the staff and faculty. A paucity of sensitivity training packages for campus personnel seems to compound this problem. (Schroedel & Ashmore, 1993, p. 23)

This lack of sensitivity is not limited to multicultural deaf students. A vast majority of colleges and universities and educational institutions in general are inadequately addressing the challenge that diverse students bring to the school (Grossman, 1995).

In addressing the educational needs of multicultural deaf students educators must avoid the mistake of lumping all students together under the category of deaf. This same mentality often pervades the field in its

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approach to educating school-age students with multiple disabilities. What often happens, for example, is that students who have a moderate hearing loss and are autistic will invariably find themselves being served by a teacher certified in the area of deaf who lacks the knowledge and skills related to teaching autistic children. Such situations typically do not benefit the students as the teacher is unable to establish a viable educational plan that addresses the educational challenges posed by disabilities other than deafness. Likewise, a degree of hearing loss is not a sufficient rationale for categorizing the learning capabilities of a student.

Yet, the advent of a strong "Deaf way" movement has contributed to how multicultural deaf students are identified:

> African American and Hispanic deaf students often are encouraged by both hearing and deaf people to be "Deaf first," to be part of the "Deaf culture." Ways of behaving that they share with their African American and Hispanic brothers and sisters are often rejected in schools for Deaf children. To succeed, African American, Asian/Pacific Islander, Native American, and Hispanic deaf students . . . have been encouraged by the system to develop . . . a "strategy of racelessness" (Fischgrund & Akamatsu, 1993, p. 173)

However, a sociocultural identity that emphasizes "Deaf first" does not insure that all deaf people are treated alike. Not long ago, many African American deaf students attended segregated residential programs which set them apart, in the eyes of the Deaf community, from those who attended the more prestigious schools for deaf children (Bowe, 1971). Multicultural deaf students today may find themselves in school programs in which they represent the dominant ethnic population but where their cultural values are nevertheless denigrated. As a result, "multicultural deaf people are tugged at by a variety of forces, forces that segregate them in subtle ways from both the mainstream deaf community and heir ethnic or racial community" (Fischgrund & Akamatsu, 1993, p. 173).

Compounding this problem is the potential impact of the sociocultural environment. The identities deaf people choose are shaped by the social context in which they interact. An African American Deaf university student relates this process as he explains the path of his own social identification:

> Where I grew up in Jamaica I always saw myself as a deaf person because there were so many Black people living there. Later, when I moved to Canada, I began to see that I am a Black person, which is how I identified myself. This is because there are a lot of white people living in Canada. Now that I am at Gallaudet University, I see myself as a Black Deaf person. (Stewart, 1991, p. 69)

For this person and others the ability to move freely between two or more cultures should allow for greater access to the benefits that the various social institutions (e.g., education, family, religion) associated with each culture have to offer. Thus, our goal is not to change the environment to accommodate the educational and cultural needs of each deaf student. Rather, we must strive to establish an environment where learning is unhindered by ingrained social prejudice and monocultured instructional strategies.

Teachers and the Deaf Student

Many teachers are not prepared to deal with cultural diversity as defined by a population of deaf people. Diversity as we see it in programs for deaf children is limited to degrees of hearing loss or to the differences in levels of language development. To some extent, these are manageable traits. We deal with the hearing loss through the provision of hearing aids, speech training, sign language, and other accommodations. Language development is also our forte as we weigh the advantages of traditional and whole language instructions, specifically designed reading materials, and in general reach out to a long list of resources addressing the language development of deaf children.

But Deaf culture? What do we do now? Is that something that we as teachers need to be concerned about if we are to be effective? What about ASL? After years of an English dominated curriculum, is there a need to change now? At least at the elementary and secondary levels the law says we do. Public Law 94-142 and the 1990 amendments to the act require that educational services be culturally appropriate for students with disabilities. There is, however, no legal definition of cultural appropriateness (Grossman, 1995). Each state and even each school system is allowed to design effective instructional approaches that are culturally appropriate. But what's effective with one group might not be effective with another group of children (Grossman, 1995).

Still there is a sense of urgency in the field as there is a growing tide of linguistic strife in schools where the instructional use of sign language dominates. The Deaf community and others are demanding that ASL be an option in schools (Stewart, 1993). More and more deaf students feel alienated in learning environments where English is the only language to which they are exposed. They perceive their teachers as having a lack of respect for their language and hence for their culture. They are waiting for teachers to respond to the linguistic and cultural diversity of their classrooms.

Opening the Doors for Deaf Culture in the Classroom

Below are some steps that teachers can take to become more sensitive to multicultural makeup of their classrooms. The emphasis in this section is on becoming sensitive to Deaf culture and its linguistic anchor, ASL.

- <u>Facilitate open discussions of Deaf culture and ASL.</u> There is no need for teachers to be on the defensive or to feel that they are inadequate if they lack knowledge about Deaf culture. Acknowledging the presence of Deaf culture and going on with the business of teaching is a superior approach to denying its presence. But teachers must actively pursue more knowledge about this unique culture and discussing it with their students and colleagues is one way of doing this. Discussions should aim to (a) increase understanding of cultural characteristics such as the role of ASL community and in the school, the process by which deaf people are socialized into the Deaf community (e.g., Padden & Humphries, 1988; Stewart, 1991), Deaf cultural values and how they relate to the values of society in general, (b) decrease prejudices through mutual respect for

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differences, and (c) learn how knowledge of Deaf culture and ASL can improve instructional effectiveness. During discussions, participants should be encouraged to look for parallels between cultures while de-emphasizing the notion that one culture is superior to another.

• Actively incorporate Deaf culture into the classroom. Cultural pluralism is not new as efforts have been made to include cultural aspects associated with African American, Hispanic, Native American and other cultures into the curriculum. Discussions of culture should avoid treating a specific culture as a special topic opting instead for ongoing discussions of cultural characteristics and issues throughout the curriculum. This is not to suggest that certain aspects of the curriculum must be brushed aside to make room for Deaf culture. Nor does it mean that teachers must become experts overnight on Deaf culture and attain immediate fluency in the use of ASL. No one believes this can happen but respect for Deaf culture can happen and it should happen quickly. Aspects of Deaf culture that can be incorporated at a post-secondary level include Deaf folklore, story-telling in ASL and on videotapes as opposed to English and print, information about Deaf leaders, and deaf students' self-analysis of their position in various sociocultural contexts. Incorporating Deaf culture also means using Deaf professionals in all aspects of education and not simply as guest speakers.

• Recognize individuality. Let a deaf person define who she or he is. Let's step beyond the deceit engendered by stereotyping. Educators are prone to judge their students and prescribe remedies for what they perceive to be shortcomings in a deaf person based on global assessment of deaf people in general.

• Encourage collaboration among deaf and non-deaf teachers in academic work. A teacher can only go so far. Infusion of multicultural content into the curriculum is only one component of a total approach to appreciating cultural diversity. The purpose of bringing deaf and non-deaf teachers together is to encourage a mutual exchanging of information. The spotlight is not on the deaf teacher, it is on knowledge and skills that can be used to improve teaching.

Teaching Without Demons

In the education of deaf students at the postsecondary level most teachers are non-deaf; they have normal hearing. While we wish that this fact would not make any difference in the way a person teaches, we know too well that for some people it does (Stewart & Donald, 1984). This truth is revealed in many ways in teachers who say that they are skeptical about the value of learning about Deaf culture. They perceive such learning as contributing little or no benefit to their teaching. It is revealed in teachers who are adamant that they could never learn ASL no matter who long they were to study it. They persist in teaching as usual with little regard to the effectiveness of their language and communication behavior. It is revealed in teachers who are fearful of Deaf people assuming too large of a role in the education of deaf students. They cling to a business as usual approach so as to minimize the challenges to their authoritative knowledge of how deaf people can best be taught.

But Deaf instructors are not immune from criticism. Being Deaf and fluent in ASL is no guarantee of effective teaching in the same manner that a non-deaf teacher is not necessarily a good teacher of non-deaf children. All teachers must reflect upon their teaching, dealing with their weaknesses and building upon their strengths. Reflection should center on prejudices and insecurities, goals and support. It should be guided by questions with answers that only the teacher would know. Do you think you can make a positive difference in a deaf student's learning? Do you think learning about Deaf culture and ASL will require too much of your time? Do you treat your colleagues, deaf and non-deaf, as equals? Such self-reflections will help teachers rid themselves of those mental demons that plague their efforts to teach effectively.

Conclusion

If we are to accept diversity in the way we educate deaf students then we must not make our understanding of diversity predicated on special events. Postsecondary teaching must refrain from the grade school approach to learning about diversity with such mundane efforts as a celebration of famous deaf people. nor can efforts toward cultural appreciation be satisfied with an annual guest appearance in classrooms by a Deaf storyteller. The acquisition of knowledge and skills relating to Deaf culture and ASL demands an ongoing commitment from those instructors who teach deaf people. Therefore, it is imperative that we become proactive in our efforts to bring cultural and linguistic aspects of the Deaf community into our postsecondary institutions. This effort must eventually become a part of the norm for postsecondary teachers.

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Endnotes

[1] The term "deaf" is used in a generic sense to include hard of hearing and Deaf persons.
[2] ASL stands for American Sign Language, the recognized language of Deaf communities in the United States.
[3] Until ASL became popularized in the Deaf community, Deaf people would refer to their language as Deaf language or Deaf signs.
[4] For in depth exploration of the Deaf community and American Sign Language, see, for example, Lucas, 1989; Padden & Humphries, 1988; Schein, 1989; and Stewart, 1991.

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