

A National Research Agenda for the Postsecondary Education of Deaf and Hard of Hearing Students: A Public Forum for Service Professionals

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Abstract

This article describes converging nationwide trends and needs that stimulated institutional and professional activities that led to drafting a *National Research Agenda*. The purposes of this “blue print” are to develop, produce, and disseminate a consumer-friendly body of useful knowledge derived from well-integrated federally funded research projects. These studies will enhance better understanding of the complex interactions of diverse support services, learning-living environments, and student populations in a broad continuum of post-high school vocational and academic training and education programs. Consumer involvement was heavily emphasized by the networking among 30 experts who drafted the *Agenda* and by numerous comments made by participants attending this conference session. The conceptual framework as the centerpiece of the *Agenda* is explained, as are its goals, and proposed criteria for future research projects. The article interweaves the perspectives and roles of postsecondary and vocational rehabilitation professionals, federal officials, and researchers contributing to the preparation of the *Agenda* and its expected benefits and outcomes. Relevant national research studies are cited.

Postsecondary education and vocational rehabilitation (VR) service professionals and program coordinators recognize the value of research studies on persons

who are deaf and hard of hearing. The results of assessing on-campus programs assist administrators, faculty, and support staff in improving academic instruction, career training, and student services. Surveys of alumni are beneficial to both postsecondary and VR professionals to appraise the outcomes of college placements. Information on graduates’ socio-economic attainments also boost fund raising from various donor groups.

Research on the postsecondary training of students who are deaf and hard of hearing during the past 30 years has a mixed legacy. On the downside, for example, national estimates of the number of these college students have widely ranged between 20,000 and 258,000 during the 1990s (see the article by Schroedel, Kelley, and Conway in this publication). Even more problematic is the severe shortage of studies evaluating the outcomes of this post-high school training and factors contributing to these outcomes. Fisher, Harlow, and Moores (1974) analyzed three regional training programs, which resulted in the relocation of one of these centers. The University of Arkansas Research and Training Center examined the management, staffing, student characteristics, their use of available support services, and alumni outcomes from a national sample of 46 colleges with programmatic specialized services (Schroedel & Watson, 1991). These authors noted major problems at these programs including: (a) a high rate of student attrition, (b) under-participation of students from ethnic minority backgrounds, (c) relative inattention to students who are hard of hearing, and (d) a lack of national standards on the quality of support services. Balancing this has been active on-going studies at specific campuses, particularly Gallaudet University and the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology, assessing various support services, methods of classroom learning, and alumni outcomes.

Presently, Gallaudet, NTID, and the University of Arkansas are the nation’s leading centers on research of students with hearing loss in a variety of post-high school vocational and academic career preparation settings. Each center has a sustained track record of such research. However, the scope and contents of studies at each center is shaped by factors such as changes in federal legislation, institutional missions, the availability of professional expertise, and funding.

Changes Prompt Research Needs

Research is needed in the postsecondary education

of students with hearing loss because of many major changes that have occurred in this field since the 1970s. There has been a decrease in the number of programs exclusively serving students who are deaf and a corresponding increase in programs serving students with hearing loss through generic on-campus offices serving students with various disabilities (Hopkins & Walter, 1999; Lewis & Farris, 1994; Schroedel & Watson, 1991). More specifically, the number of specially designated colleges serving students who are deaf (N=150) remained stable between 1987 and 1998 while the number of such students they served decreased from 7,000 in 1987 to 5,200 in 1998 (Rawlings, Karchmer, & DeCaro, 1988; Rawlings, Karchmer, DeCaro, & Allen, 1999). Furthermore, in 1996 the focus of the federally funded regional education programs shifted from directly serving students who are deaf to providing technical assistance and outreach services to area colleges and universities to enhance access and services to their students who are deaf and hard of hearing through the four regional PEPNet Technical Assistance Centers.

Watson and Schroedel (2000) noted that these trends reflected several underlying patterns: (a) the post-rubella bubble decrease in the number of students who are deaf eligible for college training since the late 1980s increased attention by college professionals to students who are hard of hearing and late-deafened and (b) the decline in specialized college programs for students who are deaf partially reflects the consequences of increased K-12 mainstreaming since the early 1970s. One significant result of these and other trends has been the emergence of a *continuum* of academic and non-academic postsecondary settings for students with hearing loss: (a) Gallaudet and NTID, (b) two-year and four-year colleges and universities, (c) community-based employment training centers, (d) for-profit business colleges and trade schools, and (e) other postsecondary vocational training programs in the 50 states.

Why is the *National Research Agenda* Needed?

Federal agencies are the primary funding sources for research on the postsecondary training of students who are deaf and hard of hearing. Passage of the 1993 Government Performance and Results Act mandated that federal agencies determine programmatic outcomes and information systems to adjust spending priorities to comply with agency goals. Ever since the founding of Gallaudet College in 1864, NTID in 1966, and four regional training programs in 1968, the federal government has had a long-standing role in funding postsecondary education for students who are deaf. However, the U.S. Department of Education has never developed a cohesive policy for supporting postsecondary education for these students.

The lack of a well-organized research program and other conditions have hampered developing national goals for the postsecondary education of students with

hearing loss. These conditions have created problems for the U.S. Department of Education in planning research, determining programmatic outcomes, and setting agency goals for federal initiatives in the postsecondary education of these students. Even though the Congressional reauthorization of the Education of the Deaf Act in 1998 mandated national studies on these students, no funding was allocated. Furthermore, federal agencies must form cooperative agreements to enhance national workforce development and reduce dependency on welfare. The Office of Special Education and Rehabilitative Services (OSERS) in the U.S. Department of Education lacks a strategy to meet these requirements that affect adults with hearing loss. Even though federal agencies must set programmatic outcomes and spending priorities that match agency objectives, OSERS has little information to develop a cohesive policy in the postsecondary training of these students. Subsequently OSERS needs an integrated research program to assess payoffs and benefits to society and the individual resulting from federal funding of postsecondary training programs.

How was the *National Research Agenda* Developed?

The above-mentioned trends and needs converged into a climate that gave birth to focused actions that produced the *National Research Agenda*. In short, widespread recognition of the value of research studies by postsecondary and vocational rehabilitation professionals was strengthened by numerous concurrent and rapid changes occurring in their fields. The sporadic efforts of prior research projects combined with an increased awareness within federal agencies that a "road map" was needed to better organize investments in future research. These projects had to yield a higher "pay-off" in results useful to not only sponsoring agencies but also by professionals active in the post-high school training of youth who are deaf or hard of hearing.

The *Agenda* originated in 1999 as a joint endeavor sponsored by the Directors of the four regional PEPNet Centers. The Postsecondary Education Consortium at the University of Tennessee coordinated its development in collaboration with administrators at Gallaudet, NTID, and the University of Arkansas Research and Training Center. A network of 30 federal officials, researchers, and program administrators from a large variety of postsecondary education and vocational rehabilitation settings developed and revised the *Agenda*. During 2000 most of these experts participated in meetings in Los Angeles (January) and Denver (April). Many of them also reviewed successive drafts of the document by e-mail. In conceptualizing the framework for the *Agenda*, its multiple authors also utilized the findings from significant national studies.

A Conceptual Framework

The centerpiece of the *Agenda* is a model hypothetical framework, or "blue print," to more effectively link

future research studies. Key unifying principles underlying this conceptual framework include: (a) a focus on outcomes, (b) common definitions of the target student populations, (c) linkages to established national goals for educating these students, (d) consistencies in data collection across different studies, and (e) integrating and coordinating these studies to ensure that their research objectives mutually reinforce each other. The primary overall desired outcome of this “blue print” is the wide dissemination of a consumer-friendly body of cost-effective research-based knowledge.

As specified in Figure 1, this conceptual framework comprises three primary inter-related research areas: (a) student populations, (b) on-campus support services and accommodations, and (c) postsecondary living and learning environments. Effects of each of these research areas are related to programmatic outcomes that mirror national objectives in the postsecondary training of students who are deaf and hard of hearing. Such objectives may include: (a) improving graduation rates, (b) diversifying enrollments, (c) enriching student language skills, and (d) strengthening graduates’ job readiness. This basic schemata reflects the complex interaction of differences in student characteristics, provision of services, and student living and learning environments found in the nationwide continuum of postsecondary programs for these students.

On the left side of Figure 1 are studies of access services, which support students’ academic and career

preparation needs. It is important to reach the people who are underserved by better understanding of what their needs are. Factors germane to on-campus learning and living environments are displayed on the right side of the figure. If students’ academic and social needs are not addressed, they will drop out: 3 of every 4 students who are deaf quit college before completing a degree (Stinson & Walter, 1997). Professionals must better comprehend and integrate the total on-campus environment – academic learning, psycho-social development, and career preparation – so that programs can enhance persistence of their students who are deaf and hard of hearing.

A possible example of one research approach to enhance career preparedness is illustrated in Figure 2. It is known that if a student who is deaf has a clear vocational goal, she or he will stay in college (Schroedel, 1991). Moreover, additional preparation is needed to improve attitudes and behaviors of faculty and staff. Inexperienced professors shocked when faced by a student with a hearing loss may deny him or her necessary accommodations. More fundamentally, understanding key factors in student learning of marketable career skills, for example, is crucial. The ways many students who are deaf learn differ from the ways that many students who hear, which, in turn, differ from the ways many students who are hard of hearing learn. Beyond these categories, we need to recognize and meet differences in *individual* student learning styles.

Figure 1.
Conceptual Framework

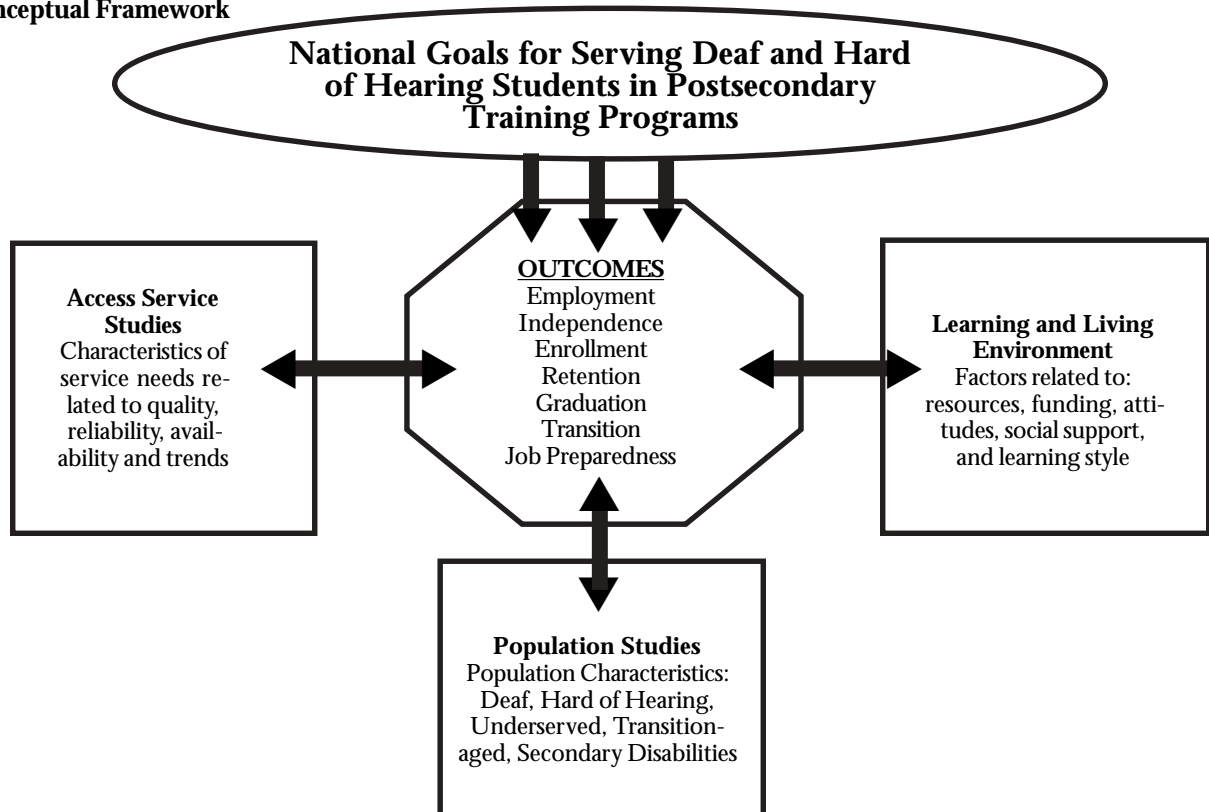
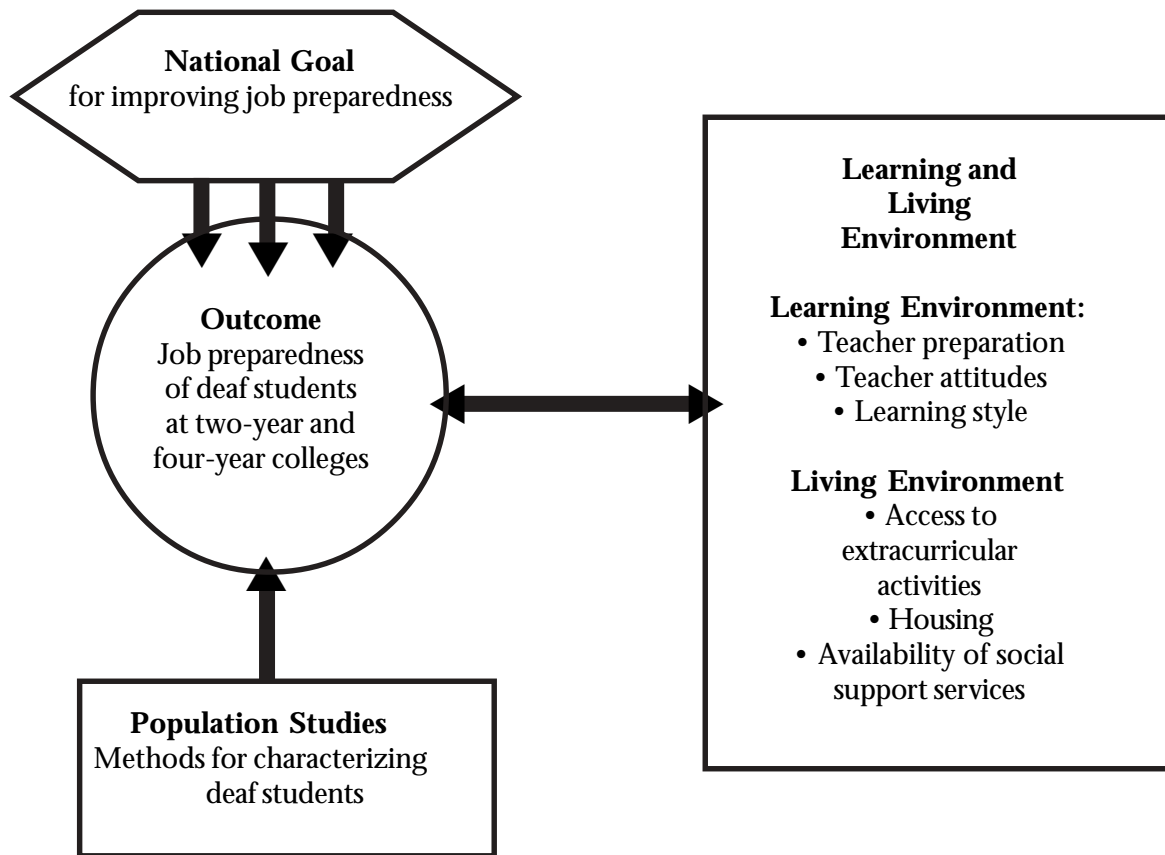


Figure 2. Example of Research on Learning and Living Environments



Other Key Ideas for the *Agenda's* Conceptual Framework

The *Agenda* report identified several other key precepts interwoven into its conceptual framework:

Future research studies must follow national goals for postsecondary training of students with hearing loss set by USDED, the U.S. Department of Labor, and the Social Security Administration. Recent federal legislation, such as the Workforce Investment Act of 1998 and the Ticket to Work Incentives Improvement Act of 1999, requires national inter-agency cooperation to enhance workforce development and reduce dependency on public assistance.

Researchers must draw upon completed studies in planning new projects. These include the PEPNet national needs assessment (Hopkins & Walter, 1999), the Gallaudet/NTID surveys for the *College and Career Programs for Deaf Students* (e.g., Rawlings, et al.,

1999), and the national forum on the education of youth with hearing loss (National Association of State Directors of Special Education, 1999).

Researchers must utilize existing national databases such as the Office of Special Education Programs (OSEP) Longitudinal Study on Transition, Integrated Postsecondary Education Data (IPED), and the Rehabilitation Services Administration RSA-911 data system

Seven Goals for the *National Research Agenda*

1. Unify federal officials, researchers, and program administrators on an *Agenda* with a conceptual framework to integrate future research projects.
2. Encourage organizations of consumers and professionals to coalesce and support the *Agenda*.
3. Present the *Agenda* to OSERS to develop guidelines for coordinating and funding research initiatives.
4. Seek funding from Congress for research projects.
5. Promote collaboration among researchers on applied research proposals to be reviewed by OSERS under the auspices of the *Agenda*.
6. Involve postsecondary, vocational rehabilitation,

and allied professionals as well as representatives from organizations of consumers who are deaf, late-deafened, and hard of hearing in the development, operation, and evaluation of research projects.

7. Expedite use of research findings to improve policies and practices in the postsecondary training of deaf and hard of hearing adults.

Criteria for Agenda Sponsored Research Projects

It is anticipated that both Requests for Proposals and peer review of submitted research applications will follow such criteria as:

- Focus on student outcomes from postsecondary programs.
- Use common definitions of targeted student populations in different research projects.

- Include students and research consumers with all types of hearing loss.
- Link projects to established national goals for postsecondary education of these students.
- Be consistent with common data collection methods across studies.
- Form project objectives that mutually reinforce objectives from other projects.
- Use existing databases in planning projects.

Conclusions

Professionals are aware that during the past 30 years research on the postsecondary training of students who are deaf and hard of hearing has been generally sporadic and fragmented. Studies have evaluated classroom instruction methods and support service programs at se-

Figure 3. Panel 1: The SERP Research Translation Model

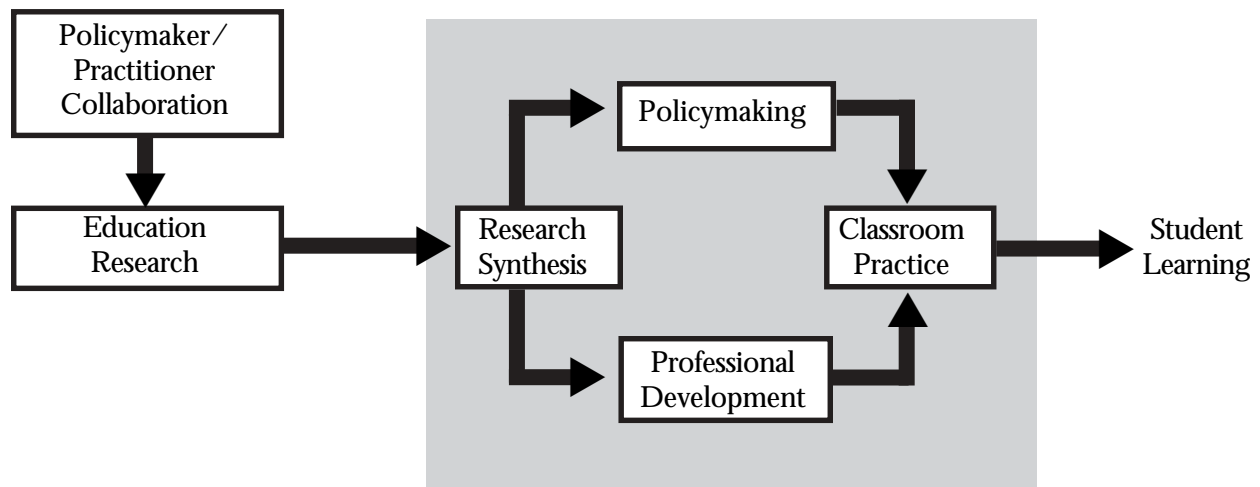
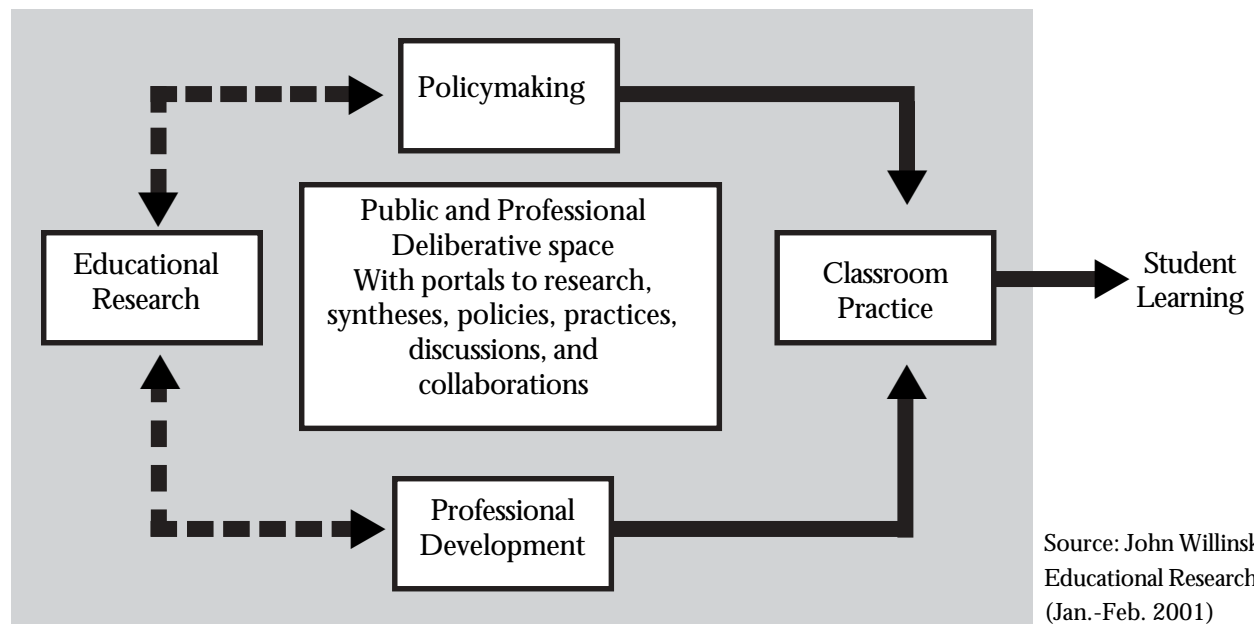


Figure 3. Panel 2: Proposed Deliberative Research Translation Model for SERP



Source: John Willinsky, Educational Researcher, (Jan.-Feb. 2001)

lected colleges and universities. Although these activities have been beneficial in disseminating knowledge of professional services and policies in postsecondary training, there has been little integration of this knowledge across research and demonstration projects.

The *National Research Agenda* is designed as a policy document to enhance planning, coordination, and funding of future research projects on postsecondary participants with hearing loss. These projects are anticipated to examine a wide range of significant issues on the interactions of variations in student characteristics, support services, and campus living and learning environments. It is also anticipated that federal research funds will be better invested and yield a higher impact on postsecondary training.

The ultimate objective of the *Agenda* is to use research-generated knowledge to improve practices and policies that will augment and expand opportunities and outcomes for postsecondary students who are deaf and hard of hearing. It is envisioned that this *Agenda* will lead to the creation of well-defined student populations, variables impacting the availability and use of support services or accommodations (including communicative technologies), as well as factors affecting classroom learning and on-campus social life. In addition, another desired product is the development of national standards on the quality of support services

Emphasizing Consumer Involvement

Research translation refers to the beginning-to-end process of designing and conducting a research project and disseminating its results. As shown in the top frame of Figure 3 is the Strategic Education Research Plan (SERP), which is the current research translation model, used by the U.S. Department of Education (Willinsky, 2001). Unfortunately, this model excludes significant consumers such as parents, teachers, and teacher trainers from the process of converting research results into educational practices and policies. The model in the lower frame of Figure 3 is better because consumers are full and active participants in the research translation process.

The University of Arkansas Research and Training Center, like other research programs, uses a participatory research action approach (Whyte, 1991) to develop research projects. Center faculty bring together service professionals and leaders of consumer organizations into focus groups to obtain synergetic expert input before designing projects, then later come back for continued input. A consumer who is involved in the development of a research project is more likely to use its results than an uninvolved prospective consumer. We get better applied research and more useful and practical research results for consumers. Along with other key sponsors, the research faculty has been taking the same approach with the development of the *National Research Agenda*, which is one reason why reactions to this presentation

are welcome. (*Note:* some post-session comments were received by e-mail).

Comments by Session Participants

Comment: As director of student services at the University of Minnesota, I am concerned about the lack of funding for postsecondary accommodations. I have three recommendations:

First, there is a need to provide high-quality interpreting services for the students in specialized graduate-level technical and professional development courses. We have difficulties in Minnesota in providing quality interpreting services that match students' needs. We have been unable to implement a wonderful services model. Our annual budget for interpreter services is about \$1.5 million and if we keep growing, in five years it will be \$4.5 million. If we are spending \$1.5 million on students who are deaf it is not going to programs such as ethnic/cultural groups or women's studies.

Second, the University now must follow the DVR focus on the medical/disability aspects of the student. If a student wants to go to college, they may not want to be identified with DVR. They are very independent. Our University is very creative in funding services, but this may change in the future. I think that other universities try to exclude us because of the costs. I want an innovative approach to shared resources from the federal government.

Third, your research is focused on the postsecondary training of students who are deaf and hard of hearing. But there are degree completers who are still on SSI because there are no opportunities for them in the workplace. We need to look beyond the school to the workplace.

Comment: I am on the rehabilitation faculty at Maryville University in St. Louis. We need to think about future funding sources that optimize the choices of students who are deaf for classroom accommodations that combine interpreters with C-Print, CART, or voice-activated note taking equipment.

Comment: I am from NTID and want to talk about college preparation. I have observed many deaf students who arrive at college without the necessary preparation. Also, we do not have good ways to evaluate a student's career maturity level and motivation.

Comment: I am from Gallaudet and wonder if you see postsecondary training as different from postsecondary education? I do not know the difference.

John Schroedel: Postsecondary training and education often used interchangeably. Keep in mind that the *Research Agenda* covers a wide range of career preparation programs in both vocational and academic settings.

Comment: Being from the University of Maine, which is a rural state, we lack the quality services that may exist in other states. We do have a very sophisticated distance learning system. I see a lack of using technology like Internet 2. There are 180 research universities that

have access to this service. I would like to see research on the use of broadband networks for educating deaf and hard of hearing students.

Comment: I have been involved with various businesses for 35 years. It is interesting as I look at your figures, I have seen all of these words in different boxes before. It is the same old story with the same old words. I would like to add a few ideas: the student environment no longer seems to include teachers. Now, they are called “facilitators of learners”, not “teachers of students.” You need to change your terminology. We need to train professionals who do not understand these new ideas. I look at the words that you have in the center circle of Figure 1: transition needs to happen first, not in the middle.

Douglas Watson: This particular activity is directed to enhancing transition from college to work.

Comment: The first transition happens from home to school. We need to train teachers how to facilitate the various transitional processes for students. We need to start early in helping them with transition, and it needs to be explained more clearly: first you do this, then this, then this. Furthermore, you need to remember the dissimilarities between residential and mainstream schools where different instructional needs must be addressed. Finally, you need to keep in mind that the majority of employers are not experienced with workers with hearing loss.

Comment: I work for a service agency in Illinois and have three questions. First, how will the *Agenda* relate to the activities of the Research and Training Center for the Study of Postsecondary Educational Supports at the University of Hawaii? Second, how do you plan to identify and reach students from ethnically and linguistically diverse groups so that they are not lost in the broader picture? Third, how will you study the “voices” of students, faculty, and staff members at various programs who have a say in the provision and impact of support services? Perhaps some kind of an interviewing study can be done using a cultural anthropological or ethnographic approach.

John Schroedel: We have been and will continue to communicate with the Research and Training Center at the University of Hawaii. We have also been in touch with researchers examining diversity issues in general higher education.

Comment: Many of the students who are deaf and enter colleges that have open-door policies never finish because they lack adequate English skills. The students are eager and motivated, but lack the support they need to succeed. I have looked for research on reading and writing skills, because this is a huge need. We have a high turnover rate for these students.

Douglas Watson: We do not want to promote or otherwise condone these “revolving door” programs where students come in and out repeatedly. Our Research and Training Center has been conducting research on stu-

dents and adults with minimal language skills. We estimate that 30% of the population of deaf persons fits this category. The Rehabilitation Services Administration (RSA) in the U.S. Department of Education came out with a quality report with much information on useful policies and practices to meet the needs of this group. This report (Dew, 1999) is available for electronic dissemination on our Center’s website <<http://www.uark.edu/depts/rehabres/publications.html>>.

Comment: I am from the Northeast Technical Assistance Center at NTID. When is the U.S. Department of Education going to take responsibility for these students?

Douglas Watson: We are trying to persuade the federal government to provide more funding for appropriate services to this underserved population. The RSA report on *Serving Individuals who are Low Functioning Deaf* provides key steps for building more effective service delivery programs for this long-neglected target population.

Comment: I am from Kansas where my agency is under VR. What kind of analyses are you using? You collect your data, but how are you analyzing it? Many of my students are in rural areas. There is a need for developing curricula for these students. We also need more long-term plans.

Comment: We need to look at the local examples. Often VR forces a consumer who is deaf to apply to SSI before they can get services and then they lose their incentive to do anything beyond that. I know parents often refuse to allow their children who are deaf to accept this aid as it prevents them from getting needed work experience.

Comment: I am from Oklahoma and our legislature recently passed a law requiring all interpreters to be certified at QAST III. We only have two big cities, Tulsa and Oklahoma City, whereas the rest of the state is rural. Our teachers of students who are deaf are not required to have any language fluency in ASL. Everyone is fighting the same battles. It would be nice to see what everyone else is doing and how they are succeeding.

Comment: I am from Tennessee. The ultimate outcome is employment, but there are issues that are crucial in helping people to get there. Many things are involved including the ability to effectively disclose the disability to the employer. Educating employers is very important.

Douglas Watson: We will bring all these comments to the attention of the Directors of the four PEPNet Centers so they can review them. We will put these together with session participant comments we collected from other conferences. In addition to presenting at this conference, we gave presentations on the *Agenda* to the American Educational Research Association (AERA) in Seattle and the Southeastern Regional Institute on Deafness (SERID) in Biloxi, Mississippi last year. The SERID attracts many professionals like those who attend PEPNet conferences. The AERA with 30,000 members

is the nation's leading professional association of educational researchers and includes a Special Interest Group with 125 research specialists on the education of youth with hearing loss.

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