

Instructional Technology and Education of the Deaf



An International Symposium

June 27-30, 2005

<http://www.rit.edu/~techsym>

Summary of Discussions at the Culminating Luncheon

June 29, 2005

At the conclusion of the symposium, a “culminating luncheon” was held among symposium participants. The goals of this session were to foster reflection regarding symposium proceedings, and stimulate collective speculation regarding two key issues:

- A. (*Opportunities to be seized...*) Ten years from now, where should the field of Deaf Education **ideally** be regarding the use of instructional technologies in supporting deaf and hard-of-hearing learners?
- B. (*Challenges to be met...*) What are some of the real barriers likely to hinder the realization of this **ideal**?

Approximately 125 teachers, administrators, and technologists, representing the United States and international perspectives, participated in the session. Participants were clustered into twelve discussion groups. Each group was supported by a facilitator in addressing to the two key issues noted above. The following notes attempt to capture the rich discussions that ensued.

Many thanks to the following discussion group facilitators, who made this session possible:

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Kathy Darroch
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THE LOOK AHEAD...*OPPORTUNITIES TO BE SEIZED!*

Re: Human Networks of Students and Teachers

Teachers and students are the key sources of effective teaching and learning strategies when implementing technology solutions. Technology will support, but not define who we are as teachers and students.

Technology accessibility and use will be worldwide, linking educators not only in developed countries, but throughout developing countries as well.

Improved chat room communication will have a major impact on educational, employment and social situations. This will lead to a new kind of socialization among deaf learners, and this in turn will yield more learning with fewer resources than might otherwise have been necessary or possible.

A new generation of teachers will enter their profession with a higher level of technical knowledge. This will result in better use of technology in education.

Teachers, trainers, administrators, and vendors will have greater familiarity and comfort with using various educational technologies.

Re: Specific Equipment and Resources Issues

Technologies such as advanced TTY (or next generation TTY technologies), Smart Boards, classroom listening support technologies, E-Books , wireless tablet PCs, speech-to-text technology, video relay and video cell phones will have a significant impact on classroom interactions, especially in the mainstream settings.

Re: Impact of Cochlear Implant Technology on Classroom Communication and Presentation

Cochlear implants could have a significant impact on the educational environment for deaf students. The cost of such implants may be an issue for some students, especially in developing countries.

More systematic research needs to be conducted regarding the language development of younger students with Cochlear Implants.

Re: Internet and Web-based Resources

The internet will serve as a clearinghouse of information regarding technology and how to best use it. The Internet will also provide access to video teleconferencing for information sharing.

The internet will provide the platform for distance learning, wireless connectivity, sign and English on video displays, etc.

There will be greater use of on-line, web-based education, in part driven by student demand.

Some concerns regarding the presentation of instruction to students via the Internet:

- Loss of benefits of one-on-one human contact with deaf adult role-models so important for deaf kids.

With more electronic information available to students for learning, search functions to locate particular areas of interest, such as the Digital Access Management System, are becoming more important.

Distance/remote service will have a major impact on deaf people. Residential schools could benefit from distance technologies.

Re: Impact on Student Education

Teachers and students will use technology more effectively. Currently students are adept at using technology for communication and leisure purposes. They also will be skilled and active users of technology for education purposes, particularly regarding the development of reading and writing literacy.

Deaf and hard-of-hearing students will be educated to have both the awareness of global information and their role as global citizens. Deaf and hard-of-hearing students will become multi-lingual.

There will be increased opportunities for students to engage in active learning strategies through various technologies.

- There are already technologies that enable individuals to add their own notes to web videos.
- A TIVO type application that enables students to stop recordings of lectures and insert their own notes next to the material, whether it's a lecture, or other material, is desirable.

Increasingly, students will be able to independently use multiple technologies on their own, with technical support as needed.

Re: Accessibility and Universal Design

Technology implementations will be developed following Principles of Universal Design¹ to improve accessibility for deaf and hard-of-hearing students, educators, and students with a variety of learning styles.

There will be greater accessibility to web materials in formats tailored to individuals. This conceivably could include:

- A way that ASL-supported access is provided through technology that would automatically produce a signing avatar.
- Captioning would provide accessibility to web materials as well.
- Individuals would be able to select the type of accessibility support, based on their own preference.

Technology used for access benefits everyone – including hearing students, (e.g. not limited to helping one group).

Support and access should always be available immediately, not only by pre-arranged requests (i.e. access live interpreting when needed via video relay to laptop).

THE LOOK AHEAD...*CHALLENGES TO BE MET*

Re: Teachers and Administrators

Practice openness to experimentation and change regarding the use of new instructional technologies within the learning/teaching process.

Ensure opportunities and support for professional development in applying and evaluating instructional technologies within educational situations.

Maintain an awareness of emerging technologies and how they can respond to the instructional and accessibility needs of individuals with disabilities, and develop better dissemination strategies regarding such technologies that inform rather than overwhelm.

Re: Technical Support Staff

Provide additional technical support staff, and, for those technical support staff already in place, provide more ongoing professional development regarding emerging technologies and their instructional implications.

Develop additional strategies for providing readily accessible technical support to end-users (including on-line resources).

Re: Funding

Increase our investment in instructional and accessibility technology. Currently, there is not enough funding overall for educational institutions in supporting the use, maintenance, and upgrades of such technologies. What funding that does exist is unequally distributed among educational institutions, creating a “have/have not” state of affairs, both nationally and internationally.

Regarding this state of affairs, the “haves,” whether as members of the global community or at state, regional, or national levels, do not consistently act on a commitment to share technological resources with the “have nots.” Indeed, technology is one of the elements fueling the widening of the “have/have not” gap in terms of standard of living, quality of life, and information access. (Cochlear implant technology could become a case study of this trend, in that it potentially will fuel a “class system” between individuals in developed countries and those in developing countries...with deaf people still signing being those who are disadvantaged.)

Re: Greater Investment in Research and Development

Increase the commitment among teachers, administrators, government officials, and private sector individuals for supporting R&D regarding both the use of technology in education and the use of technology for realizing universal accessibility.

Re: Preserving Linguistic and Cultural Minorities

If not careful, technology will serve as a powerful (albeit unintentional) means for weakening the integrity of linguistic and cultural differences, establishing English as *the* operational language and favoring text-based over visual-based language.

Re: Preserving the Role of Human Interaction

There is a need to maintain a vital “high tech/high touch” balance between technology and humanity within educational processes; as well as the need to find ways of using technology to enhance the “human touch.”

Re: Educating Deaf and Hard-of-Hearing Individuals About Technology...and Educating Technology about Deaf and Hard of Hearing Individuals

Educators have a responsibility to support the development of technological literacy among deaf and hard-of-hearing individuals, so that these individuals are aware of their options and know what to advocate for.

And at the same time...

Developers of emerging technologies need to consider the needs and lifestyles of deaf and hard-of-hearing individuals in their basic design and functionality decisions.

Re: The Need to Simplify Technology

For technology to truly become omnipresent, it needs to become cheaper, simpler to learn and use, and more seamlessly functional from one “platform environment” to the next.

¹ http://www.design.ncsu.edu:8120/cud/univ_design/princ_overview.htm, accessed November 28, 2005