

Technology Integration

Berent, G., & Clymer, E. (2001). A Web-based initiative to infuse English across the curriculum for deaf and hard-of-hearing students. In Papers from Instructional Technology and Education of the Deaf Supporting Learners, K-College [On-Line]. Available: <http://www.rit.edu/techsym/2001/proceedings.html> [AN 1734]

The presenters demonstrate their "Supporting English Acquisition" (SE-4) web site and will outline a collaborative, web-based effort to infuse English teaching principles and methods into technical, math, science, social science, and humanities courses taken by students at the National Technical School for the Deaf (NTID). This broad-based effort involves faculty in NTID's Center for Research, Teaching, and Learning, the Center for Arts and Sciences, and the Center for Technical Studies, as well as peer tutors in the NTID Learning Center.

Kelly, R. (2000). Technology and individuals who are deaf, hard of hearing, blind, and partially sighted. In J. D. Lindsey (Ed.), *Technology and exceptional individuals*, (3rd ed., pp. 353-374). Austin, TX: PRO.ED. [AN 1711]

This chapter provides an overview of the educational applications of technology for students who are deaf, hard of hearing, blind, or partially sighted. It describes and discusses current, state-of-the-art instructional and educational technology along with practical examples of utilization for each of the identified student populations. Examples from actual classroom applications are included.

Egelston-Dodd, J. (2000). Interactive technology: Empowering teachers and motivating students. In R. Rittenhouse, D. Spillers (Eds.), *The Electronic Classroom: Using technology to create a 21st century curriculum*, (pp. 206-228). Hillsboro, OR: Butte Publications. [AN 1678]

While computer technologies have been available to schools in substantial numbers for about 15 years, we are now in a period of transition for technology in education. Choices made now will determine whether our schools successfully make the transition.

Elliot, L. , Stinson, M., McKee, B., Everhart, V., & Francis, P. (2001). College students' perceptions of the C-Print speech-to-text transcription system. *Journal of Deaf Studies and Deaf Education*, 6(4), 285-298. [AN 1733]

C-Print is a real-time speech-to-text transcription system used as a support service with deaf students in mainstreamed classes. Questionnaires were administered to 36 college students in 32 courses in which the C-Print system was used in addition to interpreting and note taking. Twenty-two of these students were also interviewed.

Farinella, K., Metz, D., Schiavetti, N., & Whitehead, R. (1998). Influence of Analog vs. Digital Recordings on Speech Naturalness Judgments. *Contemporary Issues in Communication Science and Disorders*, 25, 49-53. [AN 1703]

This study investigated the potential influence of analog versus digital audio recording on speech naturalness ratings. Eight male and eight female speakers were audio-recorded simultaneously with an analog recorder and a digital recorder under two speaking conditions. Twenty listeners rated the speech naturalness readings made from analog or digital audiotape recordings.

McKee, B., Stinson, M., Giles, P., Colwell, J., Hager, A., Nelson-Nasca, M., & MacDonald, A. (1998). C-Print: A computerized speech-to-print transcription system: A guide for implementing C-Print. Rochester, NY: National Technical Institute for the Deaf (NTID), Rochester Institute of Technology (RIT). [AN 1735]

This publication is aimed at professionals who wish to implement the C-Print system within their school or organization. The manual has sections for administrators, teachers, coordinators of deaf and hard-of-hearing programs, and C-print operators. It discusses a variety of topics and issues related to successfully implementing the C-Print system, including cost and equipment. Other sections discuss communication with various audiences involved, including parents and classroom teachers, and information on recruiting and training C Print operators.

Sims, D., & Gottermeier, L. (1999). Computer applications in audiologic rehabilitation. In J. G. Alpiner car, P.A. McCarthy (Eds.), *Rehabilitative audiology: Children and adults* (3rd ed., pp.556--571). [AN 1655]

This book chapter discusses recent trends and advances in audiologic rehabilitation using computer-assisted instruction, computer based audiologic rehabilitation (AR), computer aided speech reading training (CAST), and other computer based technologies.

Stinson, M. (2000). Development of a national network of C-Print service providers. Year 1 annual progress report to the U.S. Department of Education. NTID, Rochester, NY. [AN 1753]

This progress report states the project status after one year since its inception. The goal of this project is to train a network of captionists and trainers to provide local training of captionists over a wide geographic area. The project has four broad objectives: a) Increase the availability of C-Print support services to deaf and hard-of-hearing students across the country by training 10-C-Print trainers and 105 C-Print captionists nationwide; b) Evaluate the effectiveness of a national network of C-Print trainers and captionists by doing surveys and interviews with these participating individuals and by developing guidelines and materials; c) Provide for quality assurance in the delivery of C-Print services across the national network by training facilitators, developing trouble-shooting and local practice manuals, and by developing mentoring practices for C-Print trainers; d) Disseminate information nationwide about C-Print and training opportunities.

Stinson, M., Elliot, L., McKee, B., & Francis, P. (2001). Accessibility in the classroom: The pros and cons of C-Print. *Volta Voices*, 8(3), 16-19. [AN 1765]

This article explains, discusses, and reviews the pros and cons of using C-Print technology in the classroom.

Stinson, M., Eisenberg, S., Horn, C., Larson, J., Levitt, H., & Stuckless, R. (1999). Realtime speech-to-text services. In R. Stuckless (Ed.) *Reports of the national task force on quality services in postsecondary education of deaf and hard of hearing students*. Rochester, NY: Northeast Technical Assistance Center, Rochester Institute of Technology. [AN 1596]

Speech to text systems have increased the tools that educators have to effectively support deaf and hard of hearing students be educated with hearing students. Currently there are many mainstreamed students who cannot hear enough to follow the classroom discussion, but have intelligible speech and can read. Such students are sometimes given an interpreter, but this service is of limited benefit because the student does not understand signs well. There are also some situations where the student understands sign communication, but for success in the particular class, it is important to be able to review after class a text that details the class discussion. Speech-to-text services provide a quality option that can effectively address such situations.

Stinson, M., & McKee, B. (2000). Speech recognition as a support service for deaf and hard of hearing students: Adaptation and evaluation. Year 2 annual progress report to the Spencer Foundation. NTID, Rochester, N.Y. [AN 1750]

In this project a research and development group at the National Technical Institute for the Deaf is working to adapt new speech recognition technology to provide real-time speech-to-text transcription as a support service for deaf and hard-of-hearing students.

Stinson, M., McKee, B., & Elliot, L. (2000). C-Print project completes 10th year. *NTID Research Bulletin*, 5(2), 1,3-5. [AN 1784]

For the past 10 years, a research and development group at NTID has been working to develop a speech-to-text classroom support system that we call C-Print. Over these years, the group has made continuous improvements in C-Print and in strategies for implementing the system in high schools and colleges. The group also initiated nation-wide training to CPrint captionists to support deaf and hard-of-hearing students, from Maine to California and from North Dakota to Louisiana. In this article we describe and reflect upon the emergence of C-Print from an idea to a system that hundreds of deaf and hard-of-hearing students depend on everyday for classroom communication access and learning.

Stinson, M., McKee, B., & Elliot, L. (2000). Development and implementation of the CPrint speech-to-text support service. In J. Albertini, E. Ehrhardt, and H. Strauss (Eds.) *Kommunikation und Kreativitat*. Villingen-Schwenningen, Germany: Neckar-Verla. [AN 1751]

In the past 25 years, the number of deaf and hard of hearing students being educated in classes with hearing students in the United States has increased significantly at both secondary and postsecondary levels (Lewis, Ferris, & Greene, 1994; Moores, 1992; Awings, Karchmer, & DeCaro, 1998; Schildroth & Hotto, 1996; Walter, 1992).

Stinson, M., & Stuckless, R. (1998). Recent developments in speech-to-print transcription systems for deaf students. In A. Weisel (Ed.), *Issues unresolved: New perspectives on language and deaf education* (pp. 126-132). Washington, DC: Gallaudet University Press. [AN 1540]

This article discusses recent trends in speech-to-text transcription, approaches using stenotype or similar machines, approaches using standard computer keyboards, and future directions of work in this area.

Stuckless, R. (1999). Recognition means more than just getting the words right. *Speech Technology*, Oct./Nov., 30-35. [AN 1645]

This article discusses the current state of technology in the field of speech recognition, accuracy and readability.

Spencer, P., & Marschark, M. (2003). Cochlear implants: Issues and implications. In M. Marschark & P.E. Spencer (Eds.), *Oxford handbook of deaf studies, language, and education* (pp. 434-448). New York: Oxford University Press. [AN 1776]

Cochlear implants have given many late-deafened adults renewed access to auditory information and to their habitual social and communicative networks. For many children, cochlear implants also have provided access to the world of sounds and of auditory-based language. The process of learning to use information generated by a cochlear implant is typically lengthy, however, and focused practice and therapy are necessary. Eventual speech perception, production, and spoken language skills (including vocabulary and syntax development), are interrelated and vary widely, with some children receiving almost no benefits and others acquiring skills much like those of their hearing peers. Preliminary evidence indicates some reading and academic skill benefits from children's increased access to audition, but results are mixed, and more research is needed.

Note: [AN XXXX] represents a local NTID publications designation. Please include when requesting copies of these publications.