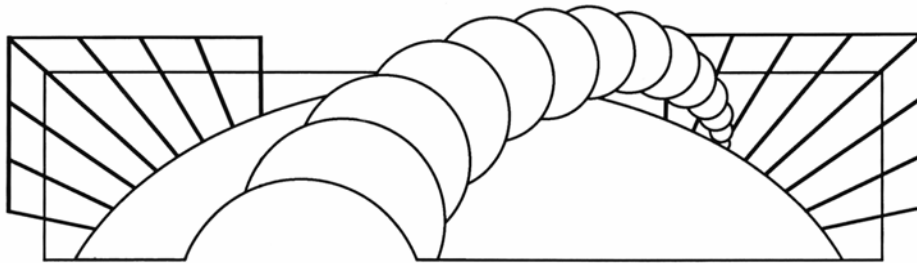


A B S T R A C T S

Formal & Poster Presentations

Instructional Technology & Education of the Deaf



Supporting Learners, K – College
An International Symposium

Sponsored by
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Abstracts of Formal and Poster Presentations

This collection of abstracts is for your convenience in selecting particular presentations to attend during this three-day Symposium. The abstracts for Formal and Poster presentations are presented in the order they appear in the program, by the date and time. With few exceptions, they appear as they were received by the program committee.

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What's New with C-Print? (W10B)

Lisa Elliot
NTID/RIT
 Michael Stinson
 Pam Francis
 Gina Coyne
 Donna Easton

Email: LBENRD@rit.edu

Wednesday, 6/25/2003 --10:00 AM

Location: LBJ [060] 1510

Strand: Using Technology to Support Learning

Type: Formal **Audience:** All

The C-Print speech-to-text support service refers to a family of computer-assisted, speech-to-print technologies. Since 1995, approximately 1,000 deaf and hard-of-hearing students have been supported in educational environments through use of C-Print and more than 500 individuals from approximately 350 educational programs in at least 46 states and four foreign countries have completed the month-long training to become a C-Print Captionist. For the past six years C-Print has been widely disseminated beyond NTID and is now frequently requested by deaf and hard-of-hearing students around the world. In this session, we will review recent findings and forthcoming enhancements to the system. We will describe innovations in C-Print technology including the new server-client software and demonstrate C-Print with automatic speech recognition technology. We will also report on recent demonstration trials in local high schools with the new C-Print Pro software.

Active Learning Through Technology: Creating a Technology-Infused Environment to Actively Engage Deaf Students in the Learning Process (W10C)

Linda Burik
Western Pennsylvania School for the Deaf
 Wayne Kelly

Email: lburik@wpsd.org

Wednesday, 6/25/2003 --10:00 AM

Location: LBJ [060] 2590

Strand: Using Technology to Support Learning

Type: Formal **Audience:** K-12

Active learning has long been successful in improving both attention in the classroom and retention of concepts for Deaf students. Engaging students in the learning process during classroom instruction enables the teacher to monitor students' achievements and helps to keep students focused and "on task". Technology, when integrated into the classroom instruction, can not only help to facilitate the active learning process but also provide a stimulating, visual learning experience. High-tech classrooms have been designed at the Western Pennsylvania School for the Deaf to promote active learning and to integrate technology into the curriculum. Through the use of wireless laptop computers, interactive whiteboards, LCD projectors, and networking software, teachers can present content, monitor student achievement, and meet curriculum objectives in all subject areas in an engaging and visual format.

The presentation will detail the physical layout and technology used in the newly renovated classrooms in the Math Science & Technology Center at the Western Pennsylvania School for the Deaf. Video clips of presentation practices and classroom activities will demonstrate how the use of a SMARTboard, laptop computers, and networking software work together to promote active learning.

WEDNESDAY

Providing Sign Language Access to Digital Information Using 3D Animation Technology: An Overview (W10D)

Danny Roush
Vcom3D, Inc.

Email: DannyR@vcom3d.com

Wednesday, 6/25/2003 --10:00 AM

Location: LBJ [060] 3237

Strand: Using Technology to Support Learning

Type: Formal

Audience: All

For Deaf and Hard-of-Hearing students, English text alone may not provide language access to educational software and web pages. Adapting these software programs with SigningAvatar™ technology, which uses 3D animated characters, is a practical way to provide sign language access to support learning.

This presentation will provide an overview of SigningAvatar™ technology and its application in the following research projects:

1. Signing Science--With this project, TERC, Inc., Vcom3D, Inc., and NTID are adding signing to two online science curriculum units and evaluating the extent to which this promotes the achievement of specific learning outcomes.
2. SignSync--In collaboration with the National Center for Accessible Media (NCAM) at WGBH, an integrated software tool is being developed and evaluated which will allow authors to add both captions and sign language animations to dynamic media such as videos.
3. Virtual Interview Exercises for Workplace Success (VIEWS)--This program allows transitional age deaf students and adults to practice interviewing skills in a virtual office scene with multiple characters.
4. Sign Builder--This software tool, under development, is an add-on to the currently available Sign Smith™ Studio Authoring Tool, which will allow for quickly inflecting spatial signs and creating technical or regional signs.

Digital Video Conferencing in Deaf and Hard-of-Hearing Instructional Environments (W11A)

Douglas MacKenzie
NTID/RIT
James Mallory
Dino Laury

Email: djmnca@rit.edu

Wednesday, 6/25/2003 --11:00 AM

Location: LBJ [060] PANARA THEATRE

Strand: Using Technology to Support Learning

Type: Formal

Audience: All

Digital Video Conferencing (DVC) is a widely available, low cost, practical technology that can be used in synchronous and asynchronous, online tutoring and teaching sessions. The throughput on the World Wide Web (www) has improved, and high speed, broadband connections at school, work and home allow DVC to become a viable instructional tool in both traditional and on-line courses. Microsoft™ Netmeeting's features such as video, audio, white boards, and chat sessions make this method of interacting with students very effective.

Interactions with Logitech cameras allows sharing of voice, sign language, facial expressions, and body gestures. When combined with NetMeeting software, instructional materials and synchronous chats can also be incorporated. Real-time interaction significantly enhances chat sessions and whiteboard viewing of instructional material such as programming code or other technical concepts. Netmeeting also allows the use of highlighting and drawing on instructional materials that are posted on its white board.

One of the authors surveyed a variety of NTID students and faculty members to gather opinions on the usefulness of this technology and the related topographies as a graduate thesis project. The results of these findings will be presented.

Planning and Implementing Effective Interactive Television Sessions (W11B)

Barbara Strassman
The College of New Jersey
 Jennifer Powers

Email: strassma@tcnj.edu

Wednesday, 6/25/2003 --11:00 AM
Location: LBJ [060] 1510

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

Video conferencing or interactive television has the potential to engage deaf students and their teachers in dialog and discussion, moving deaf education out of the traditional constraints of teaching to one class in one location. For this medium to be used at its full potential, teachers must plan collaboratively and consciously design for the active participation of all involved. This gives rise to synchronous discussions and dialog, which research shows to be effective in engaging students and increasing their thinking skills. Additionally, it gives teachers peers with whom they may brainstorm and collaborate.

Through videotapes, participants will see how, despite the differences in individual school curricula, video conferencing can be used to build a community of learners who meet content area standards and objectives (e.g., in language arts or in science). Participants will be given handouts to facilitate their future ability to initiate, plan, and conduct interactive classes via video conferencing.

Evaluation of Virtual Asynchronous Resources for Teacher Education (W11C)

Harry Lang
NTID/RIT
 James Mallory
 Alan Cutcliffe

Email: HGL9008@rit.edu

Wednesday, 6/25/2003 --11:00 AM
Location: LBJ [060] 2590

Strand: In-Service/Pre-Service Strategies
Type: Formal **Audience:** All

The Clearinghouse On Mathematics, Engineering, Technology and Science (COMETS) is a comprehensive web-based resource developed through a grant project funded by the National Science Foundation. The focus of the project is to provide information about "best practices" to a variety of target audiences, including K-12 and college educators, parents, support personnel, and those responsible for teacher education and professional development. One goal of this project is to evaluate whether the World Wide Web can be effective in providing useful information to support the needs in the field. This presentation will summarize the evaluation of many features of the Web-based clearinghouse project by more than 50 teachers and in-service and preservice teacher educators. The features of the asynchronous website evaluated include the quality of information, reliability, accuracy, stability, scope, organization, search ability, interactive elements, and ease of technological access.

WEDNESDAY

Online Design: Access for Deaf Students (W11D)

Patricia DeCaro
NTID/RIT

Email: padnod@rit.edu

Wednesday, 6/25/2003 --11:00 AM

Location: LBJ [060] 3237

Strand: Online and Distance Education

Type: Formal **Audience:** All

As computer access is increasing, so too are opportunities for classes or workshops offered through online or distance learning. The advantages are many, including flexible times and access to classes not offered locally. However, there are concerns about the heavy dependence of this form of education upon the written word for individuals who may find the specific language of the course difficult. This might apply to students who are deaf and/or whose primary language is different from that used in the course. This presentation will describe a course for which deaf and hearing students read and discuss issues related to teaching deaf students. The students design a unit plan or workshop to be inclusive of all students and create PowerPoint slide shows to summarize their work. Techniques such as varied reporting methods and activities, the use of stories and experiences, on-line links, videotapes, time allowance for revisions, and the like are demonstrated and discussed, along with other techniques not used in the course itself. Examples will be drawn from an existing online course entitled *Deaf Students: Educational and Cultural Diversity*.

Using Interactive Physics Software With Deaf College Students (W2A)

Vicki Robinson
NTID/RIT

Email: vjrmts@rit.edu

Wednesday, 6/25/2003 --2:00 PM

Location: LBJ [060] PANARA THEATRE

Strand: Using Technology to Support Learning

Type: Formal **Audience:** All

Reading technical material is a tough job for students of any level of English mastery, but for deaf students, reading can be a critical impediment to understanding in the physics classroom. Such reading is necessary to grasp the nature of the interactions between objects in word problems. Misinterpreting the description of an object's motion dooms any attempt to solve the problem. Reading can present a barrier, too, to the "real-life" quality of the information presented, so that students have trouble visualizing the action. Similarly, the instructions for performing a laboratory experiment may be so difficult to interpret that the point of the exercise is lost, and the lab becomes a battle with measuring instruments.

MSC's software package, Interactive Physics, has helped physics students at NTID overcome some of these hurdles, allowing them to spend more time learning physics and less time wrestling with difficult language. This presentation will show participants how a physics professor at NTID uses this powerful modeling software in laboratory exercises, in homework assignments, and in exams, as well as on web pages. This will not be a hands-on "how-to" session, but one demonstrating the uses to which this software has been put with deaf physics classes.

The Classroom of the Sea - Technologies Bringing the Sea to the Classroom (W2B)**Ivar Babb****Email:** babb@uconn.edu**National Undersea Research Center**

Harry Lang

Scott Brown

Peter Scheifele

Mary LaPorta Hupper

Denise Monte

Paula Johnson

Dongping Zheng

Patricia Jepson

Anthony Girasoli

Susan Payne

Wednesday, 6/25/2003 --2:00 PM**Location: LBJ [060] 1510****Strand:** Online and Distance Education**Type:** Formal**Audience:** K-12

The Classroom of the Sea (COS) is a three-year project funded by National Science Foundation's Program for Persons with Disabilities and the Connecticut Sea Grant Program. COS is a collaborative and interdisciplinary project that brings together a research team from diverse disciplines, including marine science, educational technology, and deaf education. One of the primary objectives is to use a marine science curriculum and problem-based learning (PBL) to teach the basic sciences to middle and high school deaf students. The PBL approach involves students and teachers in authentic field research activities aboard a research vessel to assess environmental conditions in Long Island Sound by the Harbor Seal as an indicator of environmental health. A wireless network has been developed that allows real-time Webcasts from the ship to shore and then directly to the classroom at the American School for the Deaf in West Hartford, CT. These Webcasts allow the shipboard teachers and students to interact with students to sign to their counterparts and peer-teach. Instant messaging provides a mechanism for students and teachers in the classroom to ask questions of the field research team. Students also access real-time data from UConn's My Sound project to help address their PBL research project.

Toward A Learner-Centered Multimedia Learning Environment: The DLSU-College of St. Benilde Experience (W2C)**Ronald Holmes****Email:** HolmesR@csb.dlsu.edu.ph**DLSU College of St. Benilde**

Therese Christine de la Torre

Ninfa Viernes

Wednesday, 6/25/2003 --2:00 PM**Location: LBJ [060] 2590****Strand:** Using Technology to Support Learning**Type:** Formal**Audience:** College

The School of Deaf Education and Applied Studies (SDEAS) of the De La Salle University-College of St. Benilde (DLSU-CSB) started implementing postsecondary (certificate) programs for deaf and hard-of-hearing students in 1991. A few years later, SDEAS, then known as the School of Special Studies, offered a Bachelor of Arts in Applied Deaf Studies program to enable the student clientele to obtain a baccalaureate degree. More than a decade after the first program for the deaf was implemented, the DLSU-College of St. Benilde was admitted as a partner in the multi-country network of higher educational institutions that cater to the deaf, the Postsecondary Education

WEDNESDAY

Network-International (PEN-International).

DLSU-CSB's membership in PEN-International provided the institution an additional boost as such came at a time when SDEAS was in the thick of reviewing its curricular programs and services. The partnership, for one, enabled SDEAS to draw lessons from the varied experiences of PEN-International member institutions, specifically the National Technical Institute for the Deaf at Rochester Institute of Technology (NTID-RIT) and from Tsukuba College of Technology (TCT) to address a range of concerns that include admissions and screening procedures, determination and monitoring of learning outcomes, and placement of student graduates to specific industries, among others. On a more specific concern, the partnership with PEN-International provided DLSU-CSB material and intangible resources to design, construct and subsequently refine what promises to be a key ingredient in facilitating the development of a learner-centered learning environment-the PEN-International Multimedia Learning Center (PEN-MLC).

This presentation is divided into two parts. The first shall focus on a recount of the process that led to the final design of the PEN-MLC. Such process may be described as **instructive** as the work went well beyond the physical design and had to ground itself on a broad understanding of the immediate and potential use of a multimedia learning environment to create active, situated, and collaborative learning.

The second section of the paper shall describe the instructional design work that is currently taking place that would ensure that the PEN-MLC becomes a "constructivist learning environment. "

The authors acknowledge that the work that has been accomplished is incomplete and would not even provide any preliminary measure of how the use of information technology will impact on the competence of our faculty in facilitating learning or on students learning. We are hopeful, however, that in sharing the instructional design effort that has taken place, the other Symposium participants will provide the requisite critique for its refinement.

Round One: Results from the Pilot Testing of a Technology Skills Assessment for Middle- and High-School Deaf and Hard-of-Hearing Students (W2D)

Pamela Luft
Kent State University

Email: pluft@kent.edu

Wednesday, 6/25/2003 --2:00 PM

Location: LBJ [060] 3237

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal

Audience: K-12

Constituent pressure from parents, communities, and employers has challenged schools to ensure that all students are technology literate. Deaf/hard-of-hearing students need to be competitive in their technology literacy in order to compete in the changing job market. In addition, they need to know the range of assistive devices that they will require at work, at home, and in the community to be fully participating citizens.

This technology skills assessment was developed to assist teachers and schools in identifying D/HH students' strengths and needs and to measure instructional outcomes of technology teaching units. The survey has two sections addressing (a) the technology, computer, and internet literacy and skills that D/HH students need; and (b) the skills and knowledge to utilize assistive devices that D/HH students will need to function as successful adults at home, at work, and in the community.

Items for technology literacy section were constructed based upon the ISTE (International Society for Technology in Education, www.iste.org) standards, a learned organization representing technology expertise. In particular, student standards (cnets.iste.org/pdf/nets_brochure.pdf) were taken from the ISTE National Education Technology Standards (NETS) project ([1 www.iste.org/standards/index.html](http://www.iste.org/standards/index.html)). These standards are identified by grade level. Consistent with transition training mandates from IDEA that require transition planning to be incorporated in student IEPs beginning at age 14, ISTE standards from middle and high school were identified from the larger NETS project

to incorporate into this survey. The second portion of the survey was developed based upon a comprehensive list of assistive devices for D/HH. This was developed through contacting assistive devices websites (e.g., TRACE, PACER), as well as catalogs and retail services for D/HH customers.

Assessment items were created to represent the knowledge and skills associated with each of the ISTE standards and with each of the assistive devices. The first section consists of computer skills (word processing, internet access, presentation software). The second portion includes personal hearing technology, communication devices, and alerting or signaling devices. The draft instrument was reviewed by individuals from each of the following constituent groups: (a) faculty in deafness/special education, (b) faculty in instructional technology, (c) Deaf adults, (d) teachers of D/HH students, and (e) D/HH middle school and high school students. The rating system consists of a "thumbs-up/neutral/down" format to support student self-evaluation. The instrument was revised based upon their comments to ensure clarity of directions and items, comprehensiveness of items, and ease of administration.

The instrument was pilot tested on 20 middle school and high school D/HH students across four available school systems in the Northeast Ohio area during January 2003. The assessment was revised with sections clarified through formatting changes. Students were then re-tested to establish reliability data. This presentation will describe the instrument and the results of this field testing process, including reliability data.

A Study of Interactive Media for Deaf Learners in Post 16 Education (W3A)

Azra Akhtar
University of Surrey, Roehampton

Email: azra@akhtar36.fsnet.co.uk

Wednesday, 6/25/2003 --3:00 PM
Location: LBJ [060] PANARA THEATRE

Strand: Using Technology to Support Learning
Type: Formal **Audience:** College

Educational achievements of Deaf students in further and higher education are mediated by limitations of access, communication and resources. It is proposed that the development of specially designed subject-specific interactive multimedia resources for Deaf young adult students will both benefit the learning outcomes of its target group, and Post 16 academic institutes widening participation schemes. A questionnaire sent out to 200 UK colleges and universities indicated a demand for interactive CD ROM product development for Deaf students studying on a number of courses, including Accountancy. A prototype interactive CD ROM covering one Accountancy module was developed, which incorporated British Sign Language (BSL), graphics, text, and sound. Subsequent focus group evaluation supported further development of a "Signed Accountancy" CD ROM to include a number of syllabus modules, online technical support, multiple choice tests and past exam papers with model answers. It is anticipated that the development of such a learning resource will (a) allow greater access to the course content and curriculum, enabling Deaf students to study for higher level qualifications and (b) allow academic institutions to be more responsive to the needs of Deaf learners. Future focus group evaluations and participant observations will be conducted to systematically investigate this.

WEDNESDAY

Career and Technology Learning Outcomes with Deaf and Hard-of-Hearing High School Students from a Single Activity (W3B)

James Mallory
NTID/RIT
Ronald Kelly

Email: jrmnet@rit.edu

Wednesday, 6/25/2003 --3:00 PM

Location: LBJ [060] 1510

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal

Audience: All

Each summer NTID offers Explore Your Future (EYF), a one-week workshop for approximately 200 deaf and hard-of-hearing high school students. These 17 - 20-year-old students sample a variety of activities that are designed to educate them on different career possibilities. The Holland model is used to help students understand the various career areas and skill requirements. One of the authors of this paper was responsible for the "Investigative" Holland category and was charged to set up a technology activity which taught basic concepts of computer technology, including software, hardware, programming and interfacing. The first year the male and female participants were combined, the second year they were separated to see if the learning or the interest level changed among each gender. The authors implemented an outcome assessment to see if the students gained both an understanding of what the Investigative type of career was and to see what technical concepts were learned during this 45-minute activity. The outcomes are derived from 400 students during a two-year time period. The authors predicted some of the results - other outcomes were surprising. The learning between the two genders was equivalent, but the interest level in the technology and the investigative types of careers varied greatly. The technical activity itself and its outcomes are presented in this paper.

Technology and Literacy (W3C)

Susan Schatz
Laurent Clerc National Deaf Education Center
Francisca Rangel
Layce Reed

Email: susan.schatz@gallaudet.edu

Wednesday, 6/25/2003 --3:00 PM

Location: LBJ [060] 2590

Strand: Using Technology to Support Learning

Type: Formal

Audience: K-12

"I was running a good race." "My nose is running." "Don't leave the water running." When reading these sentences, many deaf students will use the same sign for each sentence though they have very different meanings.

This presentation will share how 4th-5th grade teachers use technology to teach difficult concepts such as multiple-meaning words to their students. The students work on teams of two and create stories that include a selected word and its various meanings. After consultation with the teacher to verify that the story has depth and meaning, the students videotape each other. These digital video stories are transformed into a student created interactive PowerPoint presentation in which the user can view the ASL and read the English. These stories are shared with other students to help them in their reading of multiple-meaning words.

With the help of technology these students are learning how to bridge ASL to English, while improving their ASL skills, expanding their vocabulary, and enhancing their literacy skills.

Collaboration of Deafness Specialists and Instructional Technologists in Postsecondary Settings (W3D)

Rebecca Herman
PEC-FLA SOTAC
Gary Abernethy

Email: HermanR@spcollege.edu

Wednesday, 6/25/2003 --3:00 PM

Location: LBJ [060] 3237

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal

Audience: College

In 2001, three postsecondary institutions (St. Petersburg College, University of Central Florida, Miami-Dade Community College) collaborated to address:

- the provision of distance learning opportunities which are fully accessible to deaf, late-deafened, and hard-of-hearing students in postsecondary settings
- the provision of remote support services (such as sign language interpreting and real-time captioning) to deaf, late-deafened, and hard-of-hearing students in postsecondary settings in Florida

This collaborative project produced several exciting outcomes:

- St. Petersburg College- The use of emerging technologies in the areas of voice recognition and real-time video captioning for the development of replicable techniques that result in a technology that offers the ability to simultaneously present both instructor and sign language interpreter via a digital video format. The resulting product has teaching and learning ramifications in both face-to-face and distance education. Models include the use of the archived video for WebCT based instruction and the real time captioning of classroom lecture via voice recognition technology. This new paradigm offers significant leaps in the level of accessibility for deaf, hard-of-hearing, and blind students in the on-line and face-to-face instructional setting.
- University of Central Florida- The UCF website's virtual tour is now captioned, thus more accessible to individuals who are deaf, late-deafened, and hard-of-hearing. UCF also developed an accessible distance learning graduate program in Engineering by incorporating digital video into its on-line courses for this program of study.
- Miami-Dade Community College- Initiation of a project to experiment with various technologies to enable remote interpreting services and remote captioning services between campuses.
- **Tech Symposium '03 Presentation-** A prototype of the WebCT-based course (just as a student would use) which has captioning, voice, and sign language interpretation will be shown. "Web Central", the meeting space in cyberspace that was developed for this collaborative project, will also be shown and explained.
- The other above project outcomes will be described as well, and workshop participants will be encouraged to replicate these projects in their home states.

Handouts containing information on all of the above will be provided. Time will be allowed for questions and answers at the end of the presentation.

Techniques for Meeting the Needs of Deaf Students in the Design of Shared Computer Laboratories at a Major Technical University in Russia (W01P)

Olga Orechkina
Bauman Moscow State Technical University
Maxim Levashov
Valery Safronov
Alexander Stanevsky

Email: oreshkin@mx.bmstu.ru

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

WEDNESDAY

Type: Poster

Audience: College

Deaf and hard-of-hearing students at Bauman Moscow State Technical University attend mainstreamed classes. By using unique technologies and educational strategies, these students are able to fully participate in classes and laboratories with their hearing peers. In collaboration with PEN-International, a specialized multimedia laboratory was designed and constructed to meet the needs of the advanced curriculum being taught and the communication requirements of the deaf students. This poster session will discuss the design and development of the lab and report on the student use and success of the new facility.

The Use of Videoconference Technologies Between International Universities Serving Deaf Students (W02P)

Tsustomu Araki

Email: araki@a.tsukuba-tech.ac.jp

Tsukuba College of Technology

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Online and Distance Education

Type: Poster

Audience: All

Tsukuba College of Technology (TCT) of Japan has been a leader in the instructional use of videoconference applications, both traditional ISDN systems and computer-based technologies, for over 10 years. When TCT joined the Postsecondary Educational Network - International (PEN-International) one of the contributions it could make to the partnership was sharing advanced expertise in implementing videoconferencing technology for use between international partners. A PEN-International goal is the establishment of videoconference capabilities at each of its partner sites. Members of the faculty at TCT have consulted in the implementation of videoconference capabilities at PEN-sponsored multimedia labs in China, Russia, and the Philippines. This session will report on the use of various videoconference technologies for communication in instructional and meeting situations between international sites, with suggestions relating to image quality and speed that is necessary for successful sign language communication. Handouts.

Transferring Empowering Technologies in Deaf Education Through Higher Education Institutions in Developing Nations (W03P)

Ronald Brouillette

Email: ron_brouillette@yahoo.com

CBM

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Poster

Audience: All

Upgrading institutional teacher education is an efficient course for developing nations to transfer sustainable, empowering technologies, leading to an effective education for deaf and hard-of-hearing students. Where such infrastructures are underdeveloped or inaccessible, the alternative is intensive, in-service training at the highest levels in deaf and regular education and deaf leadership.

This presentation introduces the processes and products found helpful to raise standards in three developing countries: Philippines, Viet Nam, and India. In each of these nations, "inclusive education" is becoming mandatory. The Instructional Technologies developed there form the syllabi for teacher education and demonstration classrooms. They include: 1) Multi-lingual interactive CD Rom for speech and language development; 2) User and

teacher-friendly booklets on educational audiology; 3) Videos, CD-Roms/VCDs, bilingual instructive and promotional printed materials, and websites to popularize and learn indigenous sign languages; 4) Production of graded instructional workbooks, learning aids and systematic assessment tools that augment Individualized and visual-gestural communication approaches; and 5) The mobilization of literate and skill-trained Deaf and hard-of-hearing tutors. Students who have benefited from these technologies and activities are more likely to perform closer to their age/grade levels, especially in mainstreamed environments.

You Betcha! (W04P)

Michael Burton
Burton Vision

Email: BURTONVIS@aol.com

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster **Audience:** K-12

Students at Georgia School for the Deaf have increased their ITBS scores for the last three years after using technology specifically developed to enhance their word recognition. Mississippi School for the Deaf students have been using the same technology to expand their English vocabulary. A 3-year-old deaf boy with minimal language (almost no English or ASL) learned the signs for 40 animals in less than 30 minutes. A 13-year-old deaf girl in a mainstream program improved her ability to write English sentences from three-or four-word simple sentences into more complex eight-or nine-word sentences after using this technology for about four months.

What is the greatest academic need for most deaf students and how does this technology address those needs? It employs interactive ASL/English educational programs on CD-ROM. Does this program address accountability? Yes, by providing a student tracking system that delivers data to students, teachers, parents, and administrators. Here is a tool to relieve the instructor from the drudgery of rote teaching and free the teacher to focus on concepts and critical thinking skills.

Enhancing Writing Skills Through Student-Generated Captions (W05P)

Margaret Chastel
Brindle Learning Tools, LLC

Email: chastel@theworld.com

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster **Audience:** All

This session will demonstrate the use of an interactive CD designed to enhance the literacy skills of Deaf students. Deaf students who use ASL as their primary language for communication think in that language. However, written English is a completely different language from ASL, different in every way, structurally, syntactically, and semantically.

To enhance Deaf students' ability to bridge the gap between these two languages, we use a CD with a novel feature that allows the user to input English captions, and/or gloss, that are automatically synched sentence by sentence to the ASL video. A model English translation can be accessed for comparison. The results of a pilot study examining the effectiveness of the CD when used by Deaf adults with a variety of

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English skill levels will be shown. Results include pre-test and post-test assessments, observations of the learning process, and student feedback.

Increasing Teachers' Understanding of Dual Language (ASL/English) Use in the Classroom: Content and Exemplars Through Educational Technology (W06P)

Elizabeth DiGello
University of Illinois - Urbana-Champaign
Jenny Singleton

Email: digello@uiuc.edu

Wednesday, 6/25/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: In-Service/Pre-Service Strategies

Type: Poster **Audience:** All

Information regarding metalinguistic awareness and dual language acquisition issues is beneficial to teachers of the deaf but receives little attention in current teacher preparation programs. To describe and model the dual language use of American Sign Language and English in classrooms serving deaf children, we developed a CD-ROM-based multimedia instructional program oriented to teachers of the deaf. Exciting advances in educational technology have created opportunities for ASL integration (via embedded digital video clips) into instructional materials. In the current pilot program, dual language (ASL and English) issues facing deaf children in the classroom are explained in ASL and English using embedded video clips, thus making the program linguistically accessible to deaf and hearing educators. Video examples of classroom vignettes are also included to illustrate the program's lesson objectives. The program not only communicates the lesson objectives but also serves as a model for teachers on how to use dual language (ASL and English) representations effectively with instructional technology. The pilot program will be examined by focus groups comprised of educators of the deaf from various school settings. This poster presentation will focus on development of instructional media, lesson objectives, and evaluation of the program by focus group participants.

The Application of Modern Distance Education in China's Postsecondary Education for the Deaf (W07P)

Mei Han
Tianjin University of Technology

Email: bao629@sina.com

Wednesday, 6/25/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Online and Distance Education

Type: Poster **Audience:** College

The constant development of computer information and network technology makes possible distance education based on computer network technology. Modern distance education refers to the education that transfers class courses to out-of-campus areas, utilizing audio/video devices as well as both real-time and non-real-time computer networks.

Distance education in China has gone through three phases: Phase I was the correspondence education, which has cultivated a large number of talents needed in the building of the country; Phase II was the broadcasting and television education which boomed in the mid-1980s; Phase III began in the 1990s. With the development of information and network technology, modern distance education based on information and network technology comes into being in China. This has far-reaching and successful applications that are slowly revolutionizing deaf education in China.

E-Learning Across Cultures: Is It Possible? (W08P)**Corinne Heschke**
NTID/RIT**Email:** cahies@rit.edu**Wednesday, 6/25/2003 --4:30 PM****Location: LBJ [060] 2nd FLOOR STREET****Strand:** Online and Distance Education**Type:** Poster**Audience:** All

E-learning quickly is becoming a viable educational option for thousands of people worldwide. After partner selections and funding sources are resolved, the real work begins: How to successfully deliver an online course for multiple audiences spread around the world.

First, you must identify your goals for e-learning, since these will guide the process. For Project Inclusion, we identified the following goals:

1. Access: All participants must have dependable internet access that allows a minimum one-hour connection. Is that possible at the partner institutions? And if not, how will it be resolved?
2. Delivery Tool: The tool must be internet-based, allowing all participants access at any hour of the day. The tool needs to support course material, email, and most importantly, discussion boards. Technical support is critical -- both from the user standpoint as well as for the design and delivery coordinator. And most importantly, the interface should be seamless and user friendly.
3. Language: When selecting the language for the course, one must be aware of and sensitive to cultural differences that may hinder communication between faculty members and students, and even among students across countries.
4. Timing: Even in the United States, timing is a concern when offering a class between universities that use quarter and semester systems. To achieve the greatest successful learning experience for the students, one needs to strive for as much of a "full house" as possible. One must remember that students will be studying and accessing the course and discussion boards at different times depending on the time zone where they live.
5. Design: While the course may be "delivered" by several faculty members across the world, ONE person should be responsible for the management of the delivery tool.

This poster session will show how each of these goals and unforeseen challenges were met during Project Inclusion course development. Actual examples and experiences will give the viewer an appreciation for how much work really goes into e-learning, and hopefully will inspire some to design their own e-learning courses.

The Interpreter Who Never Tires: Adding Animated Sign Translations to Student and Teacher Presentations (W10P)**Becky Sue Parton**
University of North Texas**Email:** parton@cc.admin.unt.edu**Wednesday, 6/25/2003 --4:30 PM****Location: LBJ [060] 2nd FLOOR STREET****Strand:** Using Technology to Support Learning**Type:** Poster**Audience:** K-12

Are your Deaf students missing out on valuable information from web sites, PowerPoint presentations, and educational software due to English text that is hard to comprehend for those whose primary language is ASL? This

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presentation will show teachers, using *Sign Smith Studio*, how to create animated sign sequences and then integrate them into a variety of projects that can be reviewed by students independently. This session's focus is on how students K-12 can benefit by watching and creating animated sign. Participants will tour the presenter's recently created CD-ROM, "Exploring Deafness - Your Multimedia Handbook", created using *Macromedia Director*, as a demonstration of software made accessible through this technique along with the steps taken to design it. The pros and cons of using animation rather than digital video segments will also be discussed in terms of preparation time, cost, and distribution. Additionally, it will be shown that the benefit to students is not only the end-result, but also the skills they learn in ASL structure and multimedia development as they go through the process of creating the animated sign supported presentations. Suggestions for creating material for classroom enrichment and the ThinkQuest competition will also be communicated.

American Sign Language Video Dictionary and Inflection Guide (W11P)

Geoffrey Poor

Email: gspncm@rit.edu

NTID/RIT

Patrick Graybill

Dorothy Wilkins

Wednesday, 6/25/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

This presentation is a description and demonstration of the ASL Video Dictionary and Inflection Guide, an interactive CD that redefines the concept of what a sign language dictionary must be and do.

The various print and video dictionaries available are merely adaptations of the spoken language dictionary model. They provide collections of words (signs), with perhaps some descriptive information on grammar and an example or two. This is just the beginning of what an effective ASL dictionary must do, because ASL uses complex inflectional systems in places where English adds adverbs and adjectives, making the ASL language learning process significantly different.

The ASL Video Dictionary and Inflection Guide has:

- A searchable 2,700 ASL sign English-ASL dictionary.
 - More than 5,000 English words linked to those signs.
 - 650 sentences, in natural ASL and written English, showing the full range of ASL grammar; individual signs are specifically linked to signs that illustrate their inflections.
 - A "Similar Signs" feature that groups signs that look alike.
 - Categories of signs grouped semantically.
 - A Grammar Information section that describes ASL grammar, especially inflectional systems, with links to video examples.
 - Various other features. All video is in clear QuickTime movies with native Deaf signers.
-

Captioned Media Program Online Innovations (W12P)

Melanie Updegraff
St. Mary's School for the Deaf

Email: mjupdegraff@smsdk12.org

Wednesday, 6/25/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning
Type: Poster **Audience:** All

The Captioned Media Program (CMP) is a government-funded program providing open-captioned, free-loan educational and entertainment media (currently video, CD-ROM, and DVD) to all deaf and hard-of-hearing persons, their families, and professionals working within deaf communities. The CMP collection contains materials appropriate for Ps-13+, with more than 4,000 titles, and more than 425 subjects. The mission of the CMP is to provide all persons who are deaf or hard of hearing with awareness of and access to communication and learning through the use of captioned educational media and supportive collateral materials. Entering the 21st century, the ultimate goal of the CMP is to permit media to be an integral part in the lifelong learning process for all stakeholders in the deaf and hard-of-hearing community: adults, students, parents, and educators.

Many changes and improvements have been made to the program and the website over the last few years. The focus of this presentation will be on the CMP website, and accessing all services offered by CMP through the site itself, from obtaining an account to ordering materials. The newest and most exciting technological addition to the CMP web site is video streaming; account-holding clients may choose from approximately 200 titles that can be viewed free of charge online through the CMP web site. This can be used in classrooms, homes, offices -- anywhere a computer can be accessed.

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Internet-based Network Teaching and Learning Modes for the Deaf in China (T10A)

Qiang Li
Tianjin University of Technology
Hongbo Liu
Yacheng Zheng

Email: bao629@sina.com

Thursday, 6/26/2003 --10:00 AM
Location: LBJ [060] PANARA THEATRE

Strand: Online and Distance Education
Type: Formal **Audience:** College

Network is the essential base and common denominator for information in today's society. For the deaf, communication more and more often utilizes this network, especially in education. Both international deaf education and domestic deaf education need network tools, so the deaf education modes based on network have shaken traditional education. We predict that these network-based modes will become the mainstream of education modes.

Chinese domestic academics and researchers have explored new ways such as Computer Assisted Instruction (CAI), multimedia, and network to improve teaching and learning courses and have seen effective progress. Nowadays, network teaching and learning goes on through network virtual classroom, campus-wide web and Internet. Network virtual classroom provides text, voice, video and graphics for learners at anytime anywhere. It also offers large knowledge base and information base designed with HTML, which fits in human memorizing characters. Thus it can easily arouse students' interests. Taking multimedia and network as tokens, new information technology revolution has changed deaf education and will promote deaf education systems and modes to develop rapidly. It must be assessed and changed according to weaknesses in order to continue its progress and success. We will discuss this assessment and adjustment in our presentation.

Mainstream Educational Software (It's Effective with Deaf Children, too!) (T10B)

Rosemary Stifter
Laurent Clerc National Deaf Education Center
Nancy Topolosky

Email: rosemary.stifter@gallaudet.edu

Thursday, 6/26/2003 --10:00 AM
Location: LBJ [060] 1510

Strand: Using Technology to Support Learning
Type: Formal **Audience:** K-12

Some deaf educators shun the idea of using software developed for hearing students because of accessibility issues. However, what we have noticed is that, in fact, mainstream educational software can be very effective for deaf students. The design, presentation, content, age suitability, and quality interactive experiences all contribute to its effectiveness.

Last summer at the Laurent Clerc National Deaf Education Center, we conducted a software evaluation workshop in which teachers and staff evaluated mainstream educational software and its application to their grade level and/or content area. What they discovered was software that was able to meet their instructional needs and contained many, if not all, of the following characteristics; i.e., it was visual, interactive, engaging, motivating, challenging, intuitive, structured, and included an assessment feature. Although the software was not designed to be completely accessible to deaf students, it proved to hold the deaf students' interest over time, to challenge their abilities, and be fun.

This presentation will discuss the characteristics of what makes educational software programs, designed for hearing students, effective for deaf students, too. We will also take a first hand look at some of these educational software products and discuss some strategies to help teachers use software effectively in their classroom.

Technology in the College Search Process (T10C)

Loriann Macko

Email: LXLNCA@rit.edu

NTID/RIT

Robert Borden

Evon Black

Thursday, 6/26/2003 --10:00 AM

Location: LBJ [060] 2590

Strand: Using Technology to Support Learning

Type: Formal **Audience:** College

When seeking the right college, students need to ask themselves many questions. What school is a good fit for someone with my skill level? Where can I find the money to attend college? How can I gather the best information to assist with my decision of where to attend college? Who can offer me the best support services, and what ARE the best support services for me? Deaf and hard-of-hearing students have a number of valuable resources available to help them with the college search process. This presentation will discuss current resources and will focus on resources of particular interest to deaf and hard-of-hearing students. This information is valuable for anyone working closely with deaf/hard-of-hearing students at the secondary or postsecondary level.

The presentation will discuss:

- websites for college testing and preparation (ACT, College Boards, etc.) and financial information (FAFSA, scholarship sites)
 - using the web to search for colleges/universities that offer the preferred majors/academics
 - using email to communicate and gather information from college representatives
 - using IM to converse with college Admissions counselors
 - how to inquire about the needed services/technology that a school may offer for deaf/hard-of-hearing students
-

Distance Learning Science Project for Deaf and Hard-of-Hearing Students (T10D)

Jennifer Powers

Email: jpowers1970@hotmail.com

Marie H. Katzenbach School for the Deaf

Barbara Strassman

Thursday, 6/26/2003 --10:00 AM

Location: LBJ [060] 3237

Strand: Online and Distance Education

Type: Formal **Audience:** All

The Distance Learning Science Project for Deaf and Hard-of-Hearing Students is a three-year project funded by the National Science Foundation, the goal of which is to increase deaf and hard-of-hearing students' interest and aptitude in science. Participating in the project are 65 students from across New Jersey, ranging in age from 5 to 14, and 12 teachers of the deaf. The eight participating classrooms were provided with a variety of technologies meant to enhance science teaching and learning. Interactive television (ITV) technology is used to engage the students in each aspect of the scientific process. In addition to the ITV science classes, students participate each

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year in a summer science camp.

Two clear benefits of the project have been:

1. An increase in communication and socialization among participating deaf students.
2. The use of classroom technology by teachers to enhance their curriculum.

Attendees at this presentation will learn:

1. Effective ways to utilize ITV technology for virtual visits, socialization, and communication.
2. Ways to integrate technology, such as laptop computers, digital cameras (still and video), and iMovie software to enhance teaching and learning.
3. Issues associated with the use of ITV technology with deaf and hard-of-hearing students.

e-Learning Renaissance: What It Takes (T11A)

Earl Parks
Gallaudet University
Cynthia King
Elwyn Canning

Email: earl.parks@gallaudet.edu

Thursday, 6/26/2003 --11:00 AM

Location: LBJ [060] PANARA THEATRE

Strand: Online and Distance Education

Type: Formal

Audience: College

An e-Learning Renaissance relies on two important ingredients - faculty training/support and online learning systems. Ongoing faculty training and development in areas including infusing technology into the curriculum is accomplished in several ways: through collaboration with e-learning facilitators and e-curriculum projects. Online learning systems that are dependable, flexible, and easy to use are critical for accelerated adoption of e-learning elements in the curriculum.

At Gallaudet, the traditional model for academic technology support for faculty/staff has been modified from a "centralized" set of staff members who excelled in one or more specific areas to a more pragmatic approach, where e-learning facilitators are assigned to specific academic departments and provide technology training and support. Ideally, e-learning facilitators have a wide range of technology skills to be able to support faculty and student e-learning. This model has seen an increase in faculty enthusiasm as well as the number of web-enhanced courses.

Since 2000, competitive in-house e-curriculum grants have been awarded to 20-30 faculty members each summer. Project goals and compensation options have varied, depending on what the priorities were for that year. In 2002, the objective was to increase technology use/skills of first-year students. The majority of the faculty group participated in an intensive training experience while others opted to focus on developing specific curricular components at their own time and pace with support from e-learning facilitators.

Gallaudet's GDOC (Gallaudet Dynamic Online Collaboration) tools, including Blackboard and Domino course management systems, have seen a tremendous jump in faculty adoption and use in recent years. A wide range of innovative content is utilized, including (but not limited to): syllabi, weekly plans, assignments and online grade book, streaming video, and course cartridges.

This combination has served as a very successful model, as evidenced by the increase in the number of faculty utilizing online tools for classroom instruction and student learning, as well as evaluation results of first-year students. In this session, participants will have an opportunity to see samples of online materials developed, as well as several video anecdotes as told by faculty.

The Use of Web-Based Technology in Teaching Reading and Writing to Deaf Students (T11B)**Rose Marie Toscano**
NTID/RIT**Email:** rmtnge@rit.edu**Thursday, 6/26/2003 --11:00 AM****Location: LBJ [060] 1510****Strand:** Using Technology to Support Learning**Type:** Formal**Audience:** All

The Reading/Writing Tutor, part of a comprehensive web-based course building/ management tool (IdeaTools), has been in development for the past several years and used for the delivery of two required RIT courses, Writing and Literature I and II. The Reading Tutor implements strategies to enhance student comprehension of texts. A set of annotation tools enables the instructor to insert hypertext notes that appear when students click on the highlighted texts. These notes serve to alert students to textual elements they need to attend to, provide historical or cultural information necessary to understand the text, or contain analytical questions that prompt students to reflect on what they are reading. Thus, the notes play the role of a reading coach, helping weak readers learn techniques that good readers employ intuitively, but which less skilled readers often do not use.

The Writing component of the web-based course delivery helps students develop editing and proofreading skills. The Writing Tutor provides the instructor with tools to mark up assignments submitted by students. A "sticky note" tool can be used to insert margin notes and comments about content and organization. An "inline comment" tool allows the instructor to correct student sentence level text and insert direct comments. Further, the "inline comment" function allows the instructor to highlight a writing/grammatical error (e.g. subject/verb agreement) and to direct students to an a) explanation of the mistake, b) examples of how this mistake could be corrected, c) practice exercises that focus on the grammatical misunderstanding. The current Writing Tutor consists of a database of 18 most common writing errors with two sets of exercises.

Finally, another component of the web-based instructional delivery system is the discussion board forum where students debate and respond to each other's interpretation of texts. This public forum enables students to explore the different meanings possible in literary texts, view models of strong and not so strong writing about texts, and expand their understandings of multiple readings and interpretations. For the instructor, this tool provides invaluable information on what students actually comprehend and what areas should be emphasized in classroom instruction or individual tutoring sessions. Because of the conversational nature of this type of writing, students are able to venture beyond their safety zone in expressing their ideas.

How NTID's Office of Admissions Reaches Prospective Students Using Available Technology (T11C)**Jillian Sinclair**
NTID/RIT**Email:** jlsnca@rit.edu

John Reid

Thursday, 6/26/2003 --11:00 AM**Location: LBJ [060] 2590****Strand:** Using Technology to Support Learning**Type:** Formal**Audience:** All

NTID's Office of Admissions has adjusted to recent technological advancements to make admissions counselors' jobs more efficient and quicker. Admissions personnel use technology not only to process applications but also to help students with unanswered questions or to obtain more information. Counselors use different resources to reach out to students nationwide, since budgets and time often don't allow counselors to visit different schools. Initial discussions with applicants, VR counselors, parents, and teachers all can be accomplished through

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videoconferences/NetMeetings using webcam. Counselors use other tools like websites to locate schools (both mainstream and residential schools) where deaf/hard-of-hearing students are placed and laptops/LCD projectors with PowerPoint for recruitment purposes. NTID Admissions Counselors are learning to use the new software program, "OnBase," which allow applications to be scanned and placed on the computer. When callers want to know about their status, information is available from the computer. It generates quicker responses for the counselors. Prospective students who are interested in making a connection with NTID Admissions use technology like website homepage to gather information about RIT/NTID programs and contact us using AIM (NTIDatRIT) with questions. The CD is a wonderful tool for applicants to learn what RIT/NTID has to offer for them. Both Admissions Counselors and applicants can get immediate responses at the click of a button!

Learning to Learn American Sign Language (T11D)

Rico Peterson

Email: rxpnss@rit.edu

NTID/RIT

Christine Monikowski

Leslie Greer

Thursday, 6/26/2003 --11:00 AM

Location: LBJ [060] 3237

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal

Audience: All

Communication plays an essential role in bringing together Deaf and hearing people. Ready access to fundamental information about learning ASL has relevance; prospective signers need an opportunity to explore different strategies for learning ASL. By sampling a variety of alternative approaches to learning, students will develop metacognitive abilities that allow them to become both more effective and more independent learners. The objective of our project is more to discover "how to learn" than "what to learn".

The introductory level of this project makes it ideal for any student interested in learning about ASL. Because ASL is a visual-gestural language, and because many ASL teachers are Deaf, it is common for the use of voice to be prohibited in the classroom. While this can accelerate receptive skill development, it can also inhibit students from employing the many strategies that students in other foreign languages use to good advantage.

We are presenting a series of modules that address different aspects of language learning: Learning Strategies, Second Language Acquisition, English/ASL Comparisons, Language and Culture, Phonology, Morphology, and The Ecology of Learning. Each module includes a variety of media (written text, videoclips, pictures, hyperlinks, etc.). The structure of each module is similar. There is a pre-test, a lecture/presentation, examples in ASL and English, several short self-evaluations, and a post-test. Students progress through the modules at their own pace; in fact, students need not proceed in any order nor do they need to complete all the modules (although the naïve student would be well-advised to proceed through all modules).

By studying learning strategies in adults, deaf culture, comparative language features of English and ASL, phonology, and limitations of the language classroom, this project hopes to teach students how to be more effective and independent learners.

Using Online Courses to Create an Electronic Environment to Support Art and Graphic Instruction in the Classroom (T2A)

Paula Grcevic
NTID/RIT
Simon Ting

Email: PAGNDA@RIT.EDU

Thursday, 6/26/2003 --2:00 PM
Location: LBJ [060] PANARA THEATRE

Strand: Using Technology to Support Learning
Type: Formal **Audience:** College

The presenters have developed six Web-based courses used to support art and graphic instruction in the classroom. The courses are being used by the lead presenter in teaching her art and graphic design courses in the department of Art and Computer Design at the National Technical Institute for the Deaf (NTID). The presentation will emphasize use of Web technology to create an electronic environment to support classroom teaching. The presenters will discuss issues such as structure of the syllabi, class assignments and activities, vocabulary development, feedback to student homework journal/sketchbook assignments, recordkeeping, and online grade book. Visual aids/examples are provided for students to assist them with class work and homework. Also students have learned how to scan and upload their sketches for approval before doing their final projects. The presenters will discuss the pros and cons of Web-based instruction versus traditional methods of teaching. Part of the presentation will introduce IdeaTools, a combined Web authoring and course management system used by the presenters to develop their courses.

Use of Instructional Technologies to Train International Teachers of English to Deaf Students (T2B)

Gerald Berent
NTID/RIT
E. William Clymer

Email: gpbnci@rit.edu

Thursday, 6/26/2003 --2:00 PM
Location: LBJ [060] 1510

Strand: In-Service/Pre-Service Strategies
Type: Formal **Audience:** All

The presenters will discuss the planning, development, delivery, and evaluation of a weeklong teacher-training workshop for teachers of English to deaf and hard-of-hearing students at postsecondary institutions in Russia, the Czech Republic, Japan, and the Philippines. Workshop presenters used a combination of technological resources and traditional teacher-training techniques to familiarize workshop participants with best practices in teaching English. Given the unique challenges of teaching deaf and hard-of-hearing students in non-English-speaking countries, the workshop sessions reviewed state-of-the-art methods and materials both for teaching English as a second language generally and for teaching English to deaf and hard-of-hearing students specifically.

This professional development activity for university professors took advantage of lecture, print, electronic, video, and multimedia technologies. Participants accessed workshop pre-readings via the World Wide Web (WWW) from their home countries. During the workshop, presenters used combinations of lecture and discussion, PowerPoint presentation, examination of English teaching materials via the WWW, and videotapes of NTID English teachers in action. Workshop participants were also given hands-on practice with individual laptop computers in accessing English teaching resources on the WWW. A post-workshop CD-ROM containing all workshop materials to be used for international dissemination has also been produced. Participants' high ratings of the workshop reveal that the combination of technological and traditional resources contributes to

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highly successful teacher-training experiences. This workshop was supported by PEN-International, which is funded by a grant to NTID from The Nippon Foundation of Japan.

Teleconferencing: "Meeting" the Needs of Prospective Students (T2C)

Kathleen Garlinghouse
NTID/RIT
Denise Wellin

Email: ksgnvd@rit.edu

Thursday, 6/26/2003 --2:00 PM

Location: LBJ [060] 2590

Strand: Using Technology to Support Learning

Type: Formal **Audience:** All

This session, intended for teachers and guidance counselors at secondary schools, discusses the many advantages of using teleconferencing as part of the recruitment process. At NTID, teleconferencing allows admissions counselors to give presentations about NTID's academic programs to secondary schools nationwide. Kathleen Garlinghouse, NTID admissions counselor, will discuss her experiences using teleconferencing and will demonstrate steps on how to establish contacts and transmit appropriate information to prospective students.

Web-Based Bilingual Instruction for Deaf Children (T2D)

Vicki Hanson
IBM T.J. Watson Research Center
Sonia Martinez
Susan Crayne

Email: vlh@watson.ibm.com

Thursday, 6/26/2003 --2:00 PM

Location: LBJ [060] 3237

Strand: Online and Distance Education

Type: Formal **Audience:** K-12

In groundbreaking research begun in 1986, the *HandsOn* project sought to provide schools with computer technology to support bilingual/bicultural programs for deaf students (Hanson & Padden, 1989, 1990). *HandsOn* 20 was the first attempt using computer technology to deal with the question of how the two languages should be systematically combined as part of a language instruction program for these students. Using laser disc technology, *HandsOn* showed real people signing ASL, combining ASL with English in a variety of learning contexts.

Field-tested in schools in the United States and Canada, the software spawned several related projects for using ASL in education and its basic principles were supported in research that followed over the next several years. Despite the appeal of the full-screen presentation of signing in that work, videodisc technology proved to be not only dated, but also limiting. In particular, it was limited in terms of the audience it could reach because it required distribution of videodiscs to any potential users. It was with this background in mind that we undertook to update *HandsOn*, creating a version that could be used over the Web.

The conference presentation will discuss the updated *HandsOn* and include a demonstration of the software.

Using NTID IdeaTools Website for Teaching About Deaf Art and Deaf Artists (T3A)

Patti Durr
 NTID/RIT
 Simon Ting

Email: paddhd@rit.edu

Thursday, 6/26/2003 --3:00 PM

Location: LBJ [060] PANARA THEATRE

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal **Audience:** College

This winter, Patti Durr began teaching the course and with Simon Ting developed a strong webpage for the course. The website includes:

- Slide images of the artists' works
- Bios of the artists
- Links to other related sites
- Articles about Deaf art and Deaf artists
- Videoclips about the artists and their work
- Interactive homeworks with direct links

While the site is restricted to class members only in order to ensure copyright protection to the artists, the website will be presented in this session to familiarize the participants with what IdeaTools is capable of and to serve as a model on how to design and organize course materials on websites.

Preferred Instructional Delivery Methods of Deaf and Hard-of-Hearing Remote, Online Learners (T3B)

James Mallory
 NTID/RIT
 Gary Long

Email: jrmnet@rit.edu

Thursday, 6/26/2003 --3:00 PM

Location: LBJ [060] 1510

Strand: Online and Distance Education

Type: Formal **Audience:** All

Some faculty within the National Technical Institute for the Deaf (NTID) at Rochester Institute of Technology (RIT) have been using varied technologies for delivering and interacting with both on-campus and Distance (On-Line) Learning classes for the past six years. Some of the technologies used include groupware (electronic conferencing), VHS tape and web-streamed video, web-based instruction with text and graphics, digital video conferencing, multimedia desktop capturing simulation, sample source code and executable programming examples. For the past two years, the authors have collected data from all RIT deaf, hearing, and hard-of-hearing students who participated in courses both on campus and via distance learning in order to better understand the relative effectiveness of these technologies from the perspective of the student. Three separate surveys were implemented: 1. All RIT deaf and hard-of-hearing online learners. 2. All RIT online learners. 3. All ACT programming students, including traditional on-campus, distance, and hybrid learning.

In this session, we will present the Interactive technologies used to deliver the instructional material and the results of student-centered ratings from a questionnaire regarding their relative effectiveness for delivery of instruction for our students.

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Connecting Deaf Web Sites and ASL Classes (T3C)

Joan Naturale
NTID/RIT
Barbara Ray Holcomb

Email: jxnwml@rit.edu

Thursday, 6/26/2003 --3:00 PM
Location: LBJ [060] 2590

Strand: Online and Distance Education
Type: Formal **Audience:** All

The NTID Reference Librarian created a Deaf Web site guide to supplement and support the curriculum at NTID. Since the site is comprehensive, it can be overwhelming to explore for the novice user of the World Wide Web. In order to assist students with navigating the deaf web site, a scavenger hunt activity (available on-line) was created. After completing 35 questions, the students become more familiar and comfortable with the site. They can browse topics that pique their interest -- such as Deaf Artists or multicultural Deaf groups -- which encourages further research efforts and use of the library's resources. A sample of 5-8 questions will be shown during the presentation.

Join Together: A Virtual Professional Development School & Community of Learners for Deaf Education (T3D)

Harold Johnson
Kent State University
Karen Dilka
Donna Mertens

Email: hjohnson@kent.edu

Thursday, 6/26/2003 --3:00 PM
Location: LBJ [060] 3237

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

The primary problem of deafness is not too little hearing, but too much interpersonal and informational isolation. The primary problem of deaf education is not too little effort, but too much difficulty in achieving "critical mass" of needed expertise, resources, and meaningful learning opportunities. The primary problem of deaf education teacher preparation is not too little knowledge, but too much of a "gap" in the preparation of teachers and the realities of teaching. "Join Together: A Virtual Professional Development School & Community of Learners for Deaf Education" represents a four-year collaborative effort by the nation's major deafness-related organizations (i.e., ACE-D/HH, ASDC, AGBell, CAID, CEASD, CED & NAD) to enhance both the preparation of teachers and the education of deaf/hard-of-hearing (d/hh) students via the effective and innovative use of computer-based, Internet-linked technologies and resources. This effort has resulted in a wide array of Web-based resources, technologies, and collaborative activities. This presentation will focus upon the use of H323 video conferencing technologies to link the nation's most innovative and effective teachers of d/hh students with: a) one another; b) novice deaf education teachers; and c) deaf education teacher preparation programs. The technology will also be used to link d/hh students and their families with: a) one another; b) d/hh individuals at postsecondary settings; and c) d/hh adults. The presentation will provide information concerning how individuals can become involved in the "Join Together:..." effort and how they can directly benefit from the rapidly expanding array of collaborative partnerships/agreements that are being established for deaf education.

Information and Advisory Services Provided to Charles University Students (T01P)

Hana Urychova
Charles University
 Daniela Janakova

Email: hana.urychova@ruk.cuni.cz

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster **Audience:** College

This poster session will focus on the information and advisory services provided to students at Charles University, Prague, Czech Republic. An overview of the variety and types of services offered by the Information and Advisory Center to other target groups will be displayed. The organizational structure of university advisory services will be described, with particular attention given to the services offered to students with special needs. A CD will be used to show the implementation of selected services.

Roles and Goals: The Impact of Role Models and Expectations on the Success of Individuals Who are Deaf and Hard of Hearing. NETAC introduces a Career Web site and Video Series! (T02P)

Pat Billies
NTID/RIT
 Regina Kiperman

Email: pabnca@rit.edu

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Online and Distance Education

Type: Poster **Audience:** All

Strong role models have a major influence in the aspirations of young students who are deaf and hard of hearing.

NETAC and PEPNet will present their new Website and Video Series, "Achieving Goals! Career Stories of Individuals who are Deaf and Hard of Hearing," and panelists will consider the impact that these stories will have in the lives of 45,000 students who are deaf and hard of hearing. Attendees will view the Web site and several video segments that document the lives of individuals, highlighting their experiences growing up as well as factors that made them successful in the workplace. This poster session will present anecdotal stories regarding significant factors in promoting the success of professionals.

About the Web site:

The Web site attractively displays photos, names, position descriptions, employers, and comments from scores of individuals who are deaf and hard of hearing from all walks of life (<http://netac.rit.edu/goals/>).

About the Videotape Series:

These mini-documentaries showcase outstanding role models whose work is visually interesting with an emphasis on contributions made to society. NETAC is producing these videotapes to assist students in becoming aware of career opportunities. The videotapes will be a resource for secondary schools, colleges, universities, and proprietary programs to provide mentorship to 45,000 students who are deaf and hard of hearing. The videotapes will be distributed nationally through the PEPNet Resource Center, www.pepnet.org. There will be a nominal charge for shipping and handling.

The presentation will:

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- Examine environmental and attitudinal barriers that impede deaf and hard of hearing individuals from acquiring jobs.
- Motivate students to become active participants in determining their own futures.
- Provide powerful role models whose ambition and drive allowed them to overcome great obstacles on the way to professional success.
- Describe how much can be achieved through motivation, hard work, education, and goal setting.
- Inspire students to "be the first" individual who is deaf or hard of hearing to enter a given profession.

Others who may benefit from experiencing this series include counselors, teachers of students who are deaf and hard-of-hearing, parents, vocational rehabilitation counselors, and beginning students preparing for careers in deaf education.

NETAC, the Northeast Technical Assistance Center, is located at the National Technical Institute for the Deaf, a college of Rochester Institute of Technology. The Postsecondary Education Programs Network (PEPNet) is the national collaboration of the four Regional Postsecondary Education Centers for Individuals who are Deaf and Hard of Hearing. The goal of PEPNet is to assist postsecondary institutions across the nation to attract and effectively serve individuals who are deaf and hard of hearing. The Centers are supported by contracts with the U.S. Department of Education, Office of Special Education and Rehabilitative Services.

Interactive CD-ROM for Speechreading: The New DAVID (T03P)

Linda Bryant
NTID/RIT
Catherine Clark

Email: LMBNCA@rit.edu

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster

Audience: College

Past experience with DAVID computer assisted self-instruction has proven the benefit of computer-assisted speechreading training using training materials recorded on videodisc. However, production of practice materials required large resource allocations. Advancements in digital, video technology make it possible for new paradigms in communication training lessons using computer-supported video. The program has been proven effective and now has been revised and placed on CD-ROM (DAVID IV). This session will allow participants to experience the features of this updated program.

Administrative Support Technology (AST) Sign Vocabulary CD-ROM Project: A Self-Instructional Sign Language Resource for Faculty, Staff, & Students (T04P)

Frank Caccamise
NTID/RIT
Camille Aidala
Mary Lou Basile
Vincent Ortolani

Email: fccncr@rit.edu

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: In-Service/Pre-Service Strategies

Type: Poster

Audience: All

This project applied the basic principles and processes of the National Technical Institute for the Deaf (NTID) Technical Signs Project (TSP) and the NTID Microsoft Office ASL Project to the development of a sign language self-instructional material for Administrative Support Technology (AST) terminology. The material developed, a CD-ROM, may be used by instructional faculty, staff, and students. Consistent with the TSP, the process followed in this AST project was designed to help ensure collection and documentation of AST terminology and signs that accurately reflect current usage by skilled signers' knowledge about AST. The first step in this process was the collection of AST terminology currently used by NTID faculty/staff for six AST areas: Computer, Database, Desktop Publishing, Keyboarding, Word Processing, and Office Terms. Subsequently, the following was done for these six terminology lists: (1) existing sign language materials were reviewed for signs currently recorded for these terms, and (2) NTID faculty/staff who are both skilled signers and knowledgeable about AST terminology were interviewed in groups of four to eight for signs they currently use and their use of signs in current sign language materials was discussed. Based on the results of this process, terminology lists were revised and signs selected to reflect current usage. The selected signs were videotaped, reviewed for clarity and accuracy, and then digitized and provided in mpeg1 format to the CD-ROM programmer. The CD-ROM format used allows both PC and Mac users random access to the recorded signs and provides the option to view signs produced at a normal rate and in slow motion. Results of an evaluation of this AST CD-ROM by NTID faculty/staff and students will be used to assist in development of future sign language instructional materials using CD-ROM technology.

Improving Literacy With Technology Tools (T05P)

Kay Clausen
Schaumburg School District #54
 Joann Kort

Email: KayClausen@sd54.k12.il.us

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning
Type: Poster **Audience:** K-12

This poster session will demonstrate computer programs that have been used with a variety of school populations in K-8th grade settings, including deaf and hard-of-hearing students in self-contained and mainstreamed classrooms, learning disabled students, speech and language impaired students, and multiply involved students in self-contained and mainstreamed situations. The specific features or uses to be demonstrated for the computer programs are as follows:

- Boardmaker: Participants will learn how the Boardmaker and the Sign Addendums have been used to develop materials for the Developmental Sign Language Curriculum used in regular education classrooms. Also, see how this program has been used to target specific vocabulary related to the curriculum as well as visuals for the classroom related to scheduling, behavior strategies, and sequencing activities.
- Intellitools: This alternative keyboard with overlays will be demonstrated as it is used to help children transition to written language. Overlays that incorporate picture symbols, text, and sign will be shown. Various applications to a self-contained setting will be highlighted.
- Picture It & Pix Writer: This will be demonstrated as a tool that helps children with their literacy development. The picture-supported text in a variety of genres will be illustrated, i.e. social stories, narratives, experiential stories and how-to-sequences.
- Co:Writer: This word prediction program supports the struggling writer and reader. Its application in the classroom will be discussed as the uses in various curriculum areas will be illustrated, i.e. language arts, social studies, and science.

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The "Gambo Show": An Instructional Multimedia Application for Hungarian Deaf Students (T06P)

Sandor Gabor
The Primary School for the Deaf, Kaposvar

Email: titkar@deafkvar.hu

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning
Type: Poster **Audience:** K-12

Hungarian deaf students, like deaf students around the world, need access to enriched educational experiences that are available to their hearing counterparts. The development of the "Gambo Show" is a first effort to provide deaf students with a multimedia experience that provides them with an opportunity to explore visual stimuli, vocabulary development exercises, natural science lessons, along with other instructional experiences. A gallery section provides students art samples of Hungarian and other classic artists. The reading materials relate traditional stories in a manner students can readily understand. The application has been field tested with students and the results are very promising. Students could easily navigate the lessons and experiences; and could change the topics and presentations as they wished. Handouts.

Assessing the Effectiveness of a Web-Supported Course for Deaf College-Aged Students (T07P)

Linda Gottermeier
NTID/RIT

Email: lggnc@rit.edu

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Strategies for Assessing the Impact of Technology in Teaching/Learning Process
Type: Poster **Audience:** All

Organizational Communication and the Deaf Employee has been taught with an accompanying website for the last two academic years. The website contains Power Point presentations with outlines of lectures and selected readings to enhance teaching and learning. Surveys given to students in the 2000-2001 Academic Year, indicate that they typically access the site one to 15 times in a 10-week period (n=9, Winter Quarter, 2000 and n=9, Spring Quarter, 2001). However, with the goal of providing better and more effective instruction, does this site accomplish this task? To this end, data will be summarized from the following:

1. National Technical Institute for the Deaf Student Rating Survey for Classroom Instruction.
Students are asked to respond to the following questions using a five-point Likert scale ranging from "strongly agree" to "strongly disagree":

The course Website helped me to understand the ideas and concepts in the course.

The course Website helped me to get a better grade in this course.

It was helpful having course materials on the Website.

I understood the teacher when he/she was showing us things on the Website.

2. Fifteen item pre-post test relative to course content.

Evidence from these sources will help to develop a better understanding if the site does indeed help to provide better instruction. Such documentation may help other instructors to evaluate the effectiveness of their websites to support student learning.

Production of Educational Media to be Consonant with Deaf Culture in Thailand (T08P)

Jarinee Iochawna
Ratchasuda College, Mahidol University

Email: rsjsi@mahido.ac.th

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Online and Distance Education
Type: Poster **Audience:** College

Currently, Ratchasuda College, Mahidol University is the one of the most important centers for the development of educational media and a center for access technology for the Deaf and the blind in Thailand (Kasomsorayuth, 2001). The College provides training so students will have the skills and expertise to produce educational media for use in schools for the deaf. The College also has a role in as a training center for personnel in special education and serving as a resource center for educational media for the Deaf.

One of the first sets of educational media products developed at Tatchasuda College was "Computers for Deaf People". This CD multimedia package was developed with the communication needs of the Deaf students in mind and is consistent with Deaf culture. This instructional package can be used by Deaf students independently.

HRH Princess Mahachakri Sirindhorn, in a speech at the opening of a conference on Communication Technology for Persons with Disabilities in 1996, stated that the computer has an important role in the education and daily activities of Deaf people. She expressed her wish for Deaf people to use computers in a variety of situations. Prof. Poonpit Amartyakul, Director of Tatchasuda College at the time, informed the Princess about the challenges facing Deaf people. HRH Princess Mahachakri Sirindhorn kindly donated money to Ratchasuda College in order to develop sign language resources related to computer technology. The College cooperated with Nectec (National Electronics and Computer Technology Center) to produce a CD containing signs related to computer vocabulary. The final product has been distributed to schools throughout Thailand in order to prepare Deaf students to study computer technology.

TecEds Project Provides Online Databases and Training Materials for Integrating Technology (T09P)

Phil Mackall
Laurent Clerc National Deaf Education Center

Email: philip.mackall@gallaudet.edu

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: In-Service/Pre-Service Strategies
Type: Poster **Audience:** K-12

The TecEds project (<http://clerccenter.gallaudet.edu/TecEds/index.html>), begun in January 2000, has created several useful online tools that can help teachers and staff working with deaf and hard-of-hearing teachers/staff as they integrate technology into their interactions with their students. TecEds Reviews (<http://clerccenter2.gallaudet.edu/stg/index.html>) is an online searchable software evaluation database containing descriptions of the software and evaluations by teachers/staff across the nation who have used that software with their students. There is also a section on accessibility and a list of software that has been made accessible through captions or sign language components. TecEds Activities (<http://clerccenter2.gallaudet.edu/tecEds/activity/>) is an online searchable database containing activities that incorporate technology use with deaf students. The database contains descriptions of the activity, links to related Websites, and electronic copies of worksheets, presentations, and projects. Users are encouraged to submit entries to both of these databases. The TecEds Training Materials

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(<http://clerccenter.gallaudet.edu/TecEds/training/materials/>) contain agendas, PowerPoint presentations, handouts, projects, etc., that were used in actual training at the Clerc Center. Teachers and staff are encouraged to use these materials in providing training for themselves and to their peers. This poster session will demonstrate these three tools to participants through live Internet interactions.

Varied Multimedia Instructional Approaches for Deaf and Hard-of-Hearing Online Learners (T10P)

James Mallory
NTID/RIT
Simon Ting
Rick Rizzo
Alan Cutcliffe

Email: jrmnet@rit.edu

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

NTID's Applied Computer Technology Department, in conjunction with developers and technicians in NTID's instructional and technical departments, has successfully implemented a variety of online, multimedia instructional units for use by deaf and hard-of-hearing learners in its Visual Basic and C++ computer programming courses. Instructional methods used include: using RealPlayer with computer screen sequence captures, video movies using audio, sign language, and captioning to stream instruction to the student's desktop; using Windows Media player with screen captures and text description inserted into the program using Java script; using Macromedia to convert story boards to illustrate computer syntax, memory contents, sequence of execution and instructor's text comments; converting previously developed VHS tapes which were converted to a digital format and posted on the web. The audience using these materials includes deaf, hearing, and hard-of-hearing traditional on-campus, remote and blended learners as well as remote hearing academic and corporate learners. Challenges with software and delivery of instruction through both high speed and dial-up connections will be discussed. Assessment outcomes from one year of teaching these courses will be shared with the audience, as well as positive and negative experiences from both a student and faculty perspective.

Integrating Library Resources into an IdeaTools Academic Writing Course (T11P)

Joan Naturale
NTID/RIT
Pamela Conley

Email: jxnwml@rit.edu

Thursday, 6/26/2003 --4:30 PM

Location: LBJ [060] 2nd FLOOR STREET

Strand: Online and Distance Education

Type: Poster

Audience: College

In order to realize the goal of all students gaining library skills needed for the demands of their writing classes, the librarian and writing instructor created a model of integrated instruction that provides opportunities for students to expand their knowledge of library resources, meets students' pacing needs, reinforces integration of library skills incorporated into writing assignments, supports students' acquisition of information literacy skills,

and uses technology to make instruction visually accessible which address communication and language diversities. The librarian and instructor chose to evaluate and adapt the existing online information literacy tutorial called Virgil via <http://www.sunywcc.edu/library/tutorial/virgil/index11.htm> to review modules such as "Choosing a Topic," "Developing a Research Question," and "Using Keywords Effectively". The modules were presented over two quarters. In addition, the team incorporated course-specific library resources and services into IdeaTools to ensure students' research success. An evaluation sheet was developed to determine the success of the team's approach. The results of student feedback will be shared.

The Interpreter/Captionist: Enhancing Support in English and ASL with Technology (T12P)

Valorie Smith-Pethybridge
Miami-Dade Community College

Email: vsmithpe@mdcc.edu

Thursday, 6/26/2003 --4:30 PM
Location: LBJ [060] 2nd FLOOR STREET

Strand: Using Technology to Support Learning
Type: Poster **Audience:** College

Many Deaf college students are readily provided access to classroom information with sign language interpreters. Those who do not sign (late-deafened or orally educated) can now be serviced by real-time captioning. We began by contracting with an agency to provide the service. As real-time captioning became more visible on campus, Deaf students who had traditionally used sign language interpreters began to request it. We decided to set up an 'in-house' service and make it available to any Deaf student who requested it.

We researched some current real-time captioning systems, decided on the technology to use, developed some criteria that would fit our students' needs, and trained our sign language interpreters to provide the service.

We have found that students' access to classroom information, classroom discourse, socialization with teachers and peers, and access to printed English has been greatly enhanced by adding interpreters who are trained in providing real-time captioning.

A Multilevel Approach to an Integrated Curriculum in Engineering for Deaf and Hard-of-Hearing Students at Bauman Moscow State Technical University (T13P)

Alexander Stanevsky
Bauman Moscow State Technical University

Email: stan@mx.bmstu.ru

Friday, 6/27/2003 --11:00 AM
Location: LBJ [060] 2590

Strand: In-Service/Pre-Service Strategies
Type: Formal **Audience:** All

The Center for Deaf Students at Bauman Moscow State Technical University offers deaf postsecondary students a range of educational opportunities; from readiness and preliminary training through master's level and post-graduate study. Deaf students, upon arrival at BMSTU, begin the process of moving towards the goal of integration with hearing students at the university by the time they pursue bachelor and master level degrees. The Bauman model of education reflects state-of-the-art educational theory, modern rehabilitation services and training in information science. This presentation will review the implementation of the Bauman model and will outline program enhancements as a result of partnering with PEN-International.

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In-Service Training Success Story: 20 Years in the Making (F10A)

Robert Stern
RMTC: D/HH
Shelley Popson

Email: stern_r@firm.edu

Friday, 6/27/2003 --10:00 AM

Location: LBJ [060] PANARA THEATRE

Strand: In-Service/Pre-Service Strategies

Type: Formal

Audience: All

The Resource Materials & Technology Center for the Deaf/Hard of Hearing (RMTC: D/HH) has been working with teachers serving students with hearing loss for more than 20 years. After years of interaction, training and consultation with teachers, a successful model in developing teacher ability to integrate technology into the curriculum has been established. Presenters will share their professional development strategies, planning methods, and evaluation procedures. Information related to one of our most requested training topics, "Teacher Tools," will be integrated into the theme of this presentation. Participants will learn about some of the technology tools pre-service teachers should know about prior to entering their first classroom based on what in-service teachers are finding to be valuable assets to their practice in-field. Participants will learn methods used to evaluate teacher and student needs and how a plan is established to serve the teacher and encourage their participation in projects and sharing of practices. In recent years, RMTC: D/HH staff has provided workshops for pre-service teachers in addition to in-service teachers. Staff has also been requested to make presentations and share their strategies and techniques nationally at conferences and through the Deafed.net online portal.

Digital Video Applications for Online and Distance Learning in Deaf Education (F10B)

Jim Dellon
Gallaudet University
Cindy King
Jeff Murray

Email: jim.dellon@gallaudet.edu

Friday, 6/27/2003 --10:00 AM

Location: LBJ [060] 1510

Strand: Online and Distance Education

Type: Formal

Audience: All

Deaf education is an inherently visual learning environment. Gallaudet University's Academic Technology units are developing and supporting streaming media and videoconferencing technologies to provide online course materials and applications for distance learning and institutional support. These include digital video clips to supplement classroom teaching, edited excerpts from external sources, specially produced video material highlighting cultural events, and live videoconferencing between institutions and student groups for course, professional development, administrative, and student services applications. Videoconferencing has been used to link students at deaf schools for joint peer-to-peer learning, as well as special applications such as career placement interviews.

On-line video applications are integrated with curriculum materials using on-line learning tools such as Blackboard. Gallaudet employs several of the popular streaming formats such as RealMedia, Windows Media and QuickTime, as well as a very high quality MPEG-2 VBrick system for use in optimized broadband network environments.

Because of the qualitative and technical requirements of sign language, high resolution and captioning are needed to ensure successful digital video applications. Bandwidth issues must be considered, and Internet 2

quality interconnections are preferred. While support for captioning in streaming media is improving, it is still not adequately supported in the h.320 and h.323 videoconference standards.

Shared Reading Project: Chapter by Chapter--The Thinking Reader (F10C)

Mei Yeh-Kennedy
Center for Applied Special Technology
 Lori Lutz

Email: mkennedy@cast.org

Friday, 6/27/2003 --10:00 AM

Location: LBJ [060] 2590

Strand: Assessing the Impact of Technology in Teaching/Learning Process

Type: Formal

Audience: K-12

The Center for Applied Special Technology (CAST) and Laurent Clerc National Deaf Education Center are implementing a two-year collaboration to provide reading support, using technology applications, for struggling deaf readers in grades 6 to 8. CAST is a nonprofit organization, specializing in developing and using Universal Learning Editions, technology-based applications, and materials for students with physical and learning disabilities. CAST and Clerc Center are working together to explore the adaptation of its technology tools and materials to support older deaf students' reading development. The Thinking Reader, one of the CAST's technology-integrated reading approaches, will be adapted and pilot tested with deaf students in grades 6 to 8.

The presentation will focus on describing the application of CAST's Thinking Reader, a computer-based environment to support reading development, with Deaf and hard-of-hearing students. The digital approach to reading entails scaffolding supports for books digitized for viewing electronically. The presentation will describe the Thinking Reader philosophy, the modification of this approach to support learning through English and Sign Language, and the preliminary results of the use of the Thinking Reader in the classroom.

CART in the Classroom: Meeting the Communication Needs of Students Requires an Individual Approach (F10D)

Duane Smith
National Court Reporters Association

Email: pwacht@ncrahq.org

Friday, 6/27/2003 --10:00 AM

Location: LBJ [060] 3237

Strand: Using Technology to Support Learning

Type: Formal

Audience: All

More and more, Communication Access Realtime Translation (CART) is being used to ensure that students in the secondary and postsecondary settings can participate fully and effectively in the educational process. Nevertheless, how CART will be applied by the educational institution or used by the student will often depend on his or her age, reading level, and other key variables. The proposed paper, in addition to explaining some of the benefits of CART for both the student and the institution, will examine:

- How the secondary and postsecondary environments differ with respect to the use of CART.
- How CART can best be applied in both the secondary and postsecondary environments when taking into account the specific variables of each setting.
- How the students' communication access rights change based on the educational setting.
- How the need for CART and other assistive services is determined in the secondary and postsecondary environments.

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Meeting the communication access needs of a high school student with CART will clearly require a different approach than one used for meeting the communication access needs of a college student. By matching the advantages of CART to the needs of the individual in a specific educational environment, both the student and the institution can benefit.

PEPNet E-Learning Transition Project: Gates to Adventure! (F11A)

Debra Wilcox Hsu
Saint Paul College
Marcia Kolvitz
Patricia Billies

Email: debra.wilcox@saintpaul.edu

Friday, 6/27/2003 --11:00 AM

Location: LBJ [060] PANARA THEATRE

Strand: Using Technology to Support Learning

Type: Formal **Audience:** All

This presentation showcases the newly released PEPNet E-learning transition module, *Gates to Adventure!*, and introduces four additional modules currently in development. The PEPNet E-Learning Transition Project strives to improve national postsecondary attrition rates for learners who are deaf and hard of hearing by developing and disseminating E-learning transition curricula for use by secondary teachers, secondary students, and first-year college students who are deaf or hard of hearing. PEPNet E-learning modules are available at www.pepnet.org.

Gates to Adventure! is an asynchronous online module intended for students who are deaf and hard of hearing, ages 14-adult. The instructional goal of the training is to enhance students' understanding of skills needed for successful transition from secondary to postsecondary education. An adventure park theme is used as the visual treatment for the module. Students explore transition awareness content areas through interactive challenges in the adventure park. The module includes self-assessment sections with reports, which students may e-mail to themselves and their teachers or counselors.

Three additional modules are in development for secondary students and first-year college students to teach transition skills in greater depth in the areas of self-assessment, postsecondary options, access, accommodations, and essentials of college living. A fourth module, designed for secondary teachers, will include an online guide for using the PEPNet E-learning Transition modules in the classroom.

Digital Video Production for Deaf Students (F11B)

James DeBee
Western Pennsylvania School For The Deaf
Linda Burik
Amy Newland

Email: jdebee@wpsd.org

Friday, 6/27/2003 --11:00 AM

Location: LBJ [060] 1510

Strand: Using Technology to Support Learning

Type: Formal **Audience:** K-12

Digital Video Production is a field in which Deaf students can excel if the equipment they are using provides full accessibility to communication. The Western Pennsylvania School for the Deaf has designed a new high-tech

Digital Video Production Department to meet the specific needs of Deaf students. Through the use of robotic cameras, a visual communication system, and state-of-the-art digital editing systems, the students can develop, direct, produce and edit professional quality video projects independently. This equipment and a corresponding video production curriculum gives students the opportunity to be independent learners, and improve their communication skills, self-esteem, and leadership abilities while learning the valuable skills of video production. Students are taught how to work together as a crew to solve acting, scriptwriting, and technical production problems and how to critique their own and others' performances and projects. They also learn the appropriate profession-specific vocabulary to be used when discussing or producing television and film.

The presenter will describe the equipment used in video production for beginning and more experienced students in both live broadcast and post-production editing settings. A description of course objectives and activities for high school video production classes will be provided. A visual tour of the school's video production department will be given and samples of award-winning student video projects shown.

TabletPC - The New New Thing - Demonstration, and Implications in Deaf Education (F11C)

Donald Beil
NTID/RIT

Email: dhbndp@rit.edu

Friday, 6/27/2003 --11:00 AM
Location: LBJ [060] 2590

Strand: Using Technology to Support Learning
Type: Formal **Audience:** All

The TabletPC is a fully featured 'Windows' laptop, with an additional capability that allows you to write on it using a digital pen. The operating system includes a new notetaking application, Microsoft Journal, which makes the TabletPC work with the "simplicity of using a piece of paper and a pen." The TabletPC is available from a variety of hardware vendors, all running Microsoft Windows XP Tablet Edition.

TabletPCs are of particular note to those with an interest in notetaking for deaf and hard-of-hearing students because of the Journal application. Journal files can include handwriting, text, diagrams, formulas, etc. Journal supports color, meaning that portions of notes can be handwritten or highlighted in color, and photographs and other images can be included in Journal files.

All TabletPCs include built-in wireless capability, meaning that notes can be instantly uploaded and shared over the Internet, or can be shared between two laptops being used in tandem by a notetaker and a deaf person sitting near each other in a classroom or meeting.

These features and others, including the implications for C-Print, will be demonstrated and their implications for deaf education will be discussed.

FRIDAY

Faculty-Driven Technology Transfer: How NTID's Instructional Technology Consortium Brings Technology to the Classroom (F11D)

Myra Pelz
NTID/RIT
Mark Rosica

Email: mpelz@mail.rit.edu

Friday, 6/27/2003 --11:00 AM
Location: LBJ [060] 3237

Strand: In-Service/Pre-Service Strategies
Type: Formal **Audience:** All

NTID's Instructional Technology Consortium will share what it has learned about bringing faculty and instructional technology together. More specifically, our experience has given some insight into, among other things, the following questions:

- How do we know what faculty want to learn?

This is one area where needs assessment doesn't necessarily work, since many faculty may not know what technology is available, and how it might be used. One successful strategy is to ask faculty to demonstrate the techniques that they have found to be successful. This in turn may inspire other faculty to adopt similar techniques in their own classrooms.

- How do we motivate faculty interest?

We start with one-hour demos of how different types of technology can be used in a classroom setting. Then, if there is interest, we schedule a longer session to actual teach the "how to."

- How do we deal with different faculty expertise?

We try to offer a variety of workshops that serve faculty all along the technical skill continuum. Faculty who don't know where to save a file so they can find it again will be turned off until they've developed more confidence with the basic technology.

- How do we provide faculty with support for projects?

Not every faculty member will be able to create his or her own Flash animations and even more technically skilled faculty members will need help over hurdles. It's essential to provide a place for faculty to go for help with both development and debugging.

- How do we decide what's working?

Evaluation can be slippery, but it's essential. We ask both faculty and students what worked for them, and what didn't, and what we can provide to be of assistance.

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