



Tech Symposium

Technology and Deaf Education

Exploring Instructional and Access Technologies
An International Symposium

Technology and Deaf Education

Exploring Instructional and Access Technologies
An International Symposium

June 21-23, 2010

ABSTRACTS & SUMMARIES

<http://www.rit.edu/ntid/vp/techsym/>

Major Sponsors

National Technical Institute for the Deaf
The Nippon Foundation of Japan
PEN-International

Hosted by the
National Technical Institute for the Deaf
Rochester Institute of Technology
52 Lomb Memorial Drive
Rochester, NY 14623

Monday, June 21

8:30-9 a.m.

Opening Ceremony

E. William Clymer, Symposium Chair

James J. DeCaro, Interim President, NTID; Vice President and Dean of RIT

9-9:30 a.m.

Plenary Session I – Welcome Remarks from the Chairman of the Nippon Foundation

Yohei Sasakawa, Chairman, The Nippon Foundation of Japan

Strand: Using Technology to Support Learning

Type: Plenary

Audience: All

9:30-10 a.m.

Plenary Session II

Mark Leddy, Program Director, Research in Disabilities Education program, National Science Foundation

Strand: Using Technology to Support Learning

Type: Plenary

Audience: All

Abstract

President Obama is committed to restoring America's leadership in higher education to better prepare our nation's workforce for a 21st century economy. This promise challenges US universities and colleges to make science and engineering accessible to all students, including students who are Deaf, deaf or hard-of-hearing. The National Science Foundation (NSF) spends millions of dollars each year to fund projects that broaden the participation of students with disabilities in science, technology, engineering, and mathematics (STEM) fields. Dr. Leddy will provide an overview of NSF investments in technology and educational programming for students who Deaf, deaf or hard-of-hearing in STEM.

10-10:45 a.m.

Concurrent Session I

SDC [55] 1310

Mobile Alerting for Persons Who are Deaf and Hard of Hearing (M10A)

Helena Mitchell, Georgia Institute of Technology

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

The deaf and hard of hearing communities were early adopters of text messaging. Today national alerting systems are poised to use text messaging on mobile devices. This presentation discusses field trials that provided accessible alerting messaging and reactions from deaf and hard of hearing consumers on the most advantageous features.

Summary

It is estimated 54 million United States residents have some type of disability. The Wireless RERC notes that people with disabilities are users of wireless products and services. As more users with disabilities rely on wireless devices as their primary source of communications, they need to be included in emergency notifications. Likewise, in our increasingly mobile society the Federal Communications Commission (FCC) has stated in rulemakings that people with disabilities must be considered in emergency notifications and has also embraced the need to modernize

national alerting systems to include mobile devices. Mobile Alerting for Persons Who are Deaf and Hard of Hearing assesses the progress of rulemakings and prototype software that would promote inclusive design in mobile alerting devices and what deaf and hard of hearing consumers need to know to ensure these devices are accessible.

Included in the discussion are customized applications for presenting emergency messages; creation of prototype software capable of receiving audio and SMS alerts and emergency messages; messaging techniques to disseminate distinctive emergency warning and alert tones; and thoughts on universal design elements which could be used by wireless manufacturers and designers of equipment for the incorporation of alerting capabilities into new devices entering the marketplace.

LBJ [60] 3237

AudioWiz – Mobile Retroactive Audio Transcription and Description for Deaf and Hard-of-Hearing Individuals (M10B)

Jeffrey P. Bigham, University of Rochester

Anna C. Cavender, University of Washington

Strand: Access Technology

Type: Concurrent

Audience: All

AudioWiz is an application for mobile phones that records audio in a user's environment and then describes it. AudioWiz balances both automatic and human-powered remote services to quickly produce accurate descriptions. In retroactive recording mode, users can ask for the last 60 seconds of audio to be described, helping to provide context after an auditory event has occurred.

Summary

AudioWiz is an application for mobile phones that records audio in a user's environment and then describes it for users. AudioWiz can be used in an airport to catch announcements over the PA system, to transcribe short spoken utterances when no interpreter or captioner is available, or to produce a description of the sounds made by a faulty appliance. AudioWiz is able to do this quickly, cheaply, and accurately by balancing two types of remote web services: (1) automatic services that are fast and free but also error prone, and (2) human-powered services that are slower and potentially expensive, but much more accurate.

Our unique approach employs non-expert humans drawn from micro-task marketplaces like Mechanical Turk for a few seconds at a time when automatic approaches fail. Without context or expertise, these workers fall far short of the performance of professional interpreters and captioners, but they can be an effective and low cost option for describing simple sounds and relaying short messages either on-the-go or when a professional is not available.

The presentation will overview the AudioWiz application, give several demonstrations of its use, and discuss future work and challenges.

SDC [55] 1300

Going Global, Locally, with Cyberlearning: Lessons Learned for Accessible Cyberinfrastructure®/Enabled Knowledge Communities from a Decade of Cross-National Global Virtual Learning Teams (M10C)

Derrick L. Cogburn, American University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

This paper suggests the cyberinfrastructure movement may not benefit persons with disabilities and will fall short of its broader potential, unless closer attention is paid to accessibility and universal design. We highlight lessons from ten years of teaching in a globally distributed learning environment between the US and South Africa.

Summary

In 1989, William Wulf blended the words "Collaborate" and "Laboratory" to coin an evocative new term, collaboratory. These collaboratories were "centers without walls" for the scientific community, and were designed to facilitate researchers working together from anywhere in the country as if they were in the same physical location. The Atkins Commission Report picked up these ideas in 2003, and urged the national scientific community to place greater emphasis on developing cyberinfrastructure-enabled knowledge communities that could revolutionize science and engineering. Finally, the potential of cyberinfrastructure to revolutionize education was realized and illustrated in the NSF report on Cyberlearning (2008).

Out of this background, we see that many technology enhanced learning communities provide geographically distributed collaboration opportunities that expand the inclusion of diverse peoples and help close the digital divide. However, to date, most collaboratory efforts have not emphasized the need for access among diverse populations, including people in developing countries and those with disabilities. Nor have most of these efforts focused on meeting minimum standards for technological accessibility and universal design. In this paper, we highlight lessons from ten years of teaching in a globally distributed learning environment between the US and South Africa.

LBJ [60] 2590

Open Source, Open Minds (M10D)

Tracy Magin, RIT/NTID

Allen Ford, RIT/NTID

Strand: Online Learning

Type: Concurrent

Audience: All

Abstract

For interested registrants, our workshop includes a discussion of a pre-conference interactive "student experience" of our Moodle® open source course management system (CMS). Moodle® is an inexpensive and viable alternative to proprietary CMS that has an international community. Workshop attendees will see Moodle® from a teacher's perspective.

Summary

Moodle is a free open source course management system offering educators an easier interface and more control over course resources, assignments, and student interactions than either Desire2Learn or BlackBoard at a fraction of the licensing costs. For this presentation, there are two separate components.

First, through pre-conference hands-on experience, interested registrants will interact as "students" within a demonstration course, Tech Symposium Open Source Course (OnlineNTID.rit.edu). Major interactive functions and features will provide the student's perspective of the following activities:

1. Accessing course resources
2. Uploading "home work"
3. Receiving feedback on homework
4. Taking quizzes
5. Forum posting and response

The demo course will be available from June 1 - June 30. Course enrollment will be limited to registered conference attendees by their request.*

Secondly, the conference presentation will differ in that attendees will be introduced to Moodle from the teacher's perspective. Real world courses selected from Moodle's current international "best practices" competition (<http://coolcourses.moodle.org/>) will show Moodle in use at the primary, secondary, and post-secondary level. Then the pre-conference demo course will be presented for discussion and questions.

Participants will be provided slide and resource handouts.

11-11:45 a.m. Concurrent Session II

LBJ [60] 2590

Enhancement of Educational Access Through Emerging Technologies: Real Time Test Generation and Unified Information Display Methods (M11A)

Peter A. Lalley, RIT/NTID
Catherine Beaton, RIT
Dan Bogaard, RIT
Janet MacLeod, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

The presentation will provide results from a study designed to evaluate real time text display using automatic speech recognition, and three different methods of presenting text and non-text content in close visual proximity: a laptop, a heads up display, and a handheld device. Each was evaluated for accuracy, comprehension, ease of use, and cost benefit.

Summary

Students who are deaf or hard of hearing, as well as students with other special needs (e.g. Low Vision, LD, and ADHD) are often denied full participation in formal and informal educational activities due to the lack of appropriate and effective access services. Continuing advances in technology have the potential to expand availability of real-time display of text and non-text information that could reduce communication and educational barriers that can impede effective learning.

Our study, which included 108 student participants who are deaf or hard of hearing, was initiated to provide effective options and data-based guidance for students, teachers, employers, and service providers to reach the goal of full participation in educational environments and the world of work. Data from the study demonstrate that automatic speech recognition (ASR) combined with a unified field of vision is an effective access service, both educationally and cost wise. In addition, ASR provides direct exposure to the vocabulary of science and technology, which is critical for interactive participation in STEM disciplines and conceptual understanding. We will share the lessons learned about what works or doesn't work when displaying multiple inputs of text and non-text information to enhance student participation and learning in STEM disciplines.

LBJ [60] 3237

Music Visualization (M11B)

David W. Fourney, Ryerson University
Arla Good, Ryerson University
Michael Pouris, Ryerson University

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

We will discuss creating access to the cultural information and entertainment medium provided by music via visualization. Important questions arise as to whether meaningful and entertaining music visualization is feasible to meet the needs of deaf, deafened, and hard of hearing music enthusiasts, and the extent to which it can be accomplished automatically without human intervention.

Summary

Music is an important medium for the conveyance of cultural information, such as shared experience and knowledge, and is also entertaining and enjoyable for its own sake. For deaf, deafened, and hard of hearing (D/HH) people, the experience of entertainment and enjoyment produced for hearing audiences is limited. People who are deaf do not have access to this shared experience because it is not provided in a modality that is more appropriate to this population of consumers. For people who are hard of hearing, their residual hearing may not allow the individual to hear the full range of tones or perceive sound in stereo and making the music louder may only make the situation worse.

One possible solution to creating access to music is making it visual. Any such visualization of music needs to convey the sense of music, emotional content, and overall entertainment to be successful as well as sensitive to the cultures of the D/HH communities to be acceptable. The lyrics alone are not enough. Issues which we are addressing include finding which constructs of music (e.g., pitch, tempo, loudness, pauses, contour) best express the emotional and entertainment value of music and then investigating the optimal presentation of them visually. We will present our findings to date and demonstrate some of the solutions we have designed and evaluated.

SDC [55] 1300

Creating 21st Century Classrooms, Students, and Teachers (M11C)

Mari Liles, Texas School for the Deaf

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: PreK-12

Abstract

Visualize what you might see in a 21st century classroom. It could look something like this: Engaged learners collaborating with a global audience of peers on student-centered projects in a media-rich, creative, and interactive environment. Today's students are already there! Teachers and administrators must BEGIN with the END in mind. Are YOU ready?

Summary

This workshop will take a look at how students, teachers and administrators at Texas School for the Deaf are working towards creating 21st century classrooms. This session will explore the types of hardware, software, technology initiatives and Web 2.0 tools that have been successful in creating a move towards 21st century teaching and learning. Students and teachers at TSD are using interactive whiteboards, student response devices, document cameras, video flip cameras, iPods, laptop computers and many Web 2.0 tools to create excitement, collaboration, engaged learning, student centered and designed lessons, and academic success in K-12 classrooms.

So what is 21st century education? It is bold and it breaks the mold. It is flexible, creative, challenging, and complex. It addresses a rapidly changing world filled with fantastic new problems as well as exciting new possibilities. Students today are part of a technological environment that is far different from the world in which most adults grew up. Cell phones, text-messaging, personal web sites, social networking sites, and interactive computer tools are all a routine part of our children's lives. Our students find technology intuitive, and they assimilate it very quickly.

Attend this session to obtain resources and ideas on how you can move toward creating 21st century learning environments at your school.

SDC [55] 1310

The Effects of Closed Captions on an Online Content on Deaf Students: Content Comprehension, Cognitive Load, and Motivation (M11D)

Joong-O (Kevin) Yoon, Korea Employment Agency for the Disabled
Heaun Choi, Korea Employment Agency for the Disabled

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

Type: Concurrent

Audience: All

Abstract

The purpose of this experimental study is to examine the effects of closed captions included in an online content on deaf learners' content comprehension, cognitive load, and motivation.

The research targeted deaf students whose first language is sign language, and 62 deaf students with high school diploma were tested for the research.

Summary

The purpose of this experimental study is to examine the effects of closed captions included in an online content on deaf learners' content comprehension, cognitive load, and motivation.

The research targeted deaf students whose first language is sign language, and 62 deaf students with high school diploma were tested for the research. The subjects were randomly assigned into experiment condition and divided into two homogenized groups, a control group and an experiment group. The control group was only offered sign-language video clip and the experimental group was provided of both sign-language video clip and captions when they are exposed to an online content.

In the research, the dependent variables, content comprehension, cognitive load and motivation, were measured by the questionnaire developed by researcher, cognitive load measurement survey by Jeeheon Ryu (2009), and IMMS (Instructional Materials Motivation Survey) by Keller(1993). The mean and standard deviation of dependent variables were calculated and the pre-post difference of experiment was analyzed by the t-test.

Research results revealed that the experimental group, which was offered both sign-language video clip and captions, displayed statistically significant effect compared to the control group in terms of content comprehension, cognitive load, and motivation. This shows a correlation between captions and dependent variables. The result refuted the previous speculation that provision of sign-language video clip and captions at the same time, since they both are visual information, will disperse the learner's working memory and induce cognitive overload, which leads to modality effect, and redundancy effect. The findings of this study revealed that captions and sign-language video clip can be compatible and they should be provided when producing further online content for the Deaf. And, further investigations on the effect of cognitive load depending on the placement of captions and the use of video typography in online contents are suggested.

1-1:45 p.m. **Concurrent Session III**

SDC [55] 1310 ***Bilingual Web Conferencing with Multi-Party Videos (M1A)***

Cindy King, Gallaudet University

Earl Parks, Gallaudet University

Strand: Online Learning

Type: Concurrent

Audience: All

Abstract

Gallaudet University will review the options for conducting web conferences where each participant has a separate video window ... for bilingual meetings using both ASL and English. Comparisons of the various systems will be made, including how accessible they are and how easy they are to use for non-technical users.

Summary

Gallaudet University will review the options for conducting web conferences where each participant has a separate video window ... for bilingual meetings using both ASL and English.

Comparisons of the various systems will be made, including how accessible they are and how easy they are to use for non-technical users.

The following systems will be reviewed:

1. Nefsis.com
2. Vidyo.com
3. Elluminate.com/products/Vcs/index.jsp
4. Adobe.com/products/acrobatconnectpro
5. www.adobe.com/acom/connectnow
6. DimDim.com
7. linc.com
8. iVisit.com
9. code.google.com/p/openmeetings

We will also review web conferencing tools that do not support multiple video windows, such as WebEx, GoToMeeting, and Wimba. Conferencing tools that are designed specifically for accessibility will also be discussed (IDEAL Conference, Talking Communities, Serok Accessible Event).

We will also describe video-only web and/or traditional video conferencing systems such as ooVoo, Sorenson Video Conferencing Solution, Purple Video Conferencing Solution, LifeSize, Polycom, and other tools.

The contents of this presentation were developed, in part, with funding from the National Institute on Disability and Rehabilitation Research, U.S. Department of Education, grant number H133E090001 (RERC on Telecommunications Access). However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

LBJ [60] 3237

Social Networks: An Introduction to Social Networking and Your Accessible Web Presence (M1B)

Patrick I. Smith, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

Social Networks: Are Facebook, NING, Second Life, LinkedIn, Twitter, etc., familiar names that hold little or no meaning to you? Is your organization planning to use social networking to provide services to your deaf and hard of hearing stakeholders? This presentation will give you a better understanding, some tips and warnings as you enter into the world of social networking.

Summary

Facebook, Twitter, Second Life and a number of other social networking websites have grown in popularity over the past few years, with numbers surpassing 500,000,000 people and profiles. Many people, deaf and hard of hearing, organizations, companies and colleges are starting to turn to these social networking websites to reach their target audiences. Examples used in this will include a Facebook Group page from PEPNet-South, a NING website used by the Technical Assistance and Dissemination network and additional sites as time permits.

This presentation will cover the terminology of various social networks, such as "friending," "tweets," and "avatars." It will answer the question "What is Social Networking" and will explain the various missions and audiences that are serviced by each site. The information will also illustrate how people are using these tools to reach out to their stakeholders. While being a bold new tool for communication these websites face the same kinds of issues that various other modes of communication have faced over the years therefore information provided will also include the issues related to the accessibility of these various social networks.

LBJ [60] 2590

Supporting Students Who are Deaf or Hard of Hearing in Mobile Learning Situations with

Captioning (M1C)

Michael S. Stinson, RIT/NTID

Pamela Francis, RIT/NTID

Lisa Elliot, RIT/NTID

Anne Alepoudakis, RIT/NTID

Donna Easton, RIT/NTID

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

This presentation will: demonstrate new mobile speech-to-text technology and service for communication access, discuss of applications of the service with the audience, and present research findings about the service involving students who are deaf or hard of hearing.

Summary

C-Print mobile is a captioning support service developed to provide access in situations where it is currently difficult to support students, such as field visits for science classes and other learning experiences in which students are mobile. C-Print mobile, works by having the speaker wear a Bluetooth headset connected to a cellular phone. A teacher, tour guide, etc., speaks into a cell phone equipped with a Bluetooth headset. A service provider in another location listens to the speaker's message via cell phone and a headphones set or speakers. The provider uses standard C-Print software to produce and send the text via Internet to the C-Print Pro Mobile Client software application installed on the student's Smartphone. This Smartphone then processes the text into a form for viewing so that the student can understand what the speaker is saying.

The C-Print Pro Mobile software application will work on most Smartphones with Internet access. The presentation will also discuss research findings that include students' responses regarding the effectiveness of the mobile service on field visits, captioning accuracy, and observations that indicate situations where hearing students may also benefit from the service.

SDC [55] 1300

ASL-STEM Forum: An Online Video Forum for Discussing ASL for Science, Technology, Engineering and Math (M1D)

Richard E. Ladner, University of Washington

Anna C. Cavender, University of Washington

Daniel S. Otero, University of Washington

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

The ASL-STEM Forum is a community-based, video-enabled, online forum for discussing American Sign Language in Science, Technology, Engineering, and Math fields. The growth of ASL in STEM fields should be community-driven, and we hope that one day the forum will become a resource for finding community-accepted signed in technical fields.

Summary

Standardization of ASL terminology for advanced topics in Science, Technology, Engineering, and Mathematics (STEM) is needed to enable deaf and hard of hearing students and scientists to learn, discuss, and contribute to their chosen fields. The ASL-STEM Forum enables geographically dispersed students, faculty, and interpreters at universities, who are independently creating and using STEM terminology to come together using a community-based, video-enabled web resource. A common ASL vocabulary in science will enable deaf scientists to more easily converse, provide interpreters with consistent terminology, and

encourage students to advance in STEM fields.

We will demonstrate the ASL-STEM Forum, discuss the challenges and importance of building a community of contributors, and overview our approach to fostering such a community. We will also show a demonstration of the forum and allow symposium members to contribute live and in-person.

2-2:45 p.m. Concurrent Session IV

SDC [55] 1310 ***Demonstration of the Presentation and Access Technologies in Classrooms, Conference Rooms and Labs at NTID (M2A)***
Chas Johnstone, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

During the session, the presentation and access technology in "smart" classrooms, conference rooms and labs at NTID will be demonstrated. Participants will be given the opportunity for hands-on operation of the equipment, see examples of how it is used and ask questions.

Summary

The "smart" classrooms, conference rooms and labs at NTID feature state-of-the presentation and access technology. The presentation technology demonstrated during this session will include two XGA LCD projectors, a resident computer, a visualizer [document camera], DVD-VHS player, connections for a brought-in portable computer and two motorized 9' X 12' projection screens. The access technology demonstrated includes a resident group FM hearing assistance system, a separate, moveable flat-panel display for people who have vision challenges and a CCTV [document enlarger-viewer].

SDC [55] 1300 ***Checking for Students' Understanding in the Math Classroom: From Clickers to TI-Navigator (M2B)***

Miriam E. Santana-Valadez, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

Clickers and the TI-Navigator system are used in the deaf and hard of hearing math classroom to provide instant feedback for students allowing them to identify areas for improvement. These technologies help the instructor to: identify misconceptions, realize what specific topics required more explanations, and modify the pace of the class according to the needs of the students.

Summary

The TI Navigator system creates a powerful wireless connection between students and educator, networking each student's graphing calculator to the classroom computer. The use of TI Navigator in the classroom makes an interactive classroom by tracking the progress of individual students through screen captures, quick polls, and activities that can be sent and collected from the teacher's computer.

Benefits of using these tools in the classroom are:

1. The use of both systems provides instant feedback for students allowing them to identify areas for improvement.
2. These technologies help the instructor to: identify misconceptions, realize what specific topics require more explanations, and modify the pace of the class

matching the needs of each particular group of students.

LBJ [60] 2590

ClassInFocus: An Online Multimedia Conferencing Platform for Improved Access to Mainstream Classrooms for Deaf and Hard of Hearing Students (M2C)

Anna C. Cavender, University of Washington

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

ClassInFocus is an online multimedia platform for deaf and hard of hearing students to access remote interpreters and captioners, manage visual attention, and facilitate interaction in real-time, in-person mainstream university classrooms. We are currently studying the use of ClassInFocus for its ability to improve classroom accessibility.

Summary

Remote video interpreting and remote captioning are gaining popularity as viable options to find qualified, skilled, and knowledgeable interpreters and captioners for deaf and hard of hearing students in mainstream classrooms. Gaining a better understanding of the ways in which remote services can best meet the needs of deaf and hard of hearing students is a hallmark of our research.

We have developed ClassInFocus, an online multimedia platform for deaf and hard of hearing students to access remote interpreters and captioners, reduce visual dispersion, and facilitate interaction in real-time, in-person mainstream university classrooms. ClassInFocus incorporates multiple streams (including instructor, interpreter, captions, presentation materials, and chat) into one screen. Customized views allow students to configure the screen to best meet their needs (e.g. flexible window placements, font size and contrast) and allow remote interpreters and captioners to see materials and context to improve their services. Notifications help students manage their visual attention during class by unobtrusively pointing out slide changes and changes in speakers.

Considering the diversity of students with different needs and preferences as well as diverse classroom situations, we designed ClassInFocus to be flexible and customizable. Ongoing studies are informing the future design of the system with the ultimate goal of improving access to mainstream education.

LBJ [60] 3237

Remote Captioning / Notetaking in New York City: Synergetic Use of Current Technologies (M2D)

Tony Naturale, New York City Department of Education

Stephanie Levine, New York City Department of Education

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

This presentation discusses the current practice of remote captioning services as used in NYCDOE for 10 students attending general education programs. The various levels of support range from the initial stage of assessment and set up for the service to the maintenance of equipment and connection. Professionals, including audiologists, teachers, network administrators, participate in collaborative efforts to serve the students whose IEPs mandated the captioning services.

Summary

The emphasis is on how we all play an important role in making classroom instruction accessible in real time to deaf and hard of hearing students through the creative and

synergetic use of disparate pieces to achieve a cohesive whole: laptop, FM microphone, FM receiver, Wireless technology in FM system, access to the Internet.

During the initial assessment, a student is evaluated for reading performance, comfort level with computer use, and independence. Often students are using FM boots with their hearing aids, so audiologists assist in ensuring that we use the best equipment for wireless FM mic transmitter and FM receiver. This is critical because not only will students need to have the FM signals sent to their individual hearing boots, but also to their separate receivers which are attached to the laptops.

The school Internet is available in most classrooms through a wireless system. Laptops are also set up for each school system with the assistance of network administration to log into a security coded access.

Ongoing monitoring of the speech signals and the captioned texts will provide a picture of data flow. Whenever there is a breakdown, then the troubleshooting stage begins with the testing of the school site Internet access. Different ways of looking at the traffic of data flow are available to ensure that there is no blockage of audio signals going out of the school site and likewise no blockage of the captioned texts being received back to the school sites. Due to the required periodic upgrading of the firewall system and security patches, there may be an unintended blockage of the data flow necessary for our remote captioning service.

The positive result of maintaining uninterrupted flow of remote captioning service for our students is evident in their academic performance and high grade averages. Virtually all these students use the captioning service for their studies everyday effectively and achieved high grades successfully.

In short, the online captioning service can benefit our students, requiring initial supports for the set up and occasional troubleshooting effort to maintain the unique service.

3-3:45 p.m. Concurrent Session V

SDC [55] 1310

Signed Multimedia Storybooks: Interactive Vocabulary Instruction (M3A)

Emily L. Whiteside, Muscogee County School District

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: PreK-12

Abstract

This presentation describes an action research project which investigated elementary-aged hard of hearing students' vocabulary achievement, attitudes, and experiences with signed multimedia storybooks. The low-cost, interactive instructional tool incorporated remixed, animated video, signed interpretation, games, and activities, situated within the framework of children's literature. The intervention tool will be demonstrated.

Summary

This study investigated the influences of signed multimedia storybooks on the receptive vocabulary skills, attitudes, and experiences of elementary aged hard of hearing students. Five multimedia storybooks built in Microsoft PowerPoint introduced 25 vocabulary words to students. Signed multimedia storybooks are hyperlinked, digital learning environments with animated videos of published books, multimedia instructional activities and games, and live-action video sign language interpretation.

Fifteen students enrolled in the Hard of Hearing and Speech/Language programs at a small elementary school in a medium-sized Georgia city participated in the five-week intervention. Two pretest/posttest measures addressed vocabulary achievement. A Likert-style survey measured student attitudes, and a teacher journal documented student experiences. Students showed significant improvement on the two measures of receptive vocabulary skills.

Positive student experiences, including engagement, group interaction, communication,

and media interaction, increased with student activity choice and use of game-like activities. Negative experiences increased with teacher choice of activity, length and linguistic complexity of videos, competition among group members, and with technical difficulties. Student attitudes to all multimedia, sign language, and vocabulary statements were positive.

This presentation will include an overview of the original study, a demonstration of the multimedia storybooks, and tips for creating similar products.

LBJ [60] 2590

Accessible Mathematics for Young Deaf Children (M3B)

Nicoletta Adamo-Villani, Purdue University
Ronnie Wilbur, Purdue University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

We discuss the last iteration of Mathsigner®, a 3D animation ASL-based interactive software package which contains sets of activities, with implementation guidelines, designed to teach K-4 math concepts, signs, and corresponding English terminology to deaf children, their parents, and teachers. Mathsigner® is being developed using cutting-edge interactive 3D animation technology and presents many innovative features compared to other 3D Animation-based signing products.

Summary

During the presentation we will discuss and demonstrate the final iteration of the Mathsigner® software, and report initial findings. Mathsigner® is a 3D animation program designed to teach young deaf children and their hearing parents standard-based mathematical concepts for grades K-4, and American Sign Language (ASL) signs for math terminology. The program uses cartoon 3D avatars who communicate with the users in animated ASL. The software was developed with support of a grant from the National Science Foundation-Research in Disabilities Education Program (NSF-RDE), and in collaboration with teachers and students at the Indiana School for the Deaf (ISD).

In the paper we explain the iterative development and evaluation process used to design and develop the software, discuss the innovative animation method used to create high-quality ASL signs, describe the final implementation of the program in detail, discuss lessons learned, report initial findings of formative evaluations with target users, and give an overview of future research and development work.

SDC [55] 1300

Connect, Communicate, Collaborate (Cisco TelePresence) (M3C)

Todd Wilson, Cisco Systems, Inc.

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

Cisco technologies such as TelePresence, WebEx, and Unified Communications allow students and teachers to connect, communicate, and collaborate anywhere and at any time.

Summary

This presentation will show how Cisco technologies can transform education and bring out the full potential of every teacher and student through physical and virtual secure access to local and remote resources.

Leonardo Project: "Transfer of Innovation," DSigns: Online Training System for British, Czech, Cypriot, Greek, Irish Sign Languages in the Workplace (the Czech Experience) (M3D)
Marie Dolezalova, Charles University, Prague

Strand: Online Learning

Type: Concurrent

Audience: Postsecondary

Abstract

D-signs is a project to implement an online training system for sign language in the workplace, mapped to Common European Framework of Reference for Languages (CEFR), made available in British, Irish, Czech, Greek and Cypriot Sign Languages. As well as qualifying the hearing employers and workmates it creates a direct effect for Deaf employees through the better communication at work.

This project draws heavily on the existing framework developed in www.signstation.org for British Sign Language, but sets the development in CEFR (Common European Framework of Reference) and applies it to the partners' sign languages.

Summary

D-signs is a project to implement an online training system for sign language in the workplace, mapped to Common European Framework of Reference for Languages (CEFR), made available in British, Irish, Czech, Greek and Cypriot Sign Languages. As well as qualifying the hearing employers and workmates it creates a direct effect for Deaf employees through the better communication at work.

This project draws heavily on the existing framework developed in www.signstation.org for British Sign Language, but sets the development in CEFR (Common European Framework of Reference) and applies it to the partners' sign languages

Project Objectives:

1. to describe the language standards and available sign language training in each partner State
2. to map a new workplace curriculum on to the Common European Framework of Reference for Languages - levels A1-A2
3. to produce units for sign language teaching for the workplace in each partner's sign language
4. to implement these online within the Moodle VLE and compliant with industrial standards for e-learning (ie SCORM)
5. to mount pilot courses, to evaluate and to report on them
6. to create a sustainable web resource for each partner which can be presented to national standards bodies for accreditation

The outcome will be an online training programme, with parity across Europe:

1. comparable online courses in British, Irish, Czech, Greek and Cyprus Sign Languages
2. tools to the learners which allow them to monitor not only their reception of sign language, but also their production
3. self-teaching courses, requiring no further maintenance and with a long shelf life

The groups of users are from basic level to intermediate (A1 to A2, as a priority) ... however, because the material is online, users may browse and look at material of varying complexity.

The impact can be felt directly by hearing learners, then by Deaf employees and ultimately by any user who wishes to learn any one of the five sign languages offered.

4-5:30 p.m. **Poster Session I**

LBJ [60] – 2nd
Floor Street

Web-based Interactive Video Application as a Strategy for Employment of Deaf Professionals (M4PA)

Regina Kiperman-Kiselgof, RIT/NTID

Linda Gottermeier, RIT/NTID
Simon Ting, RIT/NTID
Cathy Clarke, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

In a recessionary economy, securing jobs is especially challenging. As a strategy to promote confidence and clearly-articulated responses, a web-based interactive video application was developed for students with severe-to-profound hearing loss. Utilization of the program (n= 50) resulted in favorable trends in securing cooperative work experiences for deaf college students.

Summary

Young adults with severe-to-profound hearing loss often lack experience interviewing and securing jobs. At the National Technical Institute for the Deaf (NTID), as a component of the Job Search Process course, a web-based interactive video application was developed. As an out-of-class assignment, students wrote and videotaped responses to typical job interview questions. Instructors then provided written and signed video feedback to individual students. In instances where the answers needed refinement, students were given the opportunity to respond again.

IdeaTools, a web-based course-building system developed at NTID, was modified to enable instructors and students to utilize webcams to record and save videos directly to a video server. This video application became a tool for students to practice in a structured, "safe" environment.

A total of 50 students completed the video practices over a two-year period. Post hoc, 20 students secured employment. Teacher-collected feedback showed that students demonstrated improvement in confidence and appropriate content for interview response.

While data is preliminary, it suggests positive trends in assisting young adults with severe-to-profound hearing loss in securing cooperative work experience. Expansion of interview questions may help to further increase students' confidence in professional, work-related interview situations. The pilot video application will be demonstrated.

LBJ [60] – 2nd
Floor Street

Blogging: An Effective Tool for Academic Writing (M4PC)

Sharon Pajka, Gallaudet University

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Researchers have noted advantages of blogging; yet, few studies include Deaf students. Research was conducted in two sections of an English course at Gallaudet University. Findings included that blogging fosters academic and personal writing, offers authentic opportunities to practice English, and builds a community of trust and respect among classmates.

Summary

English Educators seek the best ways to incorporate authentic reading and writing as well as ways to bridge the gaps underprepared students have; yet, they face students who often have little interest or motivation in completing traditional writing assignments. McMillan-Clifton (2007) writes, "it would seem that effective composition instruction should move toward embracing the forms that students are already growing comfortable with outside of the classroom."

While several advantages of have been noted in research, few studies that have been

conducted using Deaf Education classrooms. Research was conducted during the Fall 2009 semester in two sections of an ENG 102 course at Gallaudet University. One section kept blogs while the other section used traditional methods for completing writing assignments. Through the sixteen week semester, anonymous writing samples were collected from both sections. Data was compiled to answer whether or not blogging is an effective tool. Student writing was analyzed using the Gallaudet University Writing Rubric. Students completed a survey about their experiences with the course writing assignments. The findings included that blogging fosters academic and personal writing, offers authentic opportunities to practice English, and builds a community of trust and respect among classmates.

LBJ [60] – 2nd
Floor Street

Access to Mobile Emergency Alerting (MAPD)

Salimah S. LaForce, Georgia Institute of Technology
Helena Mitchell, Georgia Institute of Technology

Strand: Access Technology

Type: Poster

Audience: All

Abstract

Access to Mobile Emergency Alerting will demonstrate prototype technology to broadcast local and targeted delivery of alerts and warnings to wireless devices in accessible formats; presenting alert content with accommodations for blind/low vision and deaf/hard of hearing users.

Summary

The wireless emergency communications project (WEC) of the Wireless RERC will demonstrate prototype technology to broadcast local and targeted delivery of alerts and warnings to wireless devices in accessible formats. The mobile client software is capable of intelligently intercepting incoming short message service (SMS) alerts and rendering presentations that are both accessible and not impeded by various settings of the phone.

Attendees will be able to view/hear/feel the mobile client software applications for presenting alert content with accommodations for blind/low vision and deaf/hard of hearing users. The prototypes include systems capable of receiving live alerts of weather emergencies from the NOAA National Weather Service, simulations of the FCC's forthcoming Commercial Mobile Alerts System (CMAS), and an experimental ASL video alert. The poster includes a depiction of barriers to the accessibility of emergency alerts, summative findings from field trials conducted to identify the accommodations needed by people with sensory disabilities, and recommendations on how future generations can enhance accessibility.

LBJ [60] – 2nd
Floor Street

Remote Tutoring: An Action Research Project (M4PE)

Linda M. Bryant, RIT/NTID

Strand: Online Learning

Type: Poster

Audience: Postsecondary

Abstract

Action research is an ongoing process of inquiry, data collection and interpretation, action, reflection and transformation. It links aspects of theory, practice, and problem solving; thereby allowing the researcher to apply new knowledge and problem solving using a futuristic lens. In this poster, I will illustrate the action research cycles I will use to answer the following research question: "How does using a combination of distance technology software and videophones with deaf students in my writing classes affect my tutoring practices?"

Summary

The influences and integration of digital technologies on education will inevitably change

how teachers apply theoretical frameworks to distance education (in this case, remote tutoring). To this end, there are a number of variables to consider--the role of the instructors/tutors; the population served (in this case, d/Deaf college students); use of a multi-theory, student-centered approach--while utilizing best online teaching and tutoring practices to meet the needs of diverse learners. Ultimately, the remote tutor should be able to serve as a resource manager, technical consultant and facilitator who meets the communication preferences and learning styles of each tutee while providing opportunities for them to construct knowledge and become independent learners. Important to Deaf students receiving these services is a need to feel understood, not only communicatively but culturally.

This poster will address the theoretical, pedagogical and technical considerations of implementing an action research project that addresses the following research question: "How does using a combination of distance technology software and videophones with deaf students in my writing classes affect my tutoring practices?" Due to the fact that ever-evolving technologies will continue to influence online distance education, research on new approaches, i.e., remote tutoring, with a variety of technology-savvy populations warrants further exploration.

LBJ [60] – 2nd
Floor Street

The First Sign Language-Based Test for Attention Deficit Hyperactivity Disorder (M4PF)

Ila Parasnis, RIT/NTID
Gerald P. Berent, RIT/NTID
Vincent J. Samar, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

The Attention Deficit Scales for Adults: Sign Language Version (ADSA-SLV) is the first sign language-based test for ADHD in deaf and hard-of-hearing adults. Presented via a user-friendly interactive computer interface, the test items with captions can be viewed in ASL, English-based sign language with or without voice, or in print.

Summary

The Attention Deficit Scales for Adults: Sign Language Version (ADSA-SLV fills a critical need for assessing ADHD in deaf and hard-of-hearing adults. ADHD produces distractibility, impulsivity, and hyperactivity, which create an enormous challenge for adults to learn in traditional classroom and multimedia learning environments. Accurate diagnosis and referral are important for providing appropriate accommodation. Since the incidence of ADHD in the deaf and hard-of-hearing population may be as high as 38%, there is a pressing need to have an ADHD assessment instrument that is linguistically accessible in sign language.

The ADSA-SLV is a computerized sign language version of the original ADSA administered through an interactive interface. Deaf and hard-of-hearing clients can choose to view the instructions and the 54 test items at any time in American Sign Language (ASL) or in English-based sign language with or without voicing, or in print. A tabled and graphic profile of the client's scores on the test's nine scales is provided to aid diagnosis of ADHD by a qualified evaluator. Thus, this test is developed to meet the various communication preferences of the heterogeneous Deaf and hard-of-hearing population.

LBJ [60] – 2nd
Floor Street

Overview of 3G Mobile Phone Video Conferencing Technologies (M4PG)

Robert Hancock, Southeastern Louisiana University
Becky Sue Parton, Southeastern Louisiana University

Strand: Access Technology

Type: Poster

Audience: All

Abstract

This poster will present an overview of current 3G mobile phone video conferencing technologies that have application for exchange of ASL dialogue.

Summary

For deaf persons, video-conferencing for cell phones is much more than a nice feature; it is essential. It finally allows communication with friends and family in a way that, for a long time, has been relatively unavailable. With live, two-way video, deaf people can use their first language to easily communicate over a cell phone. This poster presentation is designed to present an overview of currently available technologies to facilitate video-conferencing over 3g networks. Participants will get hands-on experience in real-time ASL dialog with other participants.

LBJ [60] – 2nd
Floor Street

On-Line Resources Designed to Enhance Access and Support Services for Individuals who are Deaf or Hard of Hearing (M4PH)

Jane Nunes, PEPNet-Northeast
Denise Kavin, PEPNet-Northeast

Strand: Online Learning

Type: Poster

Audience: All

Abstract

This presentation/poster session will cover resources and on-line learning opportunities available through the Postsecondary Education Programs Network for individuals working with individuals who are deaf or hard of hearing in a variety of settings.

Review will include a tour of resources readily available on pepnet.org, the PEPNet Dissemination Center, PEPNet's new on-line resource search, FAQs and the PEPNet Resource Kit.

Summary

The PEPNet national network of four regional centers in the U.S. provides resources, information, in-service training, and expertise to enhance educational opportunities for individuals who are deaf or hard of hearing and their families. This presentation/poster session will cover various resources available through PEPNet to assist others in understanding the unique communication needs of secondary and postsecondary students who are deaf or hard of hearing. The PEPNet Dissemination Center offers various products and materials including tipsheets, handbooks, videos, newsletters, and a new resources search engine to locate items quickly. Online training modules are readily available at pepnet.org, as are FAQs in multiple media formats.

The PEPNet Resource Kit web page is housed on the PEPNet website that provides transition resources, with an emphasis on technical assistance includes information related to technical assistance, support services, self-advocacy and transition planning.

This poster session will give conference participants a virtual "walk" through pepnet.org via a live internet connection.

LEARNING OUTCOMES:

1. To understand the purpose of the PEPNet Network, and what services and programs can be provided to personnel working with individuals who are deaf and hard of hearing in a variety of settings.
2. To be able to identify three specific resources available via PEPNet.org.
3. To learn how to utilize PEPNet on-line search tool to locate resources and training tools that have been demonstrated.

An Interactive Computerized Sign Language Health Survey for Deaf Adults: Interface Design and Functionality (M4PI)

Vincent J. Samar, RIT/NTID

Strand: Access Technology

Type: Poster

Audience: All

Abstract

The National Center for Deaf Health Research (NCDHR) partnered with the National Technical Institute for the Deaf and Deaf community members to develop an innovative computerized health survey in sign language. This poster demonstrates the survey interface, describes its development, and presents evidence of its usability and accessibility.

Summary

Little is known about the health of Deaf adults, since standard telephone health surveys are inaccessible to Deaf people. Deaf people are a diverse cultural minority group in America with diverse language skills, which include skills in American Sign Language (ASL) and English-based sign language. Therefore, Deaf and hearing researchers from the National Center for Deaf Health Research and Deaf community members designed a user-friendly, multimedia interface to deliver the first computerized sign language health survey to the Deaf community.

Initial performance data from the first administration of the Deaf Health Survey suggest that the interface is accessible to a broad segment of the Deaf community and that respondents take advantage of the flexible usability features and culturally relevant personal options that it provides. This interface can also deliver a health survey video and print content to other cultural and linguistic communities or to low literacy populations in appropriate spoken languages.

IdeaTools: Building Online Courses with Integrated Video Communications and Social Networking Capabilities (M4PJ)

Simon Ting, RIT/NTID

Cathy Clarke, RIT/NTID

Aju Cherian, RIT/NTID

Strand: Online Learning

Type: Poster

Audience: All

Abstract

IdeaTools is an online course-building system for creating Web-based learning resources for deaf learners. Text, pictures and videos are easily combined to create visually exciting course content. New video communications and social networking capabilities allow teachers to design innovative web-based learning activities, and to integrate sign language in such activities.

Summary

IdeaTools is an online course building system created by Simon Ting and Cathy Clarke at NTID. Over the years it has been used by NTID faculty to build over one hundred online courses with innovative and visually exciting multimedia content developed specially to meet the learning needs of deaf students at NTID. New video communications tools were recently added to allow teachers to take advantage of videoconferencing and remote collaboration technologies to design learning activities allowing deaf students to communicate and collaborate with teachers and students remotely in web browsers. Online video recording allows students to submit homework assignments in sign language. Built-in social networking capabilities offer interesting new ways for students to interact with their teachers and peers.

A selection of IdeaTools applications will be on display during the poster session. Visitors can view sample courses created with IdeaTools, and see for themselves IdeaTools' versatility and flexibility as a tool for designing innovative learning resources and activities for deaf learners. Those with project ideas that can be implemented with IdeaTools are welcome to discuss them with the presenters.

LBJ [60] – 2nd
Floor Street

Portable Alert/Communications Technology System for the Deaf/Hard-of-Hearing (M4PK)

Paul Carlson, Freelance Graphic/Industrial Designer

Strand: Access Technology

Type: Poster

Audience: All

Abstract

This work presents an industrial design concept for a smartphone for Deaf/hard-of-hearing sign language users. Advances in technology protocols have opened up possibilities for multimedia interaction in smartphones, creating opportunities for increased access. A literature review surveys smartphones, webcams/videophones, and assistive devices. This leads to a discussion of the various design considerations involved in developing a specialized smartphone.

Summary

Deaf and hard-of-hearing people have historically been underserved by telecommunications and associated technologies. In recent years, advances in webcams and videophones have allowed Deaf and hard-of-hearing users unprecedented access to each other and others in a visual medium, via sign language. This has further enhanced the distance learning experience for many, particularly those whose preferred mode of communication is sign language. However, this carries with it certain limitations: users need to be at a videophone or webcam-equipped computer/laptop, both of which require broadband internet access for video-based communications. Laptops coupled with wifi offer a degree of mobility in this regard, but users need to be in the vicinity of a strong wifi signal.

At present, some cameraphones in Asia and Europe offer real-time video-based communication over cellular networks; such functionality is not yet available in the United States. However, research shows that the usage of such cameraphones in Asia and Europe did not "take off" as anticipated. I argue this is due to a number of factors, including ergonomics and vanity ... they are not optimally designed with sustained use in mind (particularly when conversing via sign language), and the video capture angles do not provide for a flattering picture. My work presents an industrial design concept that addresses these issues, and more.

LBJ [60] – 2nd
Floor Street

A Preliminary Study on Eye Movement Between Expert and Novice in Learning Sign Language (M4PL)

Min-Chi Kao, National Taichung University

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

The purpose of this work-in-progress study was to explore the relationships between Taiwanese sign language learners' sentence comprehension and their eye movement behavior. This study used expert-novice paradigm.

Summary

The subjects were divided into two groups of expert and novice according to their experience of using sign language. The eye tracking system was used to collect data of

subject's eye movement pattern and saccade indicators. The comparison of comprehension performance and eye movement pattern of expert and novice data was made. The expert group had shorter fixation duration, more fixation numbers, and faster scan velocity than the novice group. The eye movement pattern of the expert group had lower mental workload than the novice group. The results revealed that effective eye movement pattern is related to good performance. The analysis of eye movement indicators can assess sign language learners' performance.

LBJ [60] – 2nd
Floor Street

Learning to Teach Deaf Students in India (M4PM)

Rebecca Isaac, Manomaniam Sundaranar University
Benedicta Isaac, National Health Service, UK

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

I would like to share my experiences in teaching the Deaf, using a variety of Technology. I use the word technology where it does not mean only electronic or electrical gadgets. As the Headmistress of a newly started school in a rural area of India, I struggled hard with various techniques, resources and methods from "gestural oral method" to "Maternal reflective Method." I learned about Sign Language and Bilingualism from the West. I tried all possible techniques. Did I succeed?

Summary

Technology is a problem solving invention. Educational technology is the systematic application of scientific knowledge in the field of education. It includes methods and strategies, teaching tools, mechanical and electronic devices and instruments and even text books.

As I lived right next to a boarding school, the deaf children were very often my playmates. I was told that their means of communication is "Gestural Oralism."

On an average, deaf children come to the notice of professionals in India around the age of 5 to 6 years. This is a serious disadvantage to the child as by now he has crossed his prime language learning years. As India does not have a universal Sign Language they develop their own signs that differ from school to school even in the neighbourhood.

When I met two Deaf students in the normal school where I was a science teacher I tried Visual Method to teach them Science and it worked! Then I had my training to teach the Deaf and in the training school they taught me "Maternal Reflective Method." When I had to head a school for the Deaf I was expected to start with oral-auralism even without Hearing Aids. Along with speech reading I taught the children signs for sounds somewhat like cued speech and that worked very well. To develop the language skills I also prepared special Reading Books for them. When I got an opportunity to visit U.K I came to know about the advantages of Sign Language. Due to the absence of Indian Sign Language we followed Total Communication. Recently when I did an M.A. (SEN) in Europe I understood the advantages of Bilingualism.

At last I found out "Deaf education" still has a long way to go in India. Answers to different situations cannot be answers imported from the west, but answers envisioned by people in their own countries with tools for thinking and a thinking cap.

LBJ [60] – 2nd
Floor Street

Effectiveness of Notetaking and Captioning for Deaf or Hard-of-Hearing Students with Tablet PCs (M4PN)

Michael S. Stinson, RIT/NTID

Lisa Elliot, RIT/NTID

Pamela Francis, RIT/NTID

Donna Easton, RIT/NTID

Anne Alepoudakis, RIT/NTID

Strand: Access Technology

Type: Poster

Audience: All

Abstract

This poster session will demonstrate two options for using C-Print with a Tablet PC: (a) a real-time notetaking option and (b) a captioning option. The session will also present evidence from two studies that have determined that the C-Print Tablet-based service is feasible to implement in classrooms and that it benefits D/HH students' communication access and learning.

Summary

This poster session will describe an advance of the C-Print classroom captioning system that enables it to work with a Tablet PC. C-Print is a widely used captioning service at secondary and postsecondary levels in the United States. The C-Print technology uses standard laptop and Tablet PC computers. A trained service provider uses word-abbreviations to closely capture lecture information. Specialized software, C-Print Pro, allows transformation of these phonetics-based abbreviations into full words on the computer screen and produces a display that students can read on a laptop computer.

Use of tablet PCs may significantly improve services for deaf or hard-of-hearing (D/HH) students, especially when a class includes both spoken and graphical information, such as most mathematics and science classes. Two options for using C-Print with a Tablet PC have been developed: (a) a real-time notetaking option and (b) a captioning option. With the real-time notetaking option, students view notes on a Tablet PC as they are being recorded by a notetaker. In the second option, a service provider uses a Tablet PC to provide graphical information side-by-side with the text of the spoken dialogue on the student's computer display.

The session will include evidence from two studies, one at the secondary and one at the postsecondary level, that have determined that the C-Print Tablet version is feasible to implement in classrooms and that it benefits D/HH students' communication access and learning.

LBJ [60] – 2nd
Floor Street

A Web Site for Independent Vocabulary Practice (M4PO)

Eugene Lylak, RIT/NTID

Norm Crozer, Pierce College

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

A vocabulary practice program has been developed with open web access to provide English vocabulary instruction for deaf college students. The program uses a commercially available text and provides immediate on-line feedback for the study of English vocabulary with Latin or Greek word roots.

Summary

The presenters will discuss computer programs they have been developing in conjunction with a grant to help classroom teachers provide English language instruction for deaf college students. The first of these programs available through a web site can be used as a primary source of instruction for teaching words with Latin or Greek word roots. The on-line program can generate up to seven practice sessions with feedback for any number of vocabulary items. Students first study the target words in conjunction with a commercial textbook, and then they log onto the web site for in-depth practice sessions. The seven practice sessions for the target words are preceded by a short pre-test, which then is followed by lessons that

check orthography, definition matching, synonym knowledge, context (through cloze practice), and word root identification. The practice sessions may be expanded, reordered, or removed by the teacher.

The program has the flexibility to allow for any specific, teacher-chosen vocabulary items to be added to any on-line word list. The program also automatically tracks, grades, and records student progress as items are completed. A forty (40) lesson practice package (possible for adaptation to high school use) will be available for participants to review.

LBJ [60] – 2nd
Floor Street

Dynamic Keyboard (MAPP)

George Slack, RIT
Adam Stull, RIT

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Discover new and untapped keyboard applications which may be beneficial to the deaf and hard of hearing. To enable this, an experimental dynamic keyboard has been developed that is capable of capturing a full range of tactile forces and timing values during normal keyboarding activities.

Summary

During the act of speaking and signing, the integration of thought and facial expression occurs simultaneously and seamlessly with little overt thought. In contrast, text entry differentiates or separates thought and associated expression. Keyboards only capture key strokes and thus lose this expression, even though the act of typing may carry expressive emotion with it. The goal of this project is to take these skills of speaking and signing and enable us to enrich the value of text entry.

It is clear that keyboards associated with PCs, Cell Phones, PDA's and other communication devices do not capture emphasis, cadence and rhyme associated with voice inflections or facial expressions. The standard QWERTY keyboard is familiar to all of us, and all keyboard devices have the common binary striking characteristic. By adding an analog sensing scheme to each key, not only would the key capture text as it does today, but it also will capture other attributes that may enable the rebuilding or integration of expressive emotion into this text.

Tuesday, June 22

8-8:45 a.m. Concurrent Session VI

LBJ [60] 2590

Current Trends of the Professional Education of the Persons with Disabilities in Russia (T8A)

Nikolay N.V. Pustovoy, Novosibirsk State Technical University
Gennadiy Ptushkin, Novosibirsk State Technical University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

This presentation discusses current trends of the professional education of persons with disabilities in Russia, including use of the new technologies in professional education of the students who are deaf and hard of hearing; improving networking; educational transitions, trajectories, and pathways; and overcoming communication obstacles, thus improving the

quality of education. Regional aspects of developments of the PEN-network in the Siberia region will also be discussed, giving perspectives on directions of the network's development.

Summary

We think that each student has different abilities. Our goal is to help you select the program that matches your interests and skills and allows you to achieve your educational objectives. NSTU ISR has its own course management system, adapted to on-line education. The goal of that system - to help educators create effective online learning communities.

SDC [55] 1310

The Dong Nai Project: A Case Study in High Quality, Low Cost, Low Tech Deaf-Centered Bilingual Education (T8B)

James Woodward, Dong Nai Provincial Teacher's College

Nguyen Thi Hoa, Dong Nai Provincial Teacher's College

Nguyen Tran Thuy Tien, Dong Nai Provincial Teacher's College

Nguyen Hoang Lam, Dong Nai Provincial Teacher's College

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

This paper describes a project begun in 2000 to provide Deaf adults in Viet Nam with high educational programs taught in Ho Chi Minh City Sign Language and written Vietnamese. The project is entitled "Opening University Education to Deaf People in Viet Nam Through Sign Language Analysis, Teaching, and Interpretation". The purpose of this project is to improve higher educational opportunities for Deaf people in Viet Nam and to demonstrate that most countries in the region could establish indigenous tertiary education program for Deaf people even if the country has few financial and human resources it can call upon, no previous sign language analysis, and only the most basic level of deaf education.

Summary

This paper describes a project begun in 2000 to provide Deaf adults in Viet Nam with high educational programs taught in Ho Chi Minh City Sign Language and written Vietnamese. The project is entitled "Opening University Education to Deaf People in Viet Nam Through Sign Language Analysis, Teaching, and Interpretation." The purpose of this project is to improve higher educational opportunities for Deaf people in Viet Nam and to demonstrate that most countries in the region could establish indigenous tertiary education program for Deaf people even if the country has few financial and human resources it can call upon, no previous sign language analysis, and only the most basic level of deaf education.

The project has had a dramatic impact on educational opportunities for Deaf people in Viet Nam, graduating the first class of Deaf students from Junior High School, graduating the first and only classes of Deaf students from Senior High School, and providing the only college program for Deaf students in Viet Nam. Deaf students in the project have taken the same National Examinations as hearing students, and Deaf students in the project had a 100% passing rate on the National Examinations for Junior High School and a 95% passing rate on the National Examinations for Senior High School, much higher rates of passing than hearing students in the same province.

The presentation will describe the above results in detail and how and why such results were possible, focusing on the Deaf-Centered nature of the project. By Deaf-Centered, we mean that the project fully accepts the Cultural Model of Deafness and all of its implications- including the recognition that Deaf people have equal intellectual and educational potential and the right to make all decisions regarding their own communication, their use/non-use of hearing-aids, etc. Details of the Deaf-Centered nature of the project will be

discussed and commented on in detail throughout the presentation. The paper will conclude by providing information on the cost of the project (average cost of less than \$40,000 per year) and the technology used in the project.

LBJ [60] 3237

Using Technology to Support Learning for the College Student with Hearing Loss: From Services to Support the Sign Language User to Services to Support the Oral Communicator (T8C)

Laura Frank, Korea Nazarene University
Hyun-Bea Yoo, Korea Nazarene University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

Korea Nazarene University (KNU) has been actively providing services to deaf and hard of hearing students since 1995. Due to the recent influx of students with hearing loss, technology currently being utilized to support learning cannot meet this new demand and improvements based on available technology are being explored. Technology areas which are being looked at include speech-to-text captioning, computerized visual displays, video remote interpreting, signed video-recorded lectures, and assistive listening devices. Each area will use available technology to meet the individual needs of every student involved. Utilizing appropriate technology without proper education or without taking individuality into account, will be ineffective. Technology, in conjunction with matching individual needs and proper staff education, can greatly increase the student's accessibility, motivation, ability to learn and retain information, as well as overall success.

Summary

Korea Nazarene University (KNU) has been actively providing services to deaf and hard of hearing students since 1995. Due to the recent influx of students with hearing loss, technology currently being utilized to support learning cannot meet this new demand and improvements based on available technology are being explored. Technology areas which are being looked at include speech-to-text captioning, computerized visual displays, video remote interpreting, signed video-recorded lectures, and assistive listening devices. Each area will use available technology to meet the individual needs of every student involved. Utilizing appropriate technology without proper education or without taking individuality into account, will be ineffective. Technology, in conjunction with matching individual needs and proper staff education, can greatly increase the student's accessibility, motivation, ability to learn and retain information, as well as overall success.

SDC [55] 1300

Use of the iClicker in an NTID Biotechnology Course (T8D)

Angela Foreman, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

This presentation will discuss the use of the iClicker in an NTID Biotechnology course for the first time in measuring the student learning of the Biotechnology material using real-time measuring features such as consensus and instantaneous discussion of each question, and immediate scoring uploaded to their grade on the MyCourses website.

Summary

The iClicker was introduced to the total group of 15 deaf/hard-of-hearing (d/hh) students in

both sections of an NTID Laboratory Science Technology Biotechnology class during the Winter quarter of the 20092 academic year. Approximately a total of 15 d/hh students participated within the weekly quizzes using the iClicker technology provided by NTID. A total of 10 questions relating to what was learned during the previous week's Biotechnology class were delivered each week with the exception of the midterm during week 6 and the take-home calculation quiz during week 7. The real-time dissemination of results of the students' choices for answers that allowed the students to maintain their privacy of their scores were discussed. At near the end of the quarter (during week 9), the students will be presented with a survey assessing the outcome, frequency of use, ease of use, satisfaction, and reliability of the iClicker. The data I will be shared during this presentation. In summary, this presentation will be an interactive one with participation from the audience in using the iClicker.

9-9:45 a.m. Concurrent Session VII

SDC [55] 1300

The CUNY CART Initiative: Fostering Success and Raising Student Achievement Through Technology (T3A)

Maryellen Smolka, College of Staten Island, City University of New York
Nicole Dory, College of Staten Island, City University of New York

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

The CUNY CART Initiative has fostered total access and full integration for college students who are Hard-of-Hearing throughout the City University of New York (CUNY). Student achievement has improved using the latest voice-to-text technology with web-conferencing software, and emphasizing training of service providers, students and faculty. This interactive presentation will demonstrate the technology and its integration with best practices in supporting students.

Summary

The Multi Media Regional Center for Deaf and Hard-of-Hearing Students at the College of Staten Island (CSI) is raising achievement with state-of-the-art technology and innovation through CART (Communication Access Realtime Translation). Providing service to students throughout CUNY using voice recognition software with web-conferencing software and "netbooks," student are participating in their classes with virtual CART providers and experiencing a high level of independence. Students simply come to class, open their netbooks, and experience total access and full integration into their coursework.

Working smarter and placing an emphasis on training, the results have been transformational, qualitatively and quantitatively, through the CUNY CART Initiative. This interactive presentation will highlight:

1. A history of the initiative which was a springboard from the on-site CART project which began in 2001
2. A demonstration of remote CART which was developed and implemented at CSI and later offered to all CUNY campuses. This demonstration will highlight specific audiences targeted for this service as well as the technical requirements for the provider and the student.
3. A discussion of the advantages and challenges including assessment data highlighting
4. student achievement and faculty feedback, which have also impacted the satisfaction, recruitment and retention of students
5. A cost analysis of this service which will reveal tremendous cost effectiveness and how it has influenced growth.

SDC [55] 1310

Use of Visual Communication Tools Inside of Distance Learning (T9B)

Aaron W. Kelstone, RIT/NTID

Simon Ting, RIT/NTID

Cathy Clarke, RIT/NTID

Strand: Online Learning

Type: Concurrent

Audience: All

Abstract

Current distance learning courses rely heavily on discussion board and text based assignments. The inclusion of visual communication tools to enhance the learning process within a distance learning format is becoming more feasible for teaching and learning purposes which is beneficial to both deaf and hearing students.

Summary

During the 2010 spring quarter, NTID and Gallaudet conducted an experimental distance-learning project involving students from both universities. Students were enrolled in the Deaf Theatre History course taught by Ethan Sinnott from Gallaudet University and Aaron Kelstone from NTID. Development efforts, building on NTID's course management system "IdeaTools" spearheaded by Simon Ting and Cathy Clarke from the NTID Educational Design Resource department, supported the introduction of visual-based communications processes, such as videoconferencing and remote collaboration, in the instructional process. Adding these visual communications elements into the distance learning process expanded teaching and learning opportunities beyond the traditional text-based format used in most distance learning courses. This process allowed both teachers and both classes from each university to use low-cost webcams to facilitate meetings, lectures, and other interactions that focused more on visual learning activities and less on text based assignments.

This presentation will discuss the challenges, experiences, and benefits of adding visual tools to a distance learning course that provides academic benefits for both students and teachers that are less technically complex and costly for users.

LBJ [60] 3237

Developing a Resource Center for Advancing Technological Education for Deaf and Hard-of-Hearing Students (T9C)

Donna A. Lange, RIT/NTID

Myra Pelz, RIT/NTID

Gary Long, RIT/NTID

Ronald Till, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

NTID, a college of RIT, was awarded an NSF planning grant for developing a resource center for Advancing Technological Education for Deaf and Hard-of-Hearing Students. During this session, the principal investigators will share the vision, and collect feedback from the conference audience, for this national resource center.

Summary

During this session, a round-table discussion will be used to share the vision, and collect feedback from the conference audience, for a national resource center that is being planned at the NTID. The goal of this center is to increase the number of deaf and hard-of-hearing technicians entering the high-technology fields that drive our nation's economy. This center will serve as a resource for high schools and colleges that educate deaf and hard-of-

hearing students in STEM-related technical programs and for employers hiring deaf and hard-of-hearing individuals.

The national resource center will include:

1. A website that will serve as an online clearinghouse for:
 - (a) Career information on STEM-related technician programs and best teaching practices targeted specifically for deaf/hh students in high schools and community colleges,
 - (b) Information on working successfully with deaf/hh technicians for employers and co-workers.
 - (c) Curriculum materials related to remedial English and math.
 - (d) A collection of universal design strategies for development of a technical curriculum and training on best instructional strategies for high school and community college teachers who have mainstreamed deaf and hard-of-hearing students in their classrooms
2. Professional development opportunities and resources to help teachers improve the access to learning and academic success of their deaf and hard-of-hearing students
3. A national dual credit program with high schools
4. Articulation agreements with community colleges to accept NTID/RIT dual credit and transfer agreements for deaf and hard-of-hearing students interested in continuing in baccalaureate programs at RIT.

LBJ [60] 2590

Building Creative Thinking, Reading and Writing Skills of the Deaf, Hard of Hearing and Blind Learners (T9D)

Daniela J.D. Janakova, Charles University
Marie Dolezalova, Charles University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

This presentation focuses on introducing multiple hybrid readers in Czech, English, German and Russian for students with special needs. These readers are connected with the Internet where the fairy tale texts are projected on a screen and, at the same time, accompanied by natural sounding voices of native speakers reading the single stories. English version is also supplemented with a workbook and recall power point presentations.

Summary

This presentation called focuses on introducing a multiple hybrid reader in four language mutations: Czech, English, German and Russian--which are all connected with the Internet where the written fairy tale texts are projected on a screen and at the same time are accompanied by natural sounding voices of native speakers reading single stories.

These four hybrid readers are the result of cooperation between the Faculty of Arts Language Resource Center, Charles University in Prague and Teireisias - the Support Centre for Students with Special Needs at Masaryk University in Brno. The English version of this multiple reader is supplemented with a special English workbook containing extensive English ... Czech glossaries, commentaries of important grammar points, questions and writing tasks that follow each fairy tale. This workbook is also enriched by power point picture presentations stimulating learners' memory, helping the students to recall and retell single fairy tales.

The main goal of the above study materials is to stimulate and keep the learners' attention focused the best possible way bearing in mind their special learning needs.

10-10:45 a.m. Concurrent Session VIII

SDC [55] 1300

Using Social Networking Techniques to Enhance Learning for Deaf Students Online (T10A)

Cathy Clarke, RIT/NTID
Simon Ting, RIT/NTID

Strand: Online Learning

Type: Concurrent

Audience: All

Abstract

Current social networking technologies have potential to serve as classroom tools. This presentation will demonstrate the use of social networking applications combined with an online course management system. These applications encourage user interaction and informal discussion, and provide simple ways to connect external web resources with course content.

Summary

The presenters, a Digital Media Specialist and Instructional Developer at NTID, have experience designing online courses using IdeaTools, an online content development and management system they created. Recently, they have developed applications and tools which integrate social networking methods with IdeaTools courses.

The first of these applications adds a panel to an IdeaTools course that is similar to the Facebook "wall." Users can post short text messages, images, links, even record a webcam video. This encourages informal interactions between instructors and students, and among students and their peers. Another application integrates an open-source blogging platform, WordPress, with IdeaTools courses. Instructors can create a blog post from within their IdeaTools course. The post is distinguished from other course materials because it allows for student commenting, which serves as a starting point for discussion. An added benefit of WordPress integration is the opportunity to utilize the multitude of plugins developed for the platform, many that enhance the interactive and social aspects of blogging.

The presenters will demonstrate these applications and discuss the results of initial usage in IdeaTools courses.

SDC [55] 1310

Wikis and Blogs as Schoolwide Tools (T10B)

Kathy Tarello, Rochester School for the Deaf

Strand: Online Learning

Type: Concurrent

Audience: PreK-12

Abstract

At Rochester School for the Deaf, wikis and blogs have proven to be excellent platforms for classroom discussion and information sharing, staff development, and resource management. The capability to post information in English text and ASL video allows complete access and encourages use of academic language in a highly motivating format.

Summary

Rochester School for the Deaf has begun using wikis and blogs with resounding success in the classroom, for staff development and as a method of resource management. This presentation will showcase various wikis and blogs created by RSD staff and students and detail how they are used to enhance learning and communication.

The use of wikis and blogs has had a strong impact on the learning of both our students and staff. It provides complete access to information and supports the bilingual model of instruction of Deaf and Hard of Hearing students by allowing information to be posted in

English text and ASL video. Students are exposed to the use of academic ASL and English in a highly motivating and engaging format. Content can be easily created and modified by students themselves, empowering them to take charge of their learning.

As a staff resource, wikis and blogs are used in ways ranging from casual conversations among members of collegial circles to a formal online course, as well as for storage of resources in the form of web links, documents, photos and videos.

In addition to showcasing wikis and blogs currently in use at RSD, I will discuss various sites that offer free hosting of wikis and blogs, and suggestions for ways to design and create them in your classroom or school.

LBJ [60] 2590

Remote Services – What to Do and How to Do It! (T10C)

Philip A. Hyssong, Alternative Communication Services, LLC

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

Schools throughout the country are opting for remote text services for students with hearing loss, however they are missing some fundamental training steps and intricate differences in service types. This workshop will demonstrate live and compare verbatim and meaning-for-meaning text services and offer key elements for successful implementation.

Summary

Disability offices are recognizing the benefits of remote CART, captioning and Text Interpreting. However, schools start the process very enthusiastically only to get bogged down in technology and discouraged by what is produced. However, this does not have to be the case. Through demonstration and shared experience, participants will have the opportunity to experience and learn successful remote service.

First, the proper service needs to be selected. Cost should not be the determining factor in learning objectives being met. While there is a difference in cost, verbatim and meaning-for-meaning services serve different groups. Services will be reviewed, and examples given so that participants are fully aware of differences.

Once a service is selected, remote challenges include poor audio, internet challenges, and a lack of training. This workshop will assist those attending, and those whom they serve, in developing strategies to implement services successfully.

An overview of Voice-over-IP (VoIP) technology will be shared with participants. Microphones and best practices will be reviewed. Issues addressed will include large rooms, small rooms, quiet professors and interactive classrooms.

Finally, training of the student, professor and staff will be reviewed. Training time lessens the chance of failed communication and frustrated participants.

At the end of the presentation, participants will be able to:

1. Define Voice over the Internet Protocol (VoIP) and name two different VoIP providers.
2. Define three different forms of internet connectivity and articulate their strengths and weaknesses.
3. Identify three groups that need training and highlight the necessary training steps for each group.
4. Be able to articulate the differences between verbatim and meaning-for-meaning services.

LBJ [60] 3237

Access Technologies in Japan: PEPNet-Japan Training Workshop for Access Technologies (T10D)

Mayumi Shirasawa, Tsukuba University of Technology

Shigeki Miyoshi, Tsukuba University of Technology

Sumihiro Kawano, Tsukuba University of Technology

Kyoko Isoda, Tsukuba University of Technology

Strand: Access Technology

Type: Concurrent

Audience: Postsecondary

Abstract

Access technologies used in Japanese postsecondary educational institutions have diversified. To share and familiarize these technologies, The Postsecondary Education Programs Network of Japan (PEPNet-Japan) held a training workshop targeted service coordinators in each institution. In this presentation, the technologies shared in this workshop will be illustrated.

Summary

As for the recent development of information communication technology, access technologies used in Japanese postsecondary educational institutions have diversified. Not only standard text interpreting technology via laptop computers, but also remote captioning, voice recognition, and new technology to create captioned media have been developed and introduced to several universities to equal communication access for students with hearing disabilities. To share and familiarize these technologies, The Postsecondary Education Programs Network of Japan (PEPNet-Japan) held a training workshop targeted service coordinators in each institution. In this presentation, the technologies shared in this workshop will be illustrated and the outcome of this workshop will be discussed.

The technologies which featured in this workshop are following: text interpreting technology used IPtalk software, remote captioning technology via iPhone, speech to text technology supported by voice recognition technology and re-speak system, and video captioning system used Camtasia studio 5 and Caption Master.

11-11:45 a.m.

Concurrent Session IX

LBJ [60] 2590

Remote Interpreting n Rural School Districts (T11A)

Barbara Keefe, PEPNet-Northeast

Lloyd Scott, Southwest Vermont Supervisory Union

Joyce Gallagher, Sign Language Specialist of Western Pennsylvania

Lori Hutchison, PEPNet-Northeast

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: PreK-12

Abstract

Deaf students in rural areas are entitled to the same access support as their peers who live in urban clusters. Unfortunately, those resources are often not available. A panel of professionals will provide an overview of one rural school district's response to address this issue.

Summary

What recourse does a special education administrator have when services are unavailable locally to meet the mandated need of a student who is deaf for a sign language interpreter? Aside from a visceral reaction of "panic" the administrator reaches out for help.

An audiologist request in rural Vermont for technical assistance to access an interpreter triggered a response that initiated a pilot using a remote interpreting service through video conference technology. The use of technology to solve a problem is not new, except in cases where it has never been tried and where there is no precedent for its use. By applying high end video conference technologies a student's opportunity to access the academic

curriculum is realized. The use of this technology establishes discrete challenges for the student, interpreter, teachers, administrators, and support personnel in a high school environment? What are the critical elements necessary to deliver a successful remote interpreting service to a student who is deaf? What is the legal impact of delivering a mandated service through distance technology?

These questions and more will be addressed by the professionals who helped initiate the pilot and continue to play a major role in its implementation.

SDC [55] 1310

In Our Hands: The Future of Translation of "Frozen" Texts to Sign Language (T11B)

Benjamin J. Cavaletto, RIT/NTID

Miriam Lerner, RIT/NTID

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

We will show a prototype website that will foster the creation of translations of "frozen texts" (that is, texts whose wording will not change, for example, famous speeches) between spoken and signed languages, e.g., English and ASL. The site will host an international video-sharing community that allows lay and professional translators to post, rate, comment on, and improve upon their collective translations.

Summary

We feel that a key solution to the appalling lack of English-ASL translations is to produce a website that will foster the creation of translations of "frozen texts" between spoken and signed languages. The site will host an international video-sharing community that allows lay and professional translators to post, rate, comment on, and improve upon their collective translations. We will present a prototype of this online community site.

This project is one piece of a three-pronged effort to create an NTID Center on Translation (a world's first for signed languages). The other goals are to create a clearinghouse, where all ASL-English translations are catalogued, and to produce top-quality team translations of famous American speeches, documents, and literature by our own Division of Access services (with the collaboration of Deaf translators).

SDC [55] 1300

myAccess: A Web-Based Data System Supporting Access Services at RIT (T11C)

Steve Nelson, RIT/NTID

Kevin Carpenter, RIT/NTID

Steve Lindsey, RIT/NTID

Strand: Access Technology

Type: Concurrent

Audience: Postsecondary

Abstract

A feature rich data system facilitates requesting, communication with clients and managing the enormous detail needed to provide 200,000 hours of access services at RIT. The system demonstrates the value of integrating data from multiple systems for use by interpreters, captionists, clients, and service managers and the potential for web-based data tools to support delivery of services.

Summary

We will demonstrate a new web-based data system recently developed and implemented at RIT to support the delivery of access services. Features include gathering and responding to requests, assignment of providers, communication of schedules, managing collection and distribution of classnotes, back-up and on-call resource management, placing and

tracking orders for freelance providers, collecting feedback and problem reports. The system uses SQL data tables integrating data gathered from multiple sources including RIT's registration system, directories, course catalog and requests made through a client web interface provided to all RIT community members.

We will discuss the partnership between Access Services and Systems Development and the iterative design process that succeeded in building a very large, complex, feature rich system that works to support a wide array of services. Design decisions made and lessons learned from previously failed efforts will be discussed.

LBJ [60] 3237

Answering a PhD Qualifying Exam in ASL: One Person's Experience (T11D)

Ellen S. Hibbard, Ryerson University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

Technology is making it possible to create and save video ASL documents. This has the potential to encourage deaf academics and students who use ASL to record, edit, submit and store their academic material in ASL without the need to translate it to a written language. We present a process that was successfully implemented at Ryerson University for the writing and evaluation of a PhD comprehensive exam in ASL.

Summary

At Ryerson University, we are exploring ways in which to become successful at supporting deaf graduate students in the preparation and submission of ASL academic materials. I will present the first attempt made at Ryerson to write part of a doctoral level comprehensive exam in ASL, and describe the process, successes and pitfalls that occurred. I will draw from my personal experience of creating and submitting an ASL video essay for a PhD comprehensive examination at Ryerson University.

For the exam, I was required to complete the ASL equivalent of one 10-page written essay on a specific topic within a 24 hour period. I was also given an additional 48-hour to submit two other essays in a written English form. A three-essay exam written over a 72-hour period is the requirement for all doctoral students in that specific program. The preparation of the ASL video included using power point slides to break down the question and organize the content of the answer. Discovering how long to make the video essay and details of the preparation processes including the difficulties encountered will be discussed. The completed video essay was sent to ASL interpreters for voice translation to be added to the video prior to committee's evaluation.

Compared with my written answers, the examination committee found that my ASL answer was superior in form and content. However, they were also able to identify areas of weakness in my critical thinking process that were consistent between the written and ASL answers. Writing my exam in ASL allowed me to maximize my potential for providing an exam answer while not preventing access for my hearing committee members. We were able to find a solution that worked for all involved.

1-1:45 p.m.

Concurrent Session X

SDC [55] 1310

English Splash! A Teaching English Online Resource (T1A)

Loriann Macko, PEPNet-Northeast

Strand: Online Learning

Type: Concurrent

Audience: Postsecondary

Abstract

PEPNet designed the English Splash! online resource as a "one-stop-shop" for English teachers who work with deaf or hard of hearing students to access downloadable materials, writing tools, educational links, curriculum examples, and much more.

Summary

Like a drop of water that sends ripples into the water around it, English Splash! is a "drop" of information designed to initiate "ripples" of resources to access. Created for English teachers who works with deaf or hard of hearing students at the secondary or postsecondary level, teachers can access downloadable materials, writing tools, educational links, curriculum examples, and much more. This site also supports paraprofessionals, interpreters, and others who work with students who are deaf or hard of hearing.

The presenter will showcase the website, and demonstrate some of the contents in the 4 sections, including:

1. Tools - Tools you can apply in the classroom right now. Categorized by Reading, Writing, Vocabulary, Grammar, and Combination.
2. Approaches - Interactive models as well as ASL/English approaches.
3. Unique Issues - Tips for teaching deaf/hard of hearing students, language acquisition information, and high-school-to-college English transition resources.
4. Resources - Resources such as books, articles, research findings, and more.

SDC [55] 1300

Empowering Mainstreamed Deaf Students with Multiple Video Perspectives (T1B)

Raja S. Kushalnagar, University of Houston
Jehan-Francois Paris, University of Houston

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

Two approaches in empowering mainstreamed DHH students are investigated: multiple video perspective streams from camera-equipped mobile devices in mainstream class presentations; and indexing the videos by audio, overhead and whiteboard captions. DHH students take control of their learning process by video display prioritization, visual dispersion demand reduction and text index searching.

Summary

Modern classroom presentations include auxiliary information perspectives, such as white boards, multimedia overheads, demonstrations, and may include text captions of the audio or audio descriptions of the presentation. Although these multiple perspectives aid in learning and retention, it is difficult for deaf and hard of hearing students to see all perspectives simultaneously. With the advent of inexpensive camera-equipped mobile devices, students can capture and view multiple video perspectives cheaply.

The first approach is to enable deaf and hard of hearing students in mainstream classes to capture and view multiple video perspective streams from multiple camera-equipped mobile devices. This solution is portable, passive, requires no pre and post production, and captures synchronized high resolution visual aids accurately. We show this approach is cheaper, more empowering, flexible and easier to deploy than a camera operator capturing all perspectives using a single high bandwidth video camera.

The second approach is to segment and index the presentation by utilizing audio captions and optical character recognition of overheads and white boards.

These two approaches assist deaf and hard of hearing students take control of their learning process by prioritizing their views of the multiple video streams on their end, reduce visual dispersion demands by grouping the video views and search/review the presentation by text keywords.

LBJ [60] 2590

Video Relay Services (VRS) and Deaf Education: A Panel Discussion (T1C)

David Coco, Texas School for the Deaf

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

This workshop will be a panel discussion on Video Relay Service (VRS) and Deaf Education programs. The main focus will be on K-12 programs for deaf and hard-of-hearing students, but much of it will also apply to postsecondary programs. The panelists will be representatives from several VRS providers.

Summary

This workshop will be a panel discussion on Video Relay Service (VRS) and Deaf Education programs. The main focus will be on K-12 programs for deaf and hard of hearing students but much of it will also apply to postsecondary programs. The panelists will be representatives from several VRS providers.

The moderator will provide some background on video communication programs and VRS at Texas School for the Deaf (TSD). This background will cover the basics of how VRS works; how VRS benefits TSD; and how we prepare students to use video communication technology effectively.

Then each VRS representative will provide a short summary of their company's background and an example of how their company works with schools with deaf students. The VRS representatives will make some comments on how they believe VRS will impact K-12 Deaf Education programs in the future and how these programs can help prepare students for careers in technology. Finally, the representatives will give their opinions on what the future holds for video communication technology and VRS.

The audience will have the opportunity to ask questions of the VRS representatives.

LBJ [60] 3237

American Sign Language Finger Challenge (T1D)

Jeffrey Cougler, RIT

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

Among current media-rich websites, including game sites, there is no interactive product that mimics real-time fingerspelling. Using computer-aided instruction (CAI), Adobe Director, Flash, QuickTime videos and QuickTime Virtual Reality movie clips, the presenter will demonstrate "American Sign Language Finger Challenge," an interactive software prototype that helps people improve fingerspelling reception.

Summary

AMERICAN SIGN LANGUAGE FINGER CHALLENGE (ASLFC) is an interactive software prototype that uses real-time animation to help improve American Sign Language (ASL) fingerspelling reception. This computer-aided instruction (CAI) program uses Adobe Director as the engine to run Flash, QuickTime videos and QuickTime Virtual Reality movie clips. At the presentation, the presenter will demonstrate current CAI models using a personal laptop computer hardwired to a projector unit. The ASLFC software uses a step-by-step approach for learning the ASL manual alphabet, then guides users through review processes that use a randomizer, so each user experience is totally different from the previous one.

Research conducted by the presenter while on a Fulbright Scholarship in Rome, Italy, will be included in the presentation. The thesis document explains the process the author used

to create this work, user test results that helped to improve the software and to validate its effectiveness, and the future of the software created.

2-2:45 p.m.

Concurrent Session XI

LBJ [60] 2590

Experimentation with Classroom Capture (T2A)

Marsha Young, RIT/NTID

Alvin Boyd, RIT/NTID

Mitchell Bacot, RIT/NTID

Supriya Kulkarni, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

This past academic year, we have experimented with technologies to capture the classroom experience and to make the capture available and accessible as a teaching/learning resource. We've been developing instructional strategies for better supporting student learning through capitalizing on classroom capture technologies and evaluation strategies for assessing the impact of these technologies on student learning.

Summary

The classroom capture technologies with which we have been experimenting yield a multi-frame window with video of instructor, video of students, projected media, and captions of classroom audio (if available) shown synchronized in the individual frames. The captured classes are made available via links myCourses, RIT's online course management system. The content is accessible any time/any- where, requiring only a Mac or PC and a web connection.

The topics we're addressing in this presentation are:

1. What are the potential benefits of classroom capture for students in general and what are the potential benefits for deaf and hard-of-hearing students in particular?
2. What technologies have we tried?
3. How do these technologies meet the access need of deaf and hard-of-hearing students?
4. What were the characteristics of the courses, the instructors, and the students involved in our experimentation?
5. Instructors' reflections/observations.
6. Students' time with captures, use of captures, achievement, reflections/observations.

We will conclude with recommendations for further investigation into and utilization of classroom capture.

SDC [55] 1310

LAMBERT Grant: First Year Results of Using RFID Technologies to Facilitate Tangible Learning Interactions for Deaf Pre-Schoolers (T2B)

Becky Sue Parton, Southeastern Louisiana University

Robert Hancock, Southeastern Louisiana University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: PreK-12

Abstract

This session is a follow-up to the Lambert prototype which is now the focus of a 2 year Stepping Stones grant. Year one activities including the development process, feedback notes, and curriculum integration results will be shown. The Lambert system facilitates natural learning processes while teaching vocabulary to young, Deaf children.

Summary

At the last Symposium the authors demonstrated a prototype for LAMBERT (Language Acquisition Manipulatives Blending Early-childhood Research and Technology). Subsequently, we were awarded a Department of Education Stepping Stones grant to further develop and field test the system. The system uses Radio Frequency Identification (RFID) tags attached to kid-friendly manipulatives in order to connect the physical and digital world in a way that facilitates natural learning processes. When the tags are triggered, a video automatically plays that is designed to teach pre-school age Deaf children vocabulary concepts through a Bi-lingual approach. In this session, the researchers and the pre-school teacher from the Louisiana School for the Deaf (LSD) will describe the grant's first year activities which include:

1. The creation of a 500 word databank of concepts
2. The use of the Lambert system throughout Louisiana by the Parent Pupil Education Program (PPEP)
3. The modifications made to the system after professional reviews including the expansion of the videos to include sample ASL sentences
4. The expanded pilots for assessment features of the system at LSD and the Jean Massieu Academy for the Deaf (JMA) in Texas, and
5. The creation of a web-site for dissemination.

Photos, videos, and research data will be presented. Participants will have the opportunity to use the database and participate in future research.

SDC [55] 1300

Sign Language Terminology with Multimedia in Computers and Communication Education Context (T2C)

Benjaporn Saksiri, Ratchasuda College, Mahidol University

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

This paper presents the design and implementation of sign language terminology with multimedia in Computers and Communication (C&C) education context. The study also conducts the accessibility and appeal of the prototype made it instructive for teachers and students, many of whom do not know the signs for specialized C&C concepts.

Summary

Consequently, the concept list of Computers and Communication (C&C) terminology had, in our case, the representation equivalents in the context of spoken languages: a set of English terms (source language) and a set of Thai translations. In the case of C&C-skills terminology, sub-area fields include: Computer Graphic, Computer Animation, E-learning and Web Accessibility. The task is to create terms in Thai Sign Language (ThSL) for the same concepts, creating terminological items according to sign language word formation principles. This was a crucial prerequisite for the proposed denominations to be recognized by native signers as components of ThSL with acceptable internal structure and specific cognitive content.

The task of concept denomination for the formation of a terminology list in ThSL is undertaken by a working group of terminologists, computational linguists, ThSL specialists and computer skills teachers. The design of the terminological resources is based on term lists, the formation of which is described in the methodology section. Each entry corresponds to a term in a specific domain and includes fields for the video recorded term-sign, a video file serving as a visualized term definition, the equivalent Thai term, the equivalent English term, and multimedia presentation in which the term is used.

Assessing Computer Knowledge Using Video-Based Signer Compared with Examination Text-Based (T2D)

Chirapa Niwatapant, Ratchasuda College, Mahidol University

Strand: Assessing the Impact of Technology in Teaching/Learning Process**Type:** Concurrent**Audience:** Postsecondary**Abstract**

This investigation seeks the key factors in video-based versus text-based assessment. The factors considered here include content familiarity, computer skill, first language, and gender. Following classroom instruction, deaf undergraduates were randomly assigned to either a video-based or identical text-based test. Tested data showed that the video-based test group outperformed the text-based test group.

Summary

Deaf and Hard of Hearing (DHH) students enrolled in college attend traditional in-class instruction; they typically do so with the assistant of sign language interpreter. This system is seen as lacking the clarity of direct one-to-one communication. Students whose first language is Thai Sign Language (ThSL) may have difficulties extracting meaning from written text and formulating answers in Thai or English in case of computer literacy. Many find multiple-choice or long complicated examination questions difficult to understand. Content assessment may also disadvantage deaf students if they are not provided with appropriate reasonable adjustments.

It is good practice to provide DHH students with early information about the assessment strategy for their course. DHH students can then think about any difficulties they might face and identify their needs. The information provided should include assessment timetables, alternative assessment methods and alternative assessment activities.

The purpose of this paper is to present findings on alternate assessments for DHH students. This study investigated two alternate assessment formats: text-based and video-based testing. Analysis includes descriptive data of alternate assessment use across all two formats, qualitative analyses of teacher perspectives, and an exploratory analysis on predictors of alternate assessment use.

3-3:45 p.m. Concurrent Session XII***Using the NCES Data Analysis System (DAS) to Answer Questions Posed by Constituents (T3A)***

Gerard G. Walter, RIT/NTID

Dianne P. Bills, RIT

Strand: Assessing the Impact of Technology in Teaching/Learning Process**Type:** Concurrent**Audience:** Postsecondary**Abstract**

People often ask questions concerning the national characteristics of postsecondary students, including those who are deaf or hard of hearing. A number of national studies include such information. This workshop, conducted by an institutional researcher, and professor of Information Technology, will demonstrate how to use the NCES Data Analysis System (DAS) to create tabular information about postsecondary students. (Participants are encouraged to bring their laptop to the session and register it on RIT's network).

Summary

The purpose of this workshop is to (1) provide participants with an overview of the National Center of Education Statistics' Data Analysis System (DAS), (2) demonstrate how to create tabular output and regression analyses using DAS, and (3) provide an opportunity for

attendees who have internet access to conduct their own analyses.

Data concerning students who are deaf or hard of hearing will be used in demonstrations during the presentation. As a result of this presentation, attendees should be able to access the NECS Data Analysis System and create their own disability specific tables. In addition, handouts will summarize details of the workshop and provide printed directions for accessing the DAS system.

Part one of the presentation will provide an overview of the NCES Data Analysis System. The Data Analysis System (DAS) is a software application that allows a user to produce tables and to estimate covariance analyses from NCES datasets. Using the DAS Online, one can create instructions to run tables and regressions, and view output using a web browser. In the Tables mode, the DAS will create a table that takes into account the complex sampling designs used in NCES surveys. In the Covariance Analysis mode, the DAS will generate output for a weighted least square regression or logistic regression.

Part two of the workshop will use three datasets to demonstrate how to construct tables and conduct covariance analyses using actual questions: National Postsecondary Student Aid Study (NPSAS), Beginning Postsecondary Students (BPS) survey, Baccalaureate and Beyond (B&B) survey.

Participants will be able to use the NCES Data Analysis System (DAS) to create tables and regression analysis for any of the (DAS) datasets included on the NCES DAS website.

LBJ [60] 3237

Asian SignBank (T3B)

Ka Yiu Cheng, Chinese University of Hong Kong
Tang Wai Lan, Chinese University of Hong Kong

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: All

Abstract

Asian SignBank is an online platform supporting sign language teaching and materials development, as well as Asian sign language research. The infrastructure of the database is now complete and tested with 3,000 Hong Kong signs inputted into the system. In this presentation, we will demonstrate how the Asian SignBank can facilitate sign language teaching and research. We will also introduce some newly invented procedures, such as automatic sign language teaching / dictionary compilation.

Summary

The idea of creating a bank of natural signs observed in different countries of Asia emerged when a group of sign language researchers engaged in compiling dictionaries and teaching materials of Hong Kong Sign Language. Thanks to the support of the Nippon Foundation, the project kicked off in 2004. After a few years of development, the infrastructure of the Asian SignBank has been built and tested with around 3,000 Hong Kong signs inputted into the system. Now that the system is mature, the team of researchers is planning to input signs from different countries in Asia. The next target sign languages for the Asia SignBank will be from the sign language varieties of Indonesia and Sri Lanka.

With this sophisticated database system in place, the team has recently created an additional procedure, the automatic creation of sign language materials. After customizing the basic layout of the page, the sign language materials will be produced in PDF format automatically. All these steps are done through the internet browser, and no special additional software is required. The outputs can be turned into lesson handouts or sign language dictionaries. The Asian SignBank and all its related procedures have high pedagogical and research value for sign language teachers, interpreters, social workers and sign language researchers.

When the system is extended to cover other sign languages in Asia, modifications of functions are deemed necessary in order to answer the needs of sign language teachers,

material developers and researchers. Imminent ones are how to enrich the search function and data access system, and how to export signs into different formats.

SDC [55] 1310

OLPC (One Laptop Per Child) / Sugar Video Chat Enhancements for Deaf Communication and Education (T3C)

Stephen Jacobs, RIT
Remy DeCausemaker, RIT

Strand: Access Technology

Type: Concurrent

Audience: All

Abstract

The One Laptop Per Child XO Computer has been deployed around the world to hearing and Deaf students. In 2010 PEN International and RIT's Lab for Technological Literacy began to explore improving the XO video chat application for use with Deaf Students and educators. This presentation will discuss the project.

Summary

The One Laptop Per Child XO Computer has been deployed around the world to hearing and Deaf students. In 2010 PEN International and RIT's Lab for Technological Literacy began to explore improving the XO video chat application for use with Deaf Students and educators. This presentation will discuss the project.

LBJ [60] 2590

Drupal: Making Websites Easy to Manage (T3D)

Jonathan J. Millis, RIT/NTID
Clare Dygert, RIT/NTID

Strand: Using Technology to Support Learning

Type: Concurrent

Audience: Postsecondary

Abstract

Drupal is a free software package that allows an individual or a community of users to easily publish, manage and organize a wide variety of content on a website. We will demonstrate how we have been utilizing Drupal at NTID.

Summary

Due to the difficulty and complexity of maintaining a web site, we have invested our time and energy in supporting Drupal. Many departments, groups, or organizations that have had websites in the past, find it difficult to maintain websites, especially if the original programmer/creator has moved on to another position. This free, shareware, software allows the end user, or designated maintainer of a website, to easily maintain, edit, add, or modify the website with little training and knowledge of web programming.

The built-in functionality, combined with freely available add-on modules, will enable features such as: Blogs, Forums, Polls, Collaborative authoring environments, Newsletters, Picture galleries, File uploads/downloads, and much more.

Drupal is open-source software distributed under the GPL ("GNU General Public License") and is maintained and developed by a community of thousands of users and developers.

4-5:30 p.m.

Poster Session II

LBJ [60] – 2nd
Floor Street

Planning a Virtual Alliance for Deaf and Hard of Hearing STEM Students at the Postsecondary Level (T4PA)

Gail L. Hyde, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

This poster session will discuss the goals and objectives of a planning grant to advance knowledge of how deaf or hard-of-hearing students access cyber-enabled social and support networks in STEM education - and to elicit partnerships with postsecondary institutions to form an alliance to help bring these networks to fruition.

Summary

This current project is a planning grant, funded by the National Science Foundation (award no. 0927586), to advance knowledge of how students who are Deaf and hard-of-hearing access a cyber-enabled social and support network in STEM education. This project will establish a comprehensive baseline profile of current and recently graduated mainstreamed Deaf and hard-of-hearing STEM students and then formulate specific plans for enriching the academic performance of these students through a virtual alliance for students with disabilities in STEM. There is a specific project goal to establish a baseline profile of these students from selected postsecondary programs that could participate in a projected virtual alliance. The project will also develop and pilot a rudimentary, prototype, cyberinfrastructure system that could support the features of a virtual alliance for students with disabilities in STEM.

LBJ [60] – 2nd
Floor Street

All-in-One – Structure of Services for Hearing-Impaired University Students (T4PD)

Radka Faltinova, Masaryk University

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

The poster will present a comprehensive application of several well-known as well as less-known educational technologies for hearing impaired students, which form one integrated package of services. This is an existing application at Masaryk University in Brno, Czech Republic.

Summary

Based at the second largest university in the Czech Republic (the total number of students is 40,000), the Center for Students with Special Needs was established in 2000 and is a centralized office of Masaryk University. It provides services for students with a wide spectrum of disabilities. More than 100 students served are hearing-impaired.

For this group of students, the center provides comprehensive services in-house to individual students. This includes for instance preparation for entrance examinations (preparatory e-learning courses, a learning capabilities test supplemented by translation into Czech sign language) and making curriculum available (instruction, tutorials as well as administrative tasks supported by in situ or on-line interpreting or notekeeping).

In addition, the centre develops its own technologies. For instance the third-generation hybrid book, a dictionary of specialized terms for subjects currently studied and a one-language dictionary of Czech sign language, which includes transcription via signwriting. Finally, the center provides trainings for learners of Czech sign language and a well-equipped learning center for professional interpreters.

LBJ [60] – 2nd
Floor Street

Highlighting Our Own Characteristics to Develop High-Quality Higher Education for the Deaf (T4PE)

Guodong Bao, Tianjin University of Technology

Xin Tong, Tianjin University of Technology

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

Type: Poster

Audience: Postsecondary

Abstract

Tianjin University of Technology(TUT), which has been funded and supported by the municipal government as a key institution of higher education, is an engineering-based multi-disciplinary university that combines engineering with science, and adheres to harmonious development of engineering, science, liberal arts and management. Now there are 32,000 Current Students, 54 undergraduate programs, 39 master's degree in the TUT, and covering 20 million square feet.

As a Partner of PEN International, Engineering College for the Deaf (ECD) of TUT has developed rapidly in 10 years, ECD has made consistent efforts to perfect its mode of education for the deaf and gained remarkable achievements and has made a lot of teaching achievements.

From PEN project, ECD have received great help in developing higher education for the deaf at TUT and have established partnership with many universities in the world. There have been regular visits and training projects between the teachers and students of ECD and universities abroad to enhance friendly exchanges and cooperation. ECD has invited foreign experts to give lectures on campus. Drawing on the mature experience from other universities both at home and abroad, we have broadened our view and advanced our educational ideology, our educational conditions have been improved, and have gained a lot of achievements.

Summary

Tianjin University of Technology(TUT), which has been funded and supported by the municipal government as a key institution of higher education, is an engineering-based multi-disciplinary university that combines engineering with science, and adheres to harmonious development of engineering, science, liberal arts and management. Now there are 32,000 Current Students, 54 undergraduate programs, 39 master's degree in the TUT, and covering 20 million square feet.

As a Partner of PEN International, Engineering College for the Deaf (ECD) of TUT has developed rapidly in 10 years, ECD has made consistent efforts to perfect its mode of education for the deaf and gained remarkable achievements and has made a lot of teaching achievements.

From PEN project, ECD have received great help in developing higher education for the deaf at TUT and have established partnership with many universities in the world. There have been regular visits and training projects between the teachers and students of ECD and universities abroad to enhance friendly exchanges and cooperation. ECD has invited foreign experts to give lectures on campus. Drawing on the mature experience from other universities both at home and abroad, we have broadened our view and advanced our educational ideology, our educational conditions have been improved, and have gained a lot of achievements.

LBJ [60] – 2nd
Floor Street

The Status of PEN-International in Beijing (TAPF)

Chenguang Fu, Beijing Union University

Xiangdong Teng, Beijing Union University

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

Type: Poster

Audience: Postsecondary

Abstract

In November, 2002, the Special Education College of Beijing Union University signed official agreement with PEN-International and subsequently became a full member of PEN-International on March 20, 2003. With the fulfillment of PEN-International, we've achieved

great promotion in the fields of constructing internet and information accessibility, expanding the approaches of information acquirement of students with deaf and hard hearing, enhancing the communication with others, opening sights, boosting the development of teaching and education for students with deaf and hard hearing and improving the teaching and educational quality of the students with deaf and hard hearing. In recent years, the students with deaf and hard hearing of our college have won great achievements in various competitions and contests.

Summary

In November, 2002, the Special Education College of Beijing Union University signed official agreement with PEN-International and subsequently became a full member of PEN-International on March 20, 2003. With the fulfillment of PEN-International, we've achieved great promotion in the fields of constructing internet and information accessibility, expanding the approaches of information acquirement of students with deaf and hard hearing, enhancing the communication with others, opening sights, boosting the development of teaching and education for students with deaf and hard hearing and improving the teaching and educational quality of the students with deaf and hard hearing. In recent years, the students with deaf and hard hearing of our college have won great achievements in various competitions and contests as follows.

From 2006 to 2008, the students with deaf and hard hearing majoring in Computer Science and Technology and the Computer Application Technology of our college took part in the "Welcome Olympics--National Teenagers Robotics Competition" three times and won, without exception, first, second and third prizes.

In 2008, the students with deaf and hard hearing majoring in Landscape Architecture were honored to take part in the work of making award bouquet awarded to the athletes in 2008, Beijing Olympics.

In 2009, the students with deaf and hard hearing of our college majoring in Computer Science and Technology took part in the National College Students Kaiyuan Software Red Banner Cup and won a third group prize, a group winner prize, individual silver medal and three individual bronze medals.

In 2009, the students with deaf and hard hearing majoring in Art Design took part in National College and Technical School Students Arts Exhibition and won gold, silver and bronze prize.

The expansion of PEN-International has improved the cooperation and inosculation within our college and the foreign handicapped education organizations, it also enhanced the teaching development for the students with deaf and hard hearing of our college as well. We are going to continuously carry forward the tenet of PEN-International, i.e., excellence, completion and innovation and ceaselessly dedicate to postsecondary education career for the students with deaf and hard hearing.

LBJ [60] – 2nd
Floor Street

Utilization of 3D Modeling for Mechanical Drawing Education (T4PG)

Tsutomu Araki, Tsukuba University of Technology
Shigetaka Hosaka, Tsukuba University of Technology

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Tsukuba University of Technology (NTUT) for the deaf and the blind students in Japan utilizes 3Dimensional modeling for mechanical drawing education at the course of mechanical engineering system in order to let the students understand better 2 dimensional drawings. It has been proved that 3Dimensional models give students appropriate feedbacks when they learn basic mechanical design.

Summary

Tsukuba University of Technology (NTUT) for the deaf and the blind students in Japan utilizes 3Dimensional modeling for mechanical drawing education at the course of mechanical engineering system in order to let the students understand better 2 dimensional drawings. It has been proved that 3Dimensional models give students appropriate feedbacks when they learn basic mechanical design.

LBJ [60] – 2nd
Floor Street

Educational and Information Technologies in Vocational Training for Auditory Handicapped Students at the Academy of Management (TISBI; Kazan, Russian Federation) (T4PJ)

Valentina Parubina, Bauman Moscow State Technical University, Institute of Continuous Education, Academy of Management "TISBI"
Dmitriy Polyakov, Bauman Moscow State Technical University, Institute of Continuous Education, Academy of Management "TISBI"

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

Type: Poster

Audience: Postsecondary

Abstract

This poster will report on the status of vocational training at the Academy of Management (TISBI, Russian Federation).

Summary

This poster will report on the status of vocational training at the Academy of Management (TISBI, Russian Federation).

LBJ [60] – 2nd
Floor Street

Web-Based Learning Technology in the Centre of Education of the Deaf (T4PK)

Igor Egorov, Vladimir State University

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

Type: Poster

Audience: Postsecondary

Abstract

Interaction of the university's subdivisions at realization of web-based learning technology of the deaf is discussed in this presentation.

A geographical-analytical reference book of Vladimir region and special program of automatic information retrieval about the disabled is worked out in VSU. The main results include network technologies of distant education of the deaf on the basis of allocated information systems of management; virtual laboratories and distant access laboratories; and a system of education quality on the basis CALS-technologies.

Summary

This presentation discusses the following:

1. Web-based learning technology activities of the university of the deaf: Distance Learning Center (Laboratories, Hardware, Software, Learning Management Systems, Learning Content, Distance Education Technologies), Faculty of web-based correspondence learning (FWBC Students, Correspondence Students, Day-time Departments Students), Centre of Education of the Deaf. Interaction of the university's subdivisions: Daytime faculties; Internal subdivisions (RCNIT); WBCL faculty.
2. Unceasing lifelong learning: Average professional education (Lycee, Starting-up courses, Distance courses); Higher education (Daytime education (bachelor and master degree), Correspondence education, Shortened education, Second profession); Refresher courses (Extension course, Refresher course).
3. Technologies of the web-based learning in university of the deaf: Students DB, Web-based Courses, Teachers DB, WbLMS Moodle, Electronic DLC library, DLManagement

System

4. USERS: Students of Daytime departments; Centre of Education of the Deaf; Students of Correspondence department; Students of University WBCL faculty; Users of Refresher courses; Tutors of Web-based Learning Management Systems; Users of tutors faculty development courses on advanced web-based education.

LBJ [60] – 2nd
Floor Street

The Exhibition on the Achievements of Higher Deaf Education of Changchun University (T4PM)

Xingzhi Sun, Changchun University
Fulin Pan, Changchun University

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

Type: Poster

Audience: Postsecondary

Abstract

Special Education College of Changchun University is the first nationwide higher special education college co-founded by China Disabled Persons Federation and Jilin Provincial People's Government. Particularly for the hearing-impaired students, the college establishes Art Design, Painting, Animation Design and other college majors, and 1759 outstanding graduates have been trained and fostered for the state and society by the college with 757 undergraduates studying in the college now. After 23 years of successive exploration and practice, a higher special education mode integrating the handicapped into the normal is created. Chairman of China Disabled Persons Federation, Deng Pufang said: "Special Education College of Changchun University founded earliest, largest and with the most complete disciplines and the highest level, which is the leader in the higher special education field."

Summary

Special Education College of Changchun University is the first nationwide higher special education college co-founded by China Disabled Persons Federation and Jilin Provincial People's Government. Particularly for the hearing-impaired students, the college establishes Art Design, Painting, Animation Design and other college majors, and 1759 outstanding graduates have been trained and fostered for the state and society by the college with 757 undergraduates studying in the college now. After 23 years of successive exploration and practice, a higher special education mode integrating the handicapped into the normal is created. Chairman of China Disabled Persons Federation, Deng Pufang said: "Special Education College of Changchun University founded earliest, largest and with the most complete disciplines and the highest level, which is the leader in the higher special education field."

LBJ [60] – 2nd
Floor Street

Introduction to Zhongzhou University's College of Special Education (T4PN)

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

Type: Poster

Audience: Postsecondary

Abstract

Zhongzhou University was founded in 1980, it was the first comprehensive University by Zhengzhou government. The university grew out of Zhengzhou University, Zhengzhou branch, Henan Medical University, and Zhengzhou day-college. In 1985, the university name changed into "Zhongzhou University" in the permission of Henan People's Government, and was put on record by the former state educational committee.

College of Special Education

The College of Special Education was established in 2001. From the beginning, the college always acts on a special educational basis of "for all the deaf, for everything of the deaf". The

college vigorously conducts "confluent education" by making use of the fruitful educational resources, comprehensively implement quality education. The college has established broad friendly relations with all the world's special educational organizations on the basis of "making friends and welcoming the guests all over the world", improved the development space of the group deaf and achieved the good benefits gradually.

Summary

Zhongzhou University was founded in 1980, it was the first comprehensive University by Zhengzhou government. The university grew out of Zhengzhou University, Zhengzhou branch, Henan Medical University, and Zhengzhou day-college. In 1985, the university name changed into "Zhongzhou University" in the permission of Henan People's Government, and was put on record by the former state educational committee.

At present, Zhongzhou University has involved into many kinds of disciplines, such as engineering, economy, arts, management, law and education, it has enrolled almost in all over China, covering more than 30 provinces. It's a vocational and technological university for training the high-quality and skillful talents. The university provides college of engineering and technology, college of information engineering, college of chemical and food technology, college of economics and trade, college of culture and communication, college of foreign languages, etc.

College of Special Education

The College of Special Education was established in 2001. From the beginning, the college always acts on a special educational basis of "for all the deaf, for everything of the deaf". The college vigorously conducts "confluent education" by making use of the fruitful educational resources, comprehensively implement quality education. The college has established broad friendly relations with all the world's special educational organizations on the basis of "making friends and welcoming the guests all over the world", improved the development space of the group deaf and achieved the good benefits gradually.

As the accumulation of several years, the college has gradually cultivated the teaching staff of strong teaching ability, high level of scientific research and reasonable structure. There are 28 full-time teachers, which includes 2 professors, 10 assistant professors, 7 lectures, 9 assistant instructors. To give full expression to humanistic teaching and management, the college also provides 6 full-time counselors and 6 part-time sign language interpreters. This join of teachers and instructors has greatly manifested human nature logo in the process of deaf teaching.

The college also engages 6 excellent deaf teachers outside, they are: Li Jingming, President of the deaf association of Henan Province; Zhou Xiaoning, Vice-president of the deaf association of Zhengzhou city; He Zhiqiang, first winner of the watercolor painting contests to the disabled; Chen Pengning, Ma Wenjie, two young famous deaf painters; Liuming, international sign language teacher, etc. They are the good examples of the deaf students and the life guides as well.

There are 634 students in the college, including 407 deaf students, 227 sign language students. The college provides 7 degrees which are paintings of ancient buildings of the deaf, decoration of the deaf, photography of the deaf, animation design of the deaf, computing of the deaf, sign language of special education, and sign language of art design. Every year, The college also supplies adequate posts for the deaf graduates. The graduates of sign language have worked in the massed employed units and enterprises such as the public security system of Jiangsu Province, the deaf higher education area of Henan Province, which developed the harmony and development of society.

LBJ [60] – 2nd
Floor Street

A Brief Introduction to Chongqing Normal University (T4PO)

Xinmin Yang, Chongqing Normal University
Renhong Shen, Chongqing Normal University

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

Type: Poster

Audience: Postsecondary

Abstract

Chongqing Normal University (hereafter as "CNU"), founded in 1954, is a full-time comprehensive institution of higher education under the leadership of Chongqing Municipal Government of P. R. China. The first president was Mr. Dengken, who is Mr. Deng Xiaoping's blood brother.

CNU is a higher education institution authorized to award Master's and Bachelor's degree with the approval of the Degree Awarding commission of the State Council, P. R. China. Currently, there are 17 colleges, 45 master's degree programs, 48 under-graduate programs concerning literature, science, economics, management, art, physical education, etc., forming an educational system which is able to train postgraduates, undergraduates, associates and overseas students. Currently, there are over 20,000 students enrolled and over 1800 teachers including more than 500 professors and associate professors.

CNU is entitled by the Ministry of Education, P. R. China to enroll overseas students. It was designated as one of the first Chinese Language Educational Centers by the Overseas Chinese Affairs Office of the State Council and is currently the only one in western China. A fairly complete teachers' education system has been formed including pre-school education, primary school education, middle school education, higher education, continuing education, vocational and technical education, special education, and teachers training for overseas Chinese.

Summary

Chongqing Normal University (hereafter as "CNU"), founded in 1954, is a full-time comprehensive institution of higher education under the leadership of Chongqing Municipal Government of P. R. China. The first president was Mr. Dengken, who is Mr. Deng Xiaoping's blood brother.

CNU is a higher education institution authorized to award Master's and Bachelor's degree with the approval of the Degree Awarding commission of the State Council, P. R. China. Currently, there are 17 colleges, 45 master's degree programs, 48 under-graduate programs concerning literature, science, economics, management, art, physical education, etc., forming an educational system which is able to train postgraduates, undergraduates, associates and overseas students. Currently, there are over 20,000 students enrolled and over 1800 teachers including more than 500 professors and associate professors.

CNU is entitled by the Ministry of Education, P. R. China to enroll overseas students. It was designated as one of the first Chinese Language Educational Centers by the Overseas Chinese Affairs Office of the State Council and is currently the only one in western China. A fairly complete teachers' education system has been formed including pre-school education, primary school education, middle school education, higher education, continuing education, vocational and technical education, special education, and teachers training for overseas Chinese.

LBJ [60] – 2nd
Floor Street

Assessment of Faculty Competency in the Integration of Instructional Technology in the Classroom at the School of Deaf Education and Applied Studies, De La Salle-College of Saint Benilde (T4PP)

Theresa De la Torre, De La Salle-College of Saint Benilde

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

Type: Poster

Audience: Postsecondary

Abstract

This paper was to assess the current competency level of the School of Deaf Education and Applied Studies (SDEAS) faculty on the integration of instructional technology tools in their teaching. The study employed the descriptive survey method of research and is limited to the teaching faculty of SDEAS composed of deaf and hearing faculty-respondents. The

researcher looked into the instructional technology used in the classroom, faculty's usage of instructional technology tools, competency level in the integration of instructional technology, difficulties met, and the professional development needs that will improve their performance in the delivery of instructional technology relevant to the learning performance of student in the classroom. There was no attempt, however, to measure teacher instructional performance and student performance.

Summary

This paper was to assess the current competency level of the School of Deaf Education and Applied Studies (SDEAS) faculty on the integration of instructional technology tools in their teaching. The study employed the descriptive survey method of research and is limited to the teaching faculty of SDEAS composed of deaf and hearing faculty-respondents. The researcher looked into the instructional technology used in the classroom, faculty's usage of instructional technology tools, competency level in the integration of instructional technology, difficulties met, and the professional development needs that will improve their performance in the delivery of instructional technology relevant to the learning performance of student in the classroom. There was no attempt, however, to measure teacher instructional performance and student performance.

Technology pervades throughout the entire curriculum because of its extraordinary potential for enhancing learning. Since technology can radically expand information access and communication, it especially benefits students with disabilities, for instance, the deaf students of SDEAS, by increasing their participation in the learning process. Just as other professionals utilize specific technologies as tools to enhance their work, SDEAS faculty members must likewise become adept in putting technology to use as the field of educational software evolves with the various academic disciplines. Regardless of subject area, technology can support teachers in numerous professional activities-first and foremost in stimulating learning in the classroom, in simplifying their administrative duties, improving personal productivity, and advancing professional growth.

SDEAS faculty were very proficient in utilizing word processors and PowerPoint in producing presentation materials and online research and email in communicating with students. Their use of instructional technology was evident but somehow in the low level and found there is some difficulties in implementing the use of instructional technology in the classroom e.g. time management, technical problems, and limited skills and knowledge of new technology. SDEAS faculty got a medium level of competency in the areas of designing developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners; using technology to support learner-centered strategies that address the diverse needs of students, and applying technology to increase productivity. SDEAS faculty got a low level of competency in the following areas such demonstrating introductory knowledge, skills, and understanding of concepts related to technology; planning strategies to manage student learning in a technology-enhanced environment; applying technology to develop students' higher-order skills and creativity; managing student learning activities in a technology-enhanced environment; applying technology in assessing student learning of subject matter using a variety of assessment techniques; facilitating equitable access to technology resources for all students; and applying technology resources to enable and empower learner with diverse backgrounds, characteristics, and abilities. These are the competencies that SDEAS faculty expected to improve in terms of integration of instructional technology.

Therefore, it is recommended for SDEAS faculty to provide or conduct on regular basis a seminar and in-service training to keep SDEAS faculty updated with the trends and innovations in educational technology and to enhance their competencies on technology integration.

Type: Poster

Audience: Postsecondary

Abstract

The poster discloses the aims, peculiarities and technologies of the pre-university training for disabled people in Chelyabinsk State University. It provides the detailed information about organization, necessary technological basis and informational and educational environment, specificity of the full time and distance forms of pre-university training for disabled people. The special attention is paid to the development of educational content and the questions of organizational, educational and methodical and also technological facilities of the pre-university training for disabled people.

Summary

Pre-university training is the most important part of the integrated educational system for disabled people in Chelyabinsk State University. Its necessity is explained by the fact that most of disabled people applying for the university face a range of problems, or barriers, connected with some organs or systems dysfunction, specific features of information perception, insufficient development of communicative skills, low level of basic knowledge.

The principal aim of pre-university training is removal of the barriers hindering disabled people in obtaining higher education. It is reached by the pre-university adaptation, knowledge level improvement and preparation for the further integrated education. Pre-university training is oriented at the senior pupils, school and college graduates, and can be realized simultaneously with the basic education.

Two forms of such training are provided: full time attendance in the university and distance learning via Internet. Full time attendance and distance learning is stipulated for one academic year and is effected according to the special educational adaptation program which includes educational, individual and independent work with complex use of modern information and telecommunication technologies. As the main principle of pre-university training for disabled people connected complex of educational and rehabilitation programmes is realized. Effective innovations for teaching disabled people, universal spreading of this model is available for other universities so as a result of pre-university training following diversity of main educational programmes for disabled students.

Pre-university training results in the enrolment of a disabled person at the university and further successful integrated education on a par with other students.

LBJ [60] – 2nd
Floor Street

Presenting Charles University, Faculty of Arts, Language Resource Center Outputs (T4PS)

Marie Dolezalova, Charles University

Daniela Janakova, Charles University

Strand: Online Learning

Type: Poster

Audience: Postsecondary

Abstract

The poster will present the outcomes of Charles University in Prague, Faculty of Arts, Language Resource Centre which mainly focuses on teaching English to Deaf and Hard-of-Hearing university students, but also provides other services for the students with special needs.

Summary

D-signs is a project to implement an online training system for sign language in the workplace, mapped to Common European Framework of Reference for Languages (CEFR), made available in British, Irish, Czech, Greek and Cypriot Sign Languages. As well as qualifying the hearing employers and workmates it creates a direct effect for Deaf employees through the better communication at work.

This project draws heavily on the existing framework developed in www.signstation.org for British Sign Language, but sets the development in CEFR (Common European Framework of

Reference) and applies it to the partners' sign languages

Project Objectives:

1. to describe the language standards and available sign language training in each partner State
2. to map a new workplace curriculum on to the Common European Framework of Reference for Languages - levels A1-A2
3. to produce units for sign language teaching for the workplace in each partner's sign language
4. to implement these online within the Moodle VLE and compliant with industrial standards for e-learning (ie SCORM)
5. to mount pilot courses, to evaluate and to report on them
6. to create a sustainable web resource for each partner which can be presented to national standards bodies for accreditation

The outcome will be an online training programme, with parity across Europe:

1. comparable online courses in British, Irish, Czech, Greek and Cyprus Sign Languages
 2. tools to the learners which allow them to monitor not only their reception of sign language, but also their production
 3. self-teaching courses, requiring no further maintenance and with a long shelf life
- The groups of users are from basic level to intermediate (A1 to A2, as a priority) ... however, because the material is online, users may browse and look at material of varying complexity. The impact can be felt directly by hearing learners, then by Deaf employees and ultimately by any user who wishes to learn any one of the five sign languages offered.

Wednesday, June 23

8-8:45 a.m. Concurrent Session XIII

SDC [55] 1300

Beyond Academic Writing: Web 2.0 Social Networking and Self-Publishing Technologies in the Writing Classroom (W&A)

Rose Marie Toscano, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

This presentation will highlight a college-level writing course focusing on newer forms of writing increasingly used in the 21st century such as blogs/vlogs and mixed-media texts. Using 2.0 social networking and self-publishing technologies, students turned their writing into a self-published anthology and mixed media presentations.

Summary

Deaf college-age students at postsecondary institutions are exposed to a thorough grounding in academic writing, including practice in rhetorical strategies, organizational patterns, idea development and appropriate citation. While these skills are critical to both college and professional success, more recent notions of "real-world" writing include social networking and collaborative practices. Additionally, today's writers are increasingly mixing print-based texts with multimedia and graphic representations of their ideas. And culturally, writing is overwhelming heading toward the personal, as witnesses by the proliferation of blogs/vlogs, Facebook and MySpace, etc.

This presentation will highlight a writing course that attends to these newer forms of writing in the 21st century. In addition to exposing students to the social, rhetorical, and stylistic dynamics of writing within social networking forms and mixed media, this course enables deaf students to experience different "arts of expression" as they create memoirs combining

print and graphic forms. Using Web 2.0 social networking and collaborative technologies as a way to have class-wide conversations and collaboration, students in this course produce a class anthology of mixed media memoirs using self-publishing technologies (i.e. lulu.com). This activity mirrors real world manuscripts for publication. In both their reading and writing during this course, students focus on how to make their personal presence felt in a mixed media text, how self-disclosure is used to go beyond narration, and how structure and form can be flexible and experimental.

SDC [55] 1310

The Heart of the Hydrogen Jukebox: The Evolution of Poetry in American Sign Language (W8B)

Miriam N. Lerner, RIT/NTID

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

Type: Poster

Audience: All

Abstract

"The Heart of the Hydrogen Jukebox" is a feature-length documentary about the evolution of poetry in American Sign Language. Deaf poets had relied on creating their works in written English and then translating them into sign, rarely generating original poetry in ASL. When ASL was validated as a real language in the early 60's, an explosion of experimentation took place, giving rise to a new art form.

Summary

The film is one hour, fifty-six minutes in length. After viewing part of the film, a discussion will take place with information about the difficulties in utilizing archival footage in older beta and vhs formats. In the early 20th century, the NAD under the leadership of George Veditz, undertook a monumental project to preserve the beautiful sign language he felt was under siege by the Congress of Milan. Without the visionaries who took the time and energy to film these early poetic efforts that are shown in the film, we would not have a record of this exciting time period of experimentation and discovery. Unlike the written word, sign can only be preserved for future generations by moving it forward to the newest iterations of image storage and transmission.

LBJ [60] 2590

Multimedia Training Courses vs. Social Discrimination: A Key Issue in a Process of Raising deaf/Deaf Awareness Among Academic Teachers (W8C)

Dagmara Nowak-Adamczyk, Jagiellonian University

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

The presentation is focused on experiences of Jagiellonian University, a leader of the European consortium of DARE and DARE 2 projects (www.DareProject.eu), responsible for developing multimedia training courses for academic teachers. The main aim of the innovative trainings is raising awareness of disability and deaf/Deaf issues among academic teachers related to challenges of a contemporary world and to the idea of a responsible university.

Summary

Assuring deaf/Deaf students an effective model of educational support and its practical realization in a process of their teaching and learning demands understanding of deaf issues among academic teachers. Lack of such knowledge may be one of the main causes of social exclusion of deaf/Deaf students. Negative attitudes and various stereotypes toward them can lead to their explicit or hidden discrimination.

The materials developed in the course of the project include information concerning

different aspects of deafness, language etiquette, ways of breaking the barriers (including mental ones), adaptation of places of study and work. A multimedia programme of trainings equipping academic teachers with the skills of making correct and effective contact with deaf/Deaf people as well as eliminating negative attitudes, stereotypes and withdrawal attitudes. The programme is based on current scientific knowledge in that field.

LBJ [60]-3237

Structured Online Academic Reading (SOAR): Enhancing Reading Comprehension and Learning Through Embedded Definitions, Pictures, Videos and Questions (W11B)

Nora B. Shannon, RIT/NTID

Simon Ting, RIT/NTID

Cathy Clarke, RIT/NTID

Harry G. Lang, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Structured Online Academic Reading (SOAR) is an interactive instructional approach to enhance reading comprehension and learning through the use of a custom-built IdeaTools widget, including such features as embedded definitions, pictures, videos and questions. Applications from NTID's Master of Science in Secondary Education teacher preparation program will be demonstrated.

Summary

Structured Online Academic Reading (SOAR) is an interactive instructional approach to enhance reading comprehension and learning of academic materials developed in a collaborative project involving the Master of Science in Secondary Education (MSSE) program and the Educational Design Resources department at NTID. The goal is to train teacher candidates to experiment with interactive reading during their student teaching in English, science, mathematics, and social studies. The MSSE program's emphasis on preparing teachers to pursue evidence-based instruction in the SOAR project includes the incorporation of what we know from educational research about how deaf children read as well as encouraging teachers to use planned, systematic approaches to collect data on what works in their own classes.

To develop this component in NTID's teacher preparation program, instructional application developers created a custom-built IdeaTools widget, which includes such features as embedded definitions, pictures, videos, and questions. The teacher candidates first experienced SOAR-type readings as students in one graduate course while simultaneously learning to develop their own SOAR readings for their student teaching in another graduate course.

This presentation will include a demonstration of the IdeaTools widget and a discussion of the perceived benefits in teaching deaf students in academic disciplines.

9-9:45 a.m. Concurrent Session XIV

LBJ [60] 2590

Visual Stories of Deafhood (W9A)

Patti A. Durr, RIT/NTID

Karen Christie, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

This presentation demonstrates an interactive DVD that examines artistic and literary

expressions of the Deaf experience. Designed as a "visual textbook," the project includes multimedia timelines, a video "who's who" glossary, interactive tools to examine Deaf artworks and literary works, and in-depth ASL commentaries from notable Deaf playwrights, poets, artists, and filmmakers.

Summary

K. Christie and P. Durr will give a demonstration of an interactive DVD produced by NTID for Gallaudet University Press that examines artistic and literary expressions of the Deaf experience. Highlights will focus in the areas of the project overview (which includes historical context) and five different genres (ASL literature, English literature, Visual Art, Deaf theatre, and Deaf cinema) as well as excerpts from in-depth video interviews of Deaf playwrights, visual artists, poets, filmmakers and more. This DVD is designed for Deaf Cultural Studies courses at the upper high school and college level.

SDC [55] 1310

e-Portfolio for Work Force Readiness (W9B)

Mary Beth Parker, RIT/NTID
Kathleen Szczepanek, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

Creating an e-Portfolio (a digital collection of work products, assignments, and personal statements) enhances our deaf and hard-of-hearing students' abilities to be competitive in the job market; demonstrates their technical, information, and communication literacy skills; and demonstrates work force readiness to potential employers via the internet.

As a capstone project for the Administrative Support Technology program, it is also used for outcomes assessment purposes. It prepares our students to be work literate, to be able to contribute in the business world, and to become a part of the lifelong learning process.

Summary

Creating an e-Portfolio enhances our deaf and hard-of-hearing students' abilities to be competitive in the job market. Students in the Administrative Support Technology (AST) program are asked to provide a digital collection of work products, assignments, and personal statements. Building a portfolio provides them with an opportunity to see the significance of their accomplishments. The portfolio is incremental in nature and evolves as students' progress through their major.

This process allows for meaningful evaluation of our students' technical, information, and communication literacy skills. The e-Portfolio is evaluated on criteria established by the faculty. Students may ask questions, seek assistance, exchange ideas and information in order to define and clarify how they want to present their work to a potential employer. The employer is interested in evaluating the students as prospective employees. The e-Portfolio demonstrates work force readiness and can be accessed via the internet.

The portfolio is a capstone project for the AST program and is used for outcomes assessment purposes. It prepares our students to be work literate, to be able to contribute in the business world, and to become a part of the life long learning process.

SDC [55] 1300

Link Between Online Course Enrollments and Academic Achievement (GPA) of Deaf Students in Mainstream Settings (W9C)

Gary L. Long, RIT/NTID
James R. Mallory, RIT/NTID
Richard Fasse, RIT
Carol Marchetti, RIT

Strand: Online Learning

Type: Poster

Audience: Postsecondary

Abstract

An increase in online course enrollments by deaf students at Rochester Institute of Technology (RIT) combined with positive student perceptions of communication ease and learning, caused us to examine the potential link of this online format to academic achievement (GPA). Research findings and their implications regarding access to learning for deaf students in mainstream settings will be discussed.

Summary

Online learning has exhibited significant growth and acceptance in higher education with current estimates indicating that as many as 4 million students are taking online courses. Further research indicates that students are either as successful or more successful in online courses than they are in traditional face-to-face classes.

This presentation will report the findings of a program of research designed to better understand the factors contributing to student success in online learning courses. Our focus was on communication and we utilized information from MyCourses, a course management system, to quantify the number of interactions that occurred in 431 online courses taken by 1,283 students during the 2007-2008 academic year. Deaf and hard-of-hearing students (n=88) who often struggle with communication in face-to-face mainstream classes, were singled out for examination to help us better understand the role effective communication plays in the teaching-learning process.

Finally we examined the extent that student perceptions of communication ease, course satisfaction and learning, were related to the actual amount of interaction that occurred in these online courses. The amount of interaction that occurred in courses was also related to academic achievement (GPA) for hearing, deaf and hard-of-hearing students. The importance of successful communication in providing access to learning for deaf and hard-of-hearing students in mainstream courses will be discussed.

LBJ [60] 3237

Linguistic and Attitudinal Obstacles Faced by Deaf People in Accessing Education in Rwanda (W9D)

Francis Twahirwa, Rwanda National Union of the Deaf

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

This presentation discusses:

1. The linguistic and attitudinal obstacles faced by Deaf people in accessing to quality education.
2. The consideration of the in-country assessment to enable to project the country picture of the Rwandan Deaf People, and share with the world their experiences.
3. An outcome of efforts of key Rwandan partners in Deaf education.

Summary

Full inclusion and participation of the Rwandan Deaf people has increasingly dominated the preoccupation of the Rwandan National Union of the Deaf (RNUD), and making the National policies work for its marginalized communities still features high on its agenda. It has been noted with concern that the current Rwandan policies and legislations have increasingly taken into consideration all those with disabilities and which recognize equal opportunities and basic rights for persons with disabilities in general.

However, RNUD is concerned that much of key rights and entitlements remain on paper and little if any is translated into concrete action, and the deaf continue to be marginalized. Though few schools and centers cater for a small number of deaf children,

the support is still inadequate and the educational approaches used are still inappropriate. The majority are known to remain in their homes while their siblings go to the neighborhood schools because the Rwandan education system remains inflexibly traditional and does not recognize the inclusion of the Deaf. The absence of the nationally recognized sign language raises a significant communication barrier between Rwandan Deaf and the rest of the society; discrimination against the deaf (including gender based discrimination) still goes on unabated.

10-10:45 a.m. Concurrent Session XV

LBJ [60] 2590

CART: Bringing the Spoken Word to Veterans and Others with Hearing Loss (W10A)

Sharaine Rawlinson Roberts, Caption First, Inc.

Strand: Access Technology

Type: Poster

Audience: Postsecondary

Abstract

128,000 veterans who served in war zones are collecting disability for tinnitus and hearing loss. Faced with finding employment and frequently needing to return to school at the postsecondary level, veterans with hearing loss benefit from CART because they can "hear" the spoken word through their eyes.

Summary

According to ClinicalTrials.gov, "Hearing loss is the most prevalent service-connected disability in the VA." When they return home, the inability to hear normally poses many challenges for veterans. During WWI and WWII, veterans might have been told to "live with it" or perhaps were given hearing aids with the idea that the hearing aids would give the veteran "20/20" hearing. Today, with 128,000 U.S. veterans drawing disability for tinnitus and hearing loss, technological advances exist to enable veterans access to spoken language. Among those technologies, Communication Access Realtime Translation (CART) has opened doors to many students and employees with hearing loss.

Students and employees benefit from CART services by receiving all the words and interactions taking place in the classroom, online, or in the office. CART services are word-for-word, not meaning-for-meaning. Students and employees feel empowered to fully participate because they are confident they are receiving all of the information.

Veterans of today's wars can benefit from CART which is available globally. This presentation will demonstrate remote CART and explain how the technology can be accessed both in the classroom and in employment situations.

SDC [55] 1300

Foreign Sign Language Survey: Connecting Deaf Teens Through Online Learning (W10B)

Becky Sue Parton, Southeastern Louisiana University

Robert Hancock, Southeastern Louisiana University

Strand: Online Learning

Type: Poster

Audience: All

Abstract

A survey on Deaf high school students' knowledge and interest in foreign sign languages was conducted with 44 participants. Session will detail results. Seventy-four percent were interested in learning a second sign language and most felt that an on-line community of learners would provide the best environment.

Summary

It is common practice for hearing high school students to take a foreign spoken language as part of the graduation requirements. Based on informal observations, most Deaf students do not have an opportunity to learn a foreign sign language and many are not even aware that ASL is not universal. Thus a survey was conducted to provide data on the availability and interest for foreign sign language study especially conducted through on-line approaches.

Students (N=44) from a residential school for the Deaf volunteered to take the survey. Detailed results will be presented. Major findings confirmed that only 3 subjects have been exposed to a foreign language, however 30 of the participants were aware that ASL was not used in most other countries. Furthermore, 32 students indicated that they would like to learn a different sign language and the majority would prefer to do so by establishing an on-line community that included video tutorials and peer interactions if visiting the country wasn't an option.

The survey was a first-step in establishing the need for creating collaborative, technology-based partnerships between high schools or colleges in multiple countries for the purpose of providing foreign sign language instruction. This session will include a discussion of how that on-line community could function.

LBJ [60] 3237

Student Assessment: Using CAIT (Communa Advanced Interpreter Training) Technology to Provide Visual, Audio and Print Feedback (W10C)

Kevin Williams, RIT/NTID

Dan L. Erickson, General Communications, Inc.

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Providing timely and meaningful student feedback is essential for language, cognitive, and skill/content development. Giving students (especially those who are Deaf/HOH) print-only feedback can be limiting and non-motivating. Using the CAIT technology platform allows educators to communicate with their students (via captured digital movies) in ASL or in English (or both). The system can also allow for print feedback to be used as a portion of this multi-format feedback resource.

Summary

This presentation will educate workshop participants about the CAIT (Communa Advanced Interpreter Training) system and how CAIT is currently being used within the American Sign Language and Interpreting Education program at NTID/RIT. The presentation will be delivered by the technology developer and an educator currently using the system. While seemingly a tool designed for interpreter education, alternate applications of this technology will be discussed.

Student feedback regarding the use of this technology has been quite positive. While not meant to replace the important face-to-face assessment-review-experience between educator and student, it is serving as a valuable tool in providing more discreet and personal acknowledgement of the student's course progress.

Points of discussion will include:

1. The history of the development of the technology
2. National applications using the technology
3. Current use of the technology within RIT/NTID's ASLIE Department
4. Discussion of 'other applications' for the feedback platform

SDC [55] 1310

Second Life® as a Learning Tool (W10D)

James R. Mallory, RIT/NTID

Gary L. Long, RIT/NTID

Joseph Stanislow, RIT/NTID
Werner Zorn, RIT/NTID

Strand: Using Technology to Support Learning

Type: Poster

Audience: All

Abstract

Second Life® (SL) has been used primarily as a social networking tool, but there is limited data supporting its effectiveness as a learning tool. At RIT/NTID, many students struggle to learn selected hardware computer concepts. NTID has successfully used SL to enhance students learning of computer concepts and trouble-shooting. The authors will present their findings.

Summary

Second Life® (SL) has been around for several years and has been used from a social networking perspective, but there is very little data that supports it as a learning/pedagogical tool. At NTID in the Informational and Computing Studies Department, many students struggle to learn fundamental computer concepts relating to configuring hard drives and items related to computer boot-up sequences and processes. NTID is using SL to enhance student learning of these computer concepts by having students experience the start up process through the use of avatars and a simulated computer. The authors will present their initial findings using SL as a teaching tool.

NTID has a Second Life® campus and a number of faculty in the business, computer client/servers and engineering fields use it for instruction. Our computer simulation resides within this RIT Second Life® environment. The authors will also present the challenges building this kind of project and the pros and cons using this as an instructional vehicle in the class room.

11-11:45 a.m.

Concurrent Session XVI

LBJ [60] 3237

Enhancing the Notetaking Support Process: Utilizing Graphic Notes and New Technologies (W11A)

Ben Rubin, RIT/NTID

Larry K. Quinsland, RIT/NTID

Daniel Thompson, RIT/NTID

Strand: Access Technology

Type: Poster

Audience: All

Abstract

This interactive session will provide an overview of new innovative techniques to enhance traditional notetaking in support of learning by deaf and hard of hearing students. A pilot study will be described where presenters experimented with new graphic techniques utilizing new technologies to enhance student learning and independence.

Summary

In the past 40 years, notetaking has become an integral part of the support provided deaf and hard-of-hearing students. The notetaking support process began at the college level (Stuckless, 1969), and expanded in various forms to the K-12 level. In the first 30 years, the process went through an evolution of increasing sophistication, including the development of detailed prescribed notetaking procedures, notetaking reproduction, distribution processes, and notetaker training methods (Hastings, et al., 1997).

The process of capturing the essence of classroom/lab teaching/learning interactions

and transcribing salient points to print currently provides students with notetaking, sometimes supplemented by live print and/or educational interpreting.

This presentation will involve participants in an examination of newly discovered enhancements to the notetaking process that show a promise of increasing the learning value of notetaking to deaf and hard of hearing students, as well as, other students with special needs.

Presenters will share the results of experimentation with alternative enriched notetaking graphics and collaborative support technologies that could lead to greater learner independence. Specific reference will be made to graphic support technologies (e.g., hand drawn, digital pens, & tablets), new speech-to text and text-to speech technologies, digital graphic options (e.g., clipart), digital camera and cell phone options.

Participants will leave this session with new insights into the potential to further enhance student learning through creative use of graphic notetaking.

References:

Hastings et al. (1997). Notetaking for Deaf and Hard of Hearing Students: A report of the National Task Force on Quality of Services in the Postsecondary Education of Deaf and Hard of Hearing Students. Rochester, NY: Northeastern Technical Assistance Center, Rochester Institute of Technology.

Stuckless, E. Ross (1969). A Notetaking Procedure for Deaf Students in Regular Classes. Rochester, NY: (Department of Health, Education, and Welfare, Washington, D.C.) Rochester Institute of Technology.

SDC [55] 1300

1. Prototype of Surdo-Portal for Education and Method Support of Inclusive Professional Education of People with Disabilities (W11B)

Alexey Volkov, Baumann Moscow State Technical University
Gennadiy Parshin, Baumann Moscow State Technical University
Alexander Stanevskiy, Baumann Moscow State Technical University

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

Surdo-portal targeted to solve the following rehabilitation tasks in the process of an inclusive, professional education of people with disabilities:

1. linguistic development
2. Speech hearing development
3. Activation of mental activity.
4. Problem of discussion interaction in the student group.
5. Providing of feedback and possibility to correct their own errors.

Users of surdo-portal might be: students with disabilities, sign language interpreters, audiologist, teachers and specialists work in the field of professional education for the deaf and hard-of-hearing.

2. An Electronic System for Personal Registration of the Use of Rehabilitation and Education Resources by Students with Disabilities at BMSTU

Alexey Volkov, Baumann Moscow State Technical University
Gennadiy Parshin, Baumann Moscow State Technical University
Alexander Stanevskiy, Baumann Moscow State Technical University

Strand: Using Technology to Support Learning

Type: Poster

Audience: Postsecondary

Abstract

An electronic system for personal registration of the use of those rehabilitation and education resources that is being provided at BMSTU to support the education process of students with disabilities has been developed. This system consists of

1. A programmer of digital cards
2. Digital cards with individual numbers of students' credit cards
3. Card readers connected with networking personal computers
4. Data base server
5. Special software to provide all needed services

SDC [55] 1310

Using Distance Learning Tools to Connect Students, Parents, and Staff (W11C)

Shelley Ardis, Florida School for the Deaf and Blind
Richard Flores, Florida School for the Deaf and Blind

Strand: Using Technology to Support Learning**Type:** Poster**Audience:** Postsecondary**Abstract**

Distance Learning Tools solve the following problems:

1. How do we involve parents so they can see student work, performances and presentations?
2. How can general education staff in schools learn strategies and sign language when they have a single child in their school?
3. How do we inform the community about what our students CAN do?

Summary

At the Florida School for the Deaf and the Blind, 650 students are attending at our campus in beautiful St. Augustine, Florida.

One Big Problem ... How do we help parents become involved when their work, homes and families are miles away? How do we share information to support the other students, parents and staff serving other students who are deaf and hard of hearing throughout the rest of the state? We have been using a combination of web streaming, web conferences, videoconferencing and online tools to get it started.

Some the activities making an impact are a Signing Stories series, campus performances broadcast live on the web, online professional development trainings, webinar rooms for parent meetings, online ASL classes, remote parent mentoring and online classroom collaborations. The classroom collaborations are being done using such tools as Moodle, Edmodo and Voicethread. We are only getting started and have come across a few bumps in the road while having other successes along the way. Come learn about some of the ups and downs. Feel free to share any information that could help us all reach those we support.

LBJ [60] 2590

Integrating Video Communications Processes in Online Courses to Enhance the Learning Experience of Deaf Students in Online and Distance Learning (W11D)

Simon Ting, RIT/NTID
Cathy Clarke, RIT/NTID

Strand: Online Learning**Type:** Poster**Audience:** All**Abstract**

Webcams and web-based video technologies allow visual communications processes to be integrated in online courses. Videoconferencing and remote collaboration applications offer a way to design small-group web-based learning activities, with students

and teachers interacting and communicating using live webcams. Instructors can also create online webcam assignments to assess/document student learning.

Summary

The presenters work as an instructional developer and a digital media specialist in the Educational Design Resources department at NTID. Both have extensive experience designing online courses with IdeaTools, a content development and management system they created. They recently developed new tools allowing instructors to integrate visual communications processes in online courses to enhance the learning experience of Deaf learners in online and distance learning.

One of the applications adds remote collaboration/meeting capabilities to online courses. This makes it possible for instructors design small-group learning activities, with students and teachers communicating and working with each other using live webcams. Activities can include online lectures, small-group discussions, tutoring, and collaborating on group projects. Another application allows video to be recorded and saved directly to a course. Teachers can save and post videos of classroom proceedings for later review by the class. Instructors can also design webcam assignments, with students able to submit answers using text or sign language or both. This opens the way for teachers of the Deaf to employ sign language to assess/document student learning.

These tools have been tested in several pilot projects. Results of these projects will be discussed.