Deaf and Hard of Hearing Cyber-Community

ClassInFocus

ASL-STEM Forum

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Enabling Access to Education

**GOAL:** Better include deaf and hard of hearing students in mainstream universities

**ClassInFocus:**
Better access in the classroom through technology

**ASL-STEM Forum:**
Growing ASL for Science, Technology, Engineering, Math
Post-secondary Demographics

• 25,000 deaf and hard of hearing students enrolled in ~4,000 post-secondary institutes in U.S.

• 95% of colleges/universities serve 1 or more deaf or hard of hearing student
  – Students are dispersed thinly

• Increased enrollment at mainstream universities

National Center for Education Statistics (NCES) 1999.
Current Accommodations

• Interpreters

• Real-time captioners

• Hearing aids
  – FM systems

• Note takers
Problems in the Classroom

• Attrition: only 25% graduate
• Causes include:
  – Missed content in classroom due to
    • Lack of skilled interpreters and captioners
    • Multiple visual tasks
  – Classroom Participation
  – Social Isolation
    • Group work strained due to language barrier

Interpreter/Captioner Matching

• Limited number of interpreters/captioners at a given university

• Matching interpreter/captioner who is knowledgeable on course content is crucial
Research Directions

• Reducing Visual Dispersion
• Increasing access to the right interpreters and captioners
• Support for diverse accommodation needs and preferences
• Increasing participation in class
• Increasing interaction with peers
• Decreasing missed classroom content
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Instructor Presentation

Sensorimotor substage 6:
Object Permanence

- Understanding that objects
  - Have substance
  - Maintain their identity when they change location
- Continue to exist (ordinarily) when out of sight – otherwise, "out of sight is out of mind"

Remote Interpreter

Student Webcam

Participants

Chat

Space for Notes
ClassInFocus:

• Reducing Visual Dispersion through flexibility in layout
  – On-the-fly video and component modifications
• Supporting Accommodation Diversity
  – Personal choice of feeds, decoupled from others
• Decreased Missed Content
  – Ability to record and save digital classroom
ASL-STEM Forum

- ASL often lacks standard terminology for Science, Technology, Engineering, Math (STEM)
- Online video forum
  - Geographically dispersed members of ASL community can discuss development of signs
- Bottom-up rather than top-down approach
- Can post videos, suggestions, ratings
- Highest rated sign posted first
  - As signs converge, forum becomes resource
- (Demo)
Programming Languages

Definition: a machine that manipulates data and executes lists of instructions known as programs.

Example: Example sentence for context: "It will be useful to review some basic concepts about computers."

Parent topic: Programming Languages

Highest Rated Sign

Video id: #27 (enlarge)
Post date: 3/13/2008
Posted by: jndewitt
Rating: ★★★★★
1 rating

See all signs (5) | Add a new sign

Sort by: Post time | Videos first | Displaying 2 comments of 2

Posted by plglsrer, 21 days ago

I use the signing "Computer" similar to #22 but the movement is not right (Jessica uses the signing- get worse), I use "Computer" as "C" handshape- get better (C going up, not down on arm)
Discussion

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DHH Cyber-Community Webpage:
dhhcybercommunity.cs.washington.edu
Classroom layout

Typical Classroom

Deaf Classroom
Classroom layout

Typical Classroom

Deaf Classroom