

# Classroom Technology:

## How to Use AV Equipment for Visual Learners

Deaf and hard-of-hearing students have special needs that must be accommodated before they can fully benefit from various types of classroom presentation technology. An optimal classroom situation for learners who must depend primarily on visual input includes careful consideration of factors such as room set-up, legibility of the media, and appropriate use of available technology. Teachers using media in general purpose classrooms need to be aware of what to use and what to avoid in order to enhance a visual learner's opportunity to take full advantage of media-assisted presentations.

### Room set-up

- Help find seating near the front if requested by the student.
- Orient the presentation end of the space as the long dimension of the room.
- Place the desks/seats in a U shape to promote optimum communication between students.
- If there are windows, try to have them outfitted with opaque curtains.
- If projecting media, use the "5:1" rule when setting up the image size: the farthest viewer should be no further than 5 times the width of the projected image [not the screen].

### Legibility of multi-media

- *Television*  
Play a videotape in advance in the classroom. Go to where the student farthest away may sit. Can you see the image clearly? Read the captions?
- *Projected computer images*  
Preview what you plan to show in the classroom. Go to where the student farthest away may sit. Can you see the graphics clearly? Read the text?
- *Overhead transparencies*  
Place the transparency on a white piece of paper on the floor in front of you. Standing straight over it, can you read the text? If not, it will probably be tough to read when projected!

- *Accommodations for visually impaired students*  
If there are students with visual impairments in the room, offer a hard-copy version of what will be projected.

### Teaching methods

- *One thing at a time*  
Avoid trying to present too many visual stimuli at the same time. Focus the students' attention in a fairly confined area in the room. Try not to wander around. Avoid talking if you are writing on a board or have to turn your back to the students.
- *One speaker at a time*  
Try to control discussion. Act as a moderator to assure that only one person is talking at a time. Be sure to recognize the next talker in order to give the students time to realize who is talking...and from where. Repeat or rephrase questions before a response is given.
- *Slow down the pace*  
If signing, or using an interpreter and/or assistive listening devices, build in a pause between concepts to allow the assisted communication to catch up.
- *Minimize visual distractions*  
Face the students as much as possible. Avoid presenting in front of windows [even if shaded]; the contrasting light level will impede communication. Don't drink or chew gum! Keep beards and mustaches trimmed...it improves speechreading.
- *Ask the student*  
Encourage students to come to you to discuss your teaching style as related to communication. Discuss concerns about a student's ability to hear you privately, not in front of the class.
- *Get to know the interpreter*  
Be familiar with oral, sign, and cued-speech interpreters and how to work with them [and when] in class.
- *Give students information ahead of time*  
Provide lesson outlines and assignments in advance.

## Appropriate use of technology

- *Assistive Listening Devices (ALDs)*  
Be aware of and know how to use ALDs such as group FM, infrared, induction loop, and sound field systems.
- *Captioning*  
Be sure that all films and videotapes presented in class are captioned, and, if possible, hand out a synopsis in advance.
- *Live captioning*  
Become familiar with computer-aided real-time services, known as CART, C-Print™, RTC, and RTGD.
- *Computer-managed instruction*  
If resources allow, consider migrating from traditional course planning and management methods to using tools such as the world wide web [WWW], database and scheduling software, and authoring tools. These tools tend to shift further toward visually-based instruction and provide a template for course design. Student access to your course WWW site will enhance course management, assignment schedules, homework traffic, and communication.
- *Computer applications*  
If resources allow, consider migrating from traditional tools such as writing surface, overhead projector, flip chart and so on, to tools such as web design, presentation, and word processing software.
- *Document camera*
  - Print landscape format on 8.5"x11" paper
  - Use at least 18-point size type
  - Use Arial or Palatino type if possible
  - Try to use colors that have high contrast against the paper (try yellow paper)

- *Computer presentation applications*  
Examples include Microsoft PowerPoint, Corel Presentations, Adobe Acrobat
  - Use at least 18-point size type
  - Use white text against dark blue background to yield high legibility
  - Use Arial or Palatino type if possible
  - Use only one chart or graph per slide
  - Keep graphics simple
  - Provide the *notes* [a feature of the software] to the students
  - If you have the resources, publish the shows on your WWW site so students can review.

For more information, contact:  
NTID Educational Resources (ER) department  
Web site: <http://www.rit.edu/ntid/crtl/er>

For more information, contact:

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