Welcome to today’s mini-training!

• Thank you for joining our training.
• This training will be recorded and archived on our website.
• The presentation will be approximately 30 minutes and will be followed by 15 minutes for questions and discussion.
• If you’d like to ask a question or make a comment, you can post it in the Chat or click the Raise Hand in your Zoom toolbar.
• “Raised Hand” questions and comments will be responded to after the presentation during our discussion time.
• To speak when called upon during the discussion, find the microphone icon on your Zoom task bar and click “Unmute”.
• A link to any handouts will be posted in the Chat.
The contents of this PowerPoint presentation were developed under a grant from the US Department of Education, #H326T180015. However, those contents do not necessarily represent the policy of the US Department of Education, and you should not assume endorsement by the Federal Government. Project Officer, Susan Weigert.
For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible.

INTERNATIONAL BUSINESS MACHINES (IBM)
1991 TRAINING MANUAL.
Equipment or a device that is used to increase, maintain, or improve the functional capabilities for people with different abilities.
Current Challenges - HEARING during Covid-19/Distance Learning (DL)

INPUT - *Speech arriving at (computer) microphone*
- How is the teacher’s voice being picked up by the technology?
- What is impacting good sound quality?
- What can we do to improve?

OUTPUT - *Speech arriving at student’s ear*
- How is student hearing at home and/or in-person w/teacher masked?
- What can we do to improve?
Face Masks: Impact on Hearing

Impact of different face masks on hearing
https://publish.illinois.edu/augmentedlistening/face-masks/

Face masks degrade high-frequency speech sounds

Grainger College of Engineering
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

go.illinois.edu/MaskAcoustics
Face Masks: Impact on Hearing

There is no one perfect mask, face covering or shield that will accommodate all students (or adults)!!!

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Tina Childress, AuD (Deaf Audiologist)


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Tina Childress informal testing
August 12 and 14, 2020

<table>
<thead>
<tr>
<th></th>
<th>Auditory Only</th>
<th>Auditory + Visual</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Quiet</td>
<td>+5 Noise</td>
</tr>
<tr>
<td>No mask</td>
<td>96%</td>
<td>92%</td>
</tr>
<tr>
<td>Paper mask</td>
<td>92%</td>
<td>96%</td>
</tr>
<tr>
<td>Cloth mask</td>
<td>92%</td>
<td>76%</td>
</tr>
<tr>
<td>Mask with clear window</td>
<td>80%</td>
<td>76%</td>
</tr>
<tr>
<td>ClearMask™</td>
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<td>76%</td>
</tr>
<tr>
<td>Face shield</td>
<td>72%</td>
<td>0%</td>
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</tbody>
</table>

NU-6 word lists
Presented by Beth Parrott, Au.D., CCC-A at 50 dB HL, MLV, boom mic in front of masks/shield
Face Masks: Impact on Hearing

This [link](#) is a microphone option for use with teachers wearing masks during hybrid instruction. A remote microphone is needed if teacher is either wearing a mask, or increasing the distance to the computer microphone while speaking.
Hearing assistance technology (HAT) is used to improve auditory access to the speaker (teacher/intervener/aide, etc) by mitigating the effects of:

1. **noise**
2. **reverberation (echo)**
3. **distance from the talker (in DL distance from computer mic)**
4. **reduced sound due to mask wearing**

Learners who have any degree of hearing loss require special technology to receive comparable auditory access.

Use of HAT for DL = **BEST AUDITORY ACCESS**
Hearing Assistive Technology (HAT)

What does HAT look like? Depends on the needs of the student

- **In person:** Teacher wears a Transmitter (e.g. Roger Touchscreen) and student has a Receiver (attached to hearing aid or CI/Baha or attached to a streaming device such as a Mini Mic+)

- **Distance learning:** Teacher is close (within 6-12 inches) to the computer microphone or uses a remote mic. **Student** has device attached to the laptop, or *quality* speaker and low room noise. Mic distance from teacher will also effect quality of auto-captions.
Connecting HAT to Computers & Tablets

- If students were using HAT (FM/DM/Remote Mic) in classroom, the same device can be plugged into the device with the audio cord - this is plugged into the headphone port.

- Adjusting volume once plugged in - can be done in settings or clicking on the speaker icon and adjusting to at least ¾ of the way up or higher.

- MULTIPLE LISTENERS - If a parent needs to listen, a 3.5-to-3.5 audio splitter and regular headphones or small speaker can be used.
Review

WHAT IF I TOLD YOU

THAT THERE ARE NO COGNITIVE PREREQUISITES TO USE AAC
Discussion 15 minutes

• Questions?

• Examples?

• Specific activities you need help with?
Questions

• How are you using assistive technology?

• Tell us something good that happened while virtual learning!

• What assistive technology are you interested in?