Communicating with Deaf/Hard of Hearing (DHH) Individuals Online

This is a generic and informal document created for the purposes of assisting others in communicating with deaf and hard of hearing (DHH) individuals online using current technology. For individual specific recommendations, please contact Katelin Miller – Teacher of the Deaf and Hard of Hearing – katelin.miller@sd71.bc.ca

1. Internet Connectivity: Good bandwidth is important, and individuals should check with Internet and wireless providers for any monthly limits on their data usage plan. Bandwidth should be minimum 1.5 Mbps to participate well on a virtual platform. Bandwidth can be tested at http://www.bandwidthplace.com.

2. Captioning: Often, simply viewing the speaker over an online platform is not sufficient for DHH individuals due to the degradation of the audio and visual outputs. Therefore, it is recommended to use captioning whenever possible. Remember – volume does not equal clarity. We have chosen to focus on automated captioning in this document as it is the most accessible for informal purposes, however real-time captioning (CART) remains the gold standard. The best platform for accurate automatic captioning is Microsoft Teams or PowerPoint Presentation. For this reason we have chosen to focus on Microsoft in this document although other platforms will be briefly referenced. **For instructions on how to access captions on Microsoft and other platforms, please refer to** *Addendum A.*

   NOTE: While automated captioning has improved greatly in the past few years in terms of accuracy, speed and exposure to more words, it is important to recognize that inaccuracies will still occur and important information may be missed. Therefore, it is important to use good communication strategies that are further outlined below.

3. Pace of Speaking: A slower pace of speaking is desired. DHH individuals require additional time to process the spoken word, written word and the signed interpretation/clarification.

4. Lipreading: Speakers should:
   a. face the camera when they are on screen to maximize the possibility of lipreading.
   b. ensure good lighting and that their face is not back-lit.
   c. ensure that their face and lips are clearly visible on the screen (i.e. not obstructed by the microphone).
   d. have a darker backdrop if possible.

5. <u>Microphones and Headphones:</u> Speakers should use the best quality microphone and headphones as possible. This will reduce background noise that will interfere with the DHH individual's auditory comprehension.

6. <u>Chat Option:</u> Please make the chat option available to those individuals whose speech intelligibility may not be sufficient to activate the automated captioning accurately.

7. <u>Group Presentation Protocol:</u> Please ensure all participants' microphones are muted until they wish to speak. Muted microphones will reduce interference from background noise and increase comprehensibility. It is suggested that the use of the CHAT feature is a good place for individuals to ask questions as the Microsoft Teams platform can only effectively caption one speaker at a time. The instructor can then direct which individual is able to verbally speak.

8. <u>Recording Session:</u> Recording sessions is a preferred practice as even with the appropriate accommodations the DHH individual will still be at a listening disadvantage and may need to be able to pause or rewind and review recorded materials. They will also be able to benefit from lip-reading and reading the captions at the same time (reading the captions on their own is insufficient).

9. <u>Visual Media:</u> All visual media and pre-recorded content should have closed-captioning or subtitles available. **For instructions on captioning pre-recorded content, please refer to *Addendum B*.**

10. <u>Personal FM/DM Systems:</u> If available, individuals should plug in their personal FM/DM systems to the auxiliary port of the device they are using. This will ensure optimum audio quality. Headphones are less effective as they block the hearing aid/cochlear implant microphones. For information on how to plug in the FM/DM system, please contact the Teacher of the Deaf and Hard of Hearing.

11. <u>Print Accessibility:</u> All materials should also be made available in print and forwarded to individuals prior to sessions, if possible.

12. <u>Signing Individuals</u>: For those who use ASL, access to an interpreter or signer is essential. This can be accommodated using Microsoft Teams. To ensure that the interpreter's/signer's image remains on the screen:
    a. there must be **no more than 5 people** attending including the interpreter/signer.
    b. Microsoft Teams will continually display images up to 4 attendees on the screen without switching between speakers when voice activated. **Here is a video that shows how to pin videos: https://youtu.be/fkBBShb0vLE**
    c. The fewer the attendees, the larger the image of the interpreter/signer which will make signing easier to read.

Computers used by individuals who are signing should be directly connected to the wall via the internet cable. This will enhance the quality of the wifi signal.

Addendum A: Automatic Captioning

Microsoft Teams
Microsoft Teams captioning appears on the same screen as the person speaking. *Microsoft Teams should be used for 1:1or 1-4 people meetings with the individual as it is not possible to present a slide and see the speaker at the same time.*

To Enable Captions: *Note you must go into calendar and set a meeting. Captions do not work in a phone call. **Captions only work using the desktop app. Captions do not work on the online version.

How to schedule a meeting: https://support.office.com/en-us/article/schedule-a-meeting-in-teams-943507a9-8583-4c58-b5d2-8ec8265e04e5

Turn captions on and off

To use live captions in a meeting, go to your meeting controls and select **More options** ··· > **Turn on live captions (preview)**.
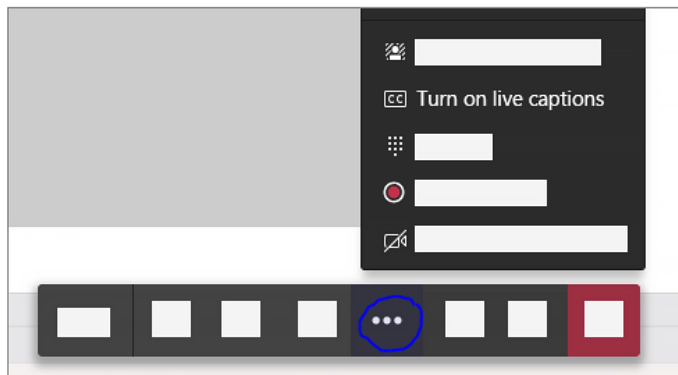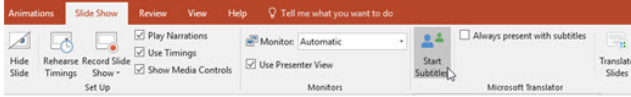
To stop using live captions, go to the meeting controls and select **More options** ··· > **Turn off live captions (preview)**.

Tips for Microsoft PowerPoint:

1. Open your desired PowerPoint presentation.

2. From the top ribbon, select **Slide Show**, then **Start Subtitles**.

   Note: First-time users will need to **Accept** the Terms of Use.

3. From the dropdown bars, select the language you will be speaking in and the desired language to display in subtitles.

4. We recommend selecting the box next to **Customize speech recognition** to improve the performance of Microsoft Translator.

5. You may choose to configure your microphone from the **Microphone** dropdown menu or customize other settings in **Additional Settings**.

6. Select **Next** to continue.
   Note: depending on the length of your presentation, it may take several minutes for the artificial intelligence to run the setup.
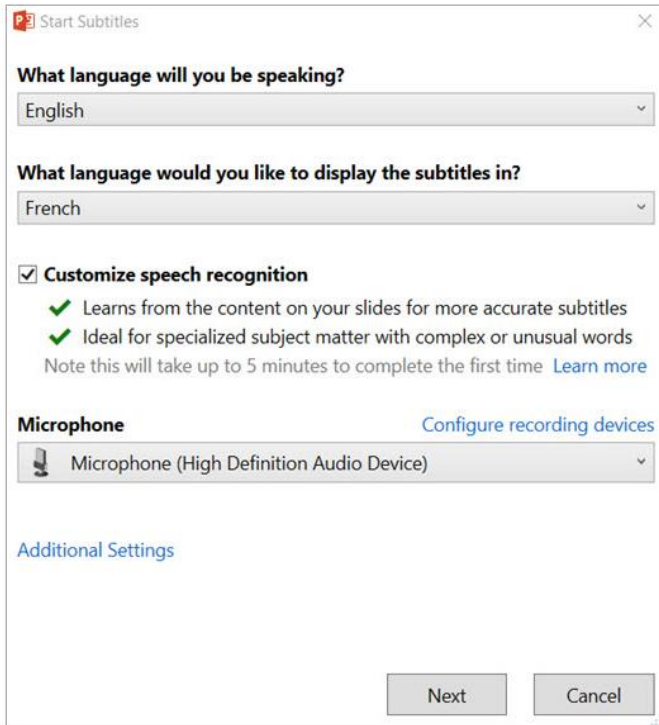
7. A new slide will be inserted before your first slide that will display a QR code and instructions in the language you selected.

Students can download the app for Microsoft Translator and follow along on their phone, tablet, or laptop. Please note that for optimal accuracy it is recommended to use a microphone. See Addendum D for more info.

Other:
1. Microsoft Teams: https://support.office.com/en-us/article/use-live-captions-in-a-teams-meeting-4be2d304-f675-4b57-8347-cbd000a21260
2. Microsoft PowerPoint: https://support.microsoft.com/en-us/office/using-microsoft-translator-in-a-presentation-2582d976-97ea-4bf3-af1b-3647d925240a?ui=en-us&rs=en-us&ad=us
3. Skype: https://support.skype.com/en/faq/FA34877/how-do-i-turn-live-captions-subtitles-on-during-a-skype-call
4. Zoom: https://support.zoom.us/hc/en-us/articles/207279736-Getting-started-with-closed-captioning

Addendum B: Visual Media
Clips (iOS based/Auto Captioned)
https://support.apple.com/en-ca/HT207848
Free in iOS app store. You will need an iOS device to record videos but it can be exported and viewed on any device with captions. This only works with videos recorded in Clips (cannot load external videos).

YouTube (Online/Auto Captioned)
https://support.google.com/youtube/answer/6373554?hl=en
First AutoCaptions videos and then you can edit

Flipgrid and accessibility https://help.flipgrid.com/hc/en-us/articles/115004848574-Flipgrid-and-Accessibility?fbclid=IwAR3eAoSkSJbMsGVFdkwpCcPosp_XTD3Evc_IKODTnDGxgBNa_IPV_ZJNMIo

Addendum C: Microsoft Translator
If all else fails, Microsoft Translator seems to be a great option. The app can be downloaded onto an android or IOS app onto a phone or tablet, or can be used on a laptop. It is easy to follow, accurate, and can be saved. It can also be used from one language to another. For more information:

For Conversations: https://www.microsoft.com/en-us/translator/education/live-conversations/

Education: https://www.microsoft.com/en-us/translator/education/
More features of the app: https://www.microsoft.com/en-us/translator/apps/features/