

SPEECH TO TEXT: WHAT IT IS & HOW IT'S ESSENTIAL FOR OUR DHH LEARNERS

Auditory Outreach: Provincial Resource Program, 2025



Land Acknowledgement



**č̣əč̣əhaṣṭ kʷ ʔaʔamin qaymɪxʷ.
ʔəсна тeʔe ɡɪʔe.**

We would like to express our respect for and gratitude to the ʔaʔamin peoples whose traditional and treaty territory qathet School District resides on. We recognize the ongoing impacts of colonialism and are committed to our own learning and unlearning while courageously working towards decolonization and indigenization through truth, healing, celebration and reconciliation.

Agenda

1

What is speech to text?

2

Auditory Outreach Loans and Eligibility

3

Speech to Text Considerations

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Device Options

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Software Options

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Questions

What is Speech to Text?



Speech to text technology converts spoken language into text.

- *STT creates more accessible instructions without adding more to the teacher's plate.*
- *basic requirement: STT software installed on a device with a screen and a microphone port*
- *to improve accuracy, the distance between source (teacher) and device can be removed via these devices available on loan from AO:*
 - *Roger Neckloop*
 - *Roger transmitter (Touchscreen or ON)*

Speech to Text Evidence

An article by Millet (2022) provides evidence that speech to text equipment and technology is beneficial for students who are d/Deaf or hard of hearing. Benefits for this cohort include:

- Improved access to auditory information
- Increases student independence
- Real-time captioning and the ability to save transcripts
- Supports inclusion and participation
- Decrease in "mishearing"
- Reduced cognitive load

Anderson (2018):

- Presenting instruction in all modalities including auditory, visual and print, increased vocabulary development.
- Children are capable of synthesizing visual and auditory representations of language.
- Presentations of words in more than one modality does not interfere with students' learning them auditorily.

Millett, P. (2021–2022). Accuracy of speech-to-text captioning for students who are deaf or hard of hearing. *Journal of Educational, Pediatric & (Re)Habilitative Audiology*, 25, 1–13. York University.

Anderson, K. (2018) Summary of Pat Spencer & Marc Marschark's 2010 book "Evidence-Based Practice in Educating Deaf and Hard-of-Hearing Students".

How these services create a more equitable learning environment for DHH learners

- real time captions
- transcripts for review and study
- used as a note taking tool
- ability to highlight, comment, and search the transcript
- empowers independence and participation
- fill in gaps of information that would otherwise be lost due to not hearing or mishearing the speaker



Auditory Outreach STT Loans

- Eligibility: Students who attend public or group 1 & 2 independent schools and have diagnosed hearing loss
- New request form specific to speech to text requests.
- If they have existing Roger equipment, we don't need Audiologist authorization.
- All students requesting STT must complete a survey before using equipment.
- We provide the Neckloop and the cord that connects to a windows laptop.
- Schools/ district are responsible for purchasing additional cords and software.

The Accessibility Gap in Classrooms

Challenges faced by our DHH students:

- *limited access to real-time spoken content, often missing parts of conversations due to missing or mishearing words or sentences*
- *reliance on interpreters or note-takers*
- *delays in accessing lecture materials*

STT is inclusive technology that bridges this gap!

Benefits for Educators and Support Staff

Teachers:

- Enhanced communication with DHH students
- Easy sharing of lecture notes to DHH students and beyond

Learning Support Teachers/TDHHS:

- monitoring student engagement and comprehension
- Supporting IEP goals
- Easy access to what is happening in the classroom for review and reteaching

Admin

- cost compared to CART or note-takers

Education Assistants

- less re-teaching (repetition) of teacher's instruction

Speech to Text Considerations

1

Audio quality is critical for accuracy!

4

Consider student's reading fluency and appearance of caption; e.g., four lines better than two lines due to working memory demands (Steinfeld 1999).

2

Software with AI is more accurate than non-AI software and helps to summarize and provide key ideas. However AI can be pricey and privacy needs to be considered.

5

Do you need to save the transcript or only require live captioning?

3

Privacy Issues and Concerns

6

Students may notice a discrepancy between what they hear and the captioning. How to deal with this?

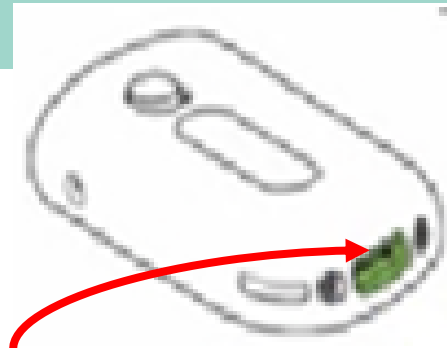
DEMO OF EQUIPMENT

*how to set up your Roger neckloop with
new or existing equipment*

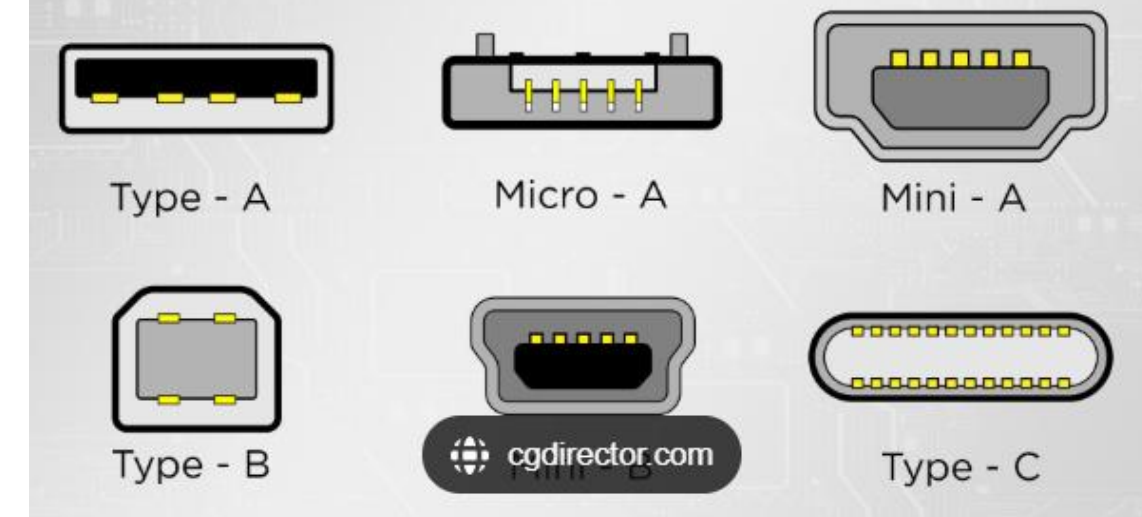


Cables and Adaptors

Different types of USB cables



Types of USB Ports



Technology Considerations when providing DHH students with STT

1. No current personal or RM devices
2. Student wearing hearing aids/CIs with Roger RM
3. Student wearing hearing aids/CIs with non-Roger RM

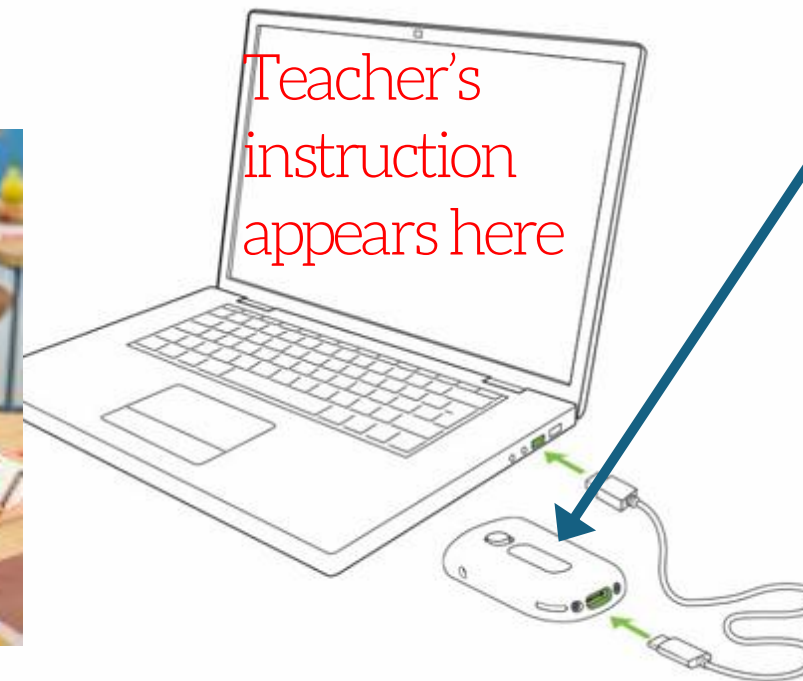
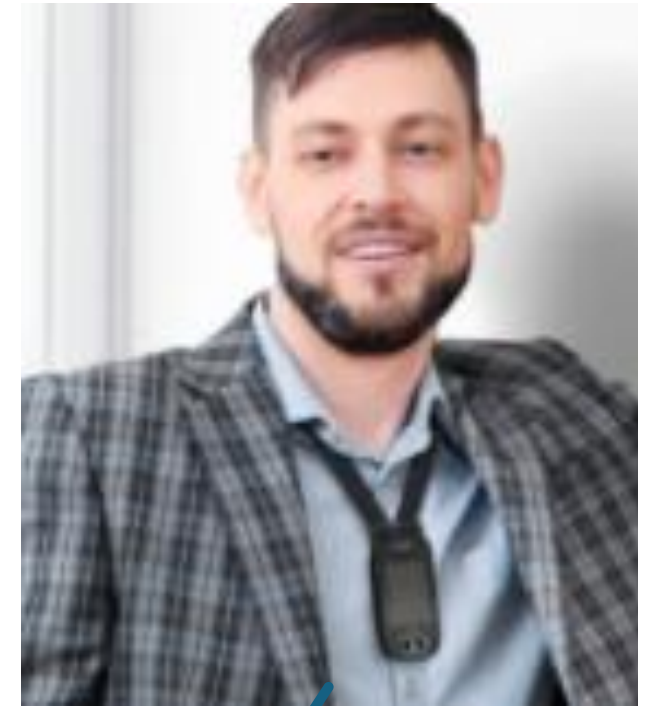
1) No personal hearing devices

Goal of STT Equipment:

Route teacher's voice to device placed on student's desk so it is transcribed in real time to text on student's device

What you need:

- Roger microphone (either Touchscreen OR ON)
- Roger Neckloop
- Cable to connect Neckloop (USB-C) to the Mic-IN of student's device
- STT software on student's device



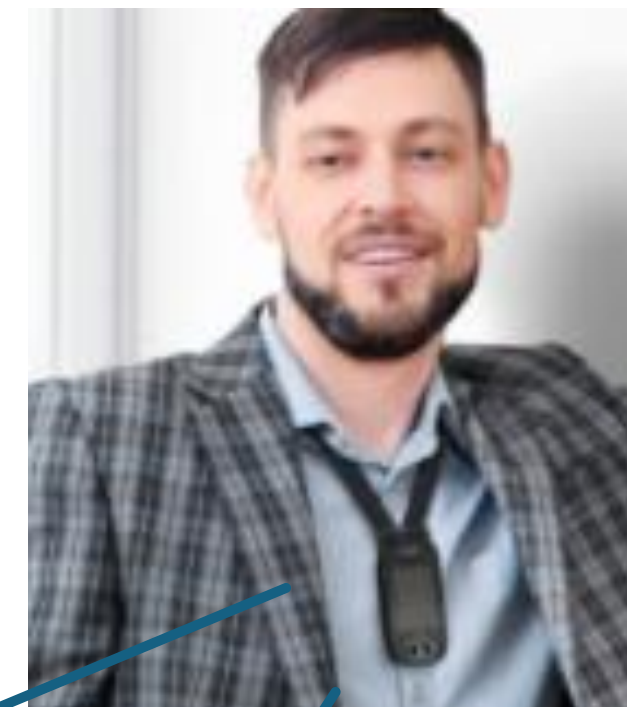
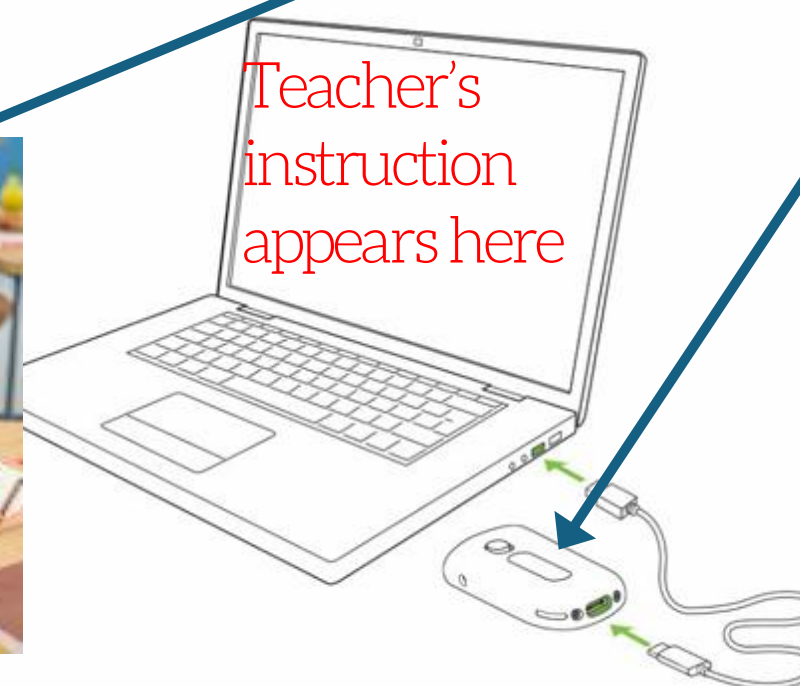
2) Hearing aids/CI + Roger RM

Goal of STT Equipment:

- Route teacher's voice to device placed on student's desk so it is transcribed in real time to text on student's device AND
- Maintain wireless streaming of teacher's voice to student's ears

What you need:

- Roger microphone (either Touchscreen OR ON)
- Roger Neckloop
- Cable to connect Neckloop (USB-C) to the Mic-IN of student's device
- STT software on student's device
- Student's HAs/CIs + Roger receivers



3) HA/CI + non-Roger RM

-> important to consult with audiologist and family to ensure benefit from visual input outweighs potential drawbacks of using non-Phonak transmitter as intermediary

Goal of STT Equipment:

- Route teacher's voice to device placed on student's desk so it is transcribed in real time to text on student's device AND
- Maintain wireless streaming of teacher's voice to student's ears

What you need:

- Roger microphone
- Student's own transmitter (as intermediary)
- Roger Neckloop
- Roger receiver
- Cable to connect Neckloop (USB-C) to the Mic-IN of student's device
- STT software on student's device
- Student's hearing aids OR CI processors



AI enabled/supported Speech to Text Software



What is Otter.ai?

Software:

- *Real time captioning & transcription*
- *Speaker identification*
- *integration with Zoom, Google Meet, and Microsoft Teams*
- *paid option offers more minutes of captioning and more features*

Available in both web and mobile versions for greater accessibility and versatility

How to use Ava

Software:

- *Real time captioning & transcription*
- *Speaker identification - still in Beta version (premium only)*
- *integration with Zoom, Google Meet, and Microsoft Teams with Ava Connect*
- *paid option offers more minutes of captioning and more features, including real time scribe with notice*

Available in both web and mobile versions for greater accessibility and versatility

How to use Word

Software:

- *Real time transcription*
- *Ability to edit text*
- *Fewer privacy concerns*
- *unlimited captioning minutes*

Available in both web and mobile versions for greater accessibility and versatility

How to use PowerPoint?

Software:

- *Real time transcription*
- *Ability to transcribe across multiple languages*
- *Fewer privacy concerns*
- *unlimited transcription/captioning minutes*

**May not be available on some devices*

Speech to Text Software Options

**not exhaustive*



Software Name	Description and Notes	Accessibility Features	Accuracy	Offline Captions	Platforms	Cost*
Google Slides	Live captions during presentations using the computer's microphone (or Roger Neckloop). Captions appear at the bottom of the screen and are not stored.	Live captions, visual display	Moderate (depends on mic and environment)	No	Web browsers (Chrome, Edge, Safari)	Free with Google account
Otter.ai	AI-powered transcription with speaker ID and meeting summaries. Integrates with Zoom, Teams, Meet.	Speaker ID, searchable transcripts, multi-language support	High (approx. 90–95%)	Limited (requires pre-recorded audio)	iOS, Android, Web	Free (Basic); Pro/month: \$11.41+ CAD; Business: \$27.40+ /month CAD
Ava	Live captions with speaker ID. Premium and Scribe captions available. Supports multiple languages.	Speaker ID, multi-language, caption customization	Premium: ~90%, Scribe: ~99%	Yes (Pro and Enterprise plans)	iOS, Android, Web, Mac, Windows	Free (Basic); Pro: \$20.54+ /month CAD

Software Name	Description and Notes	Accessibility Features	Accuracy	Offline Captions	Platforms	Cost
Genio	Transcribes recorded lectures. Available via Genio Notes web app.	Multi-language live captions (32 languages)	Moderate to High	No	Web app (desktop browser)	Free trial; pricing in GBP
Microsoft Word	Dictation feature converts speech to text. Supports voice commands.	Voice commands, real-time dictation	High (depends on mic and clarity)	Limited (requires pre-recorded audio)	Windows, Mac, Web, Mobile	Included with Microsoft 365 (CAD \$115/year)
Microsoft PowerPoint	Dictation for slide content and notes. Supports punctuation and editing. Live captioning available for presenter mode (does not save transcript)	Voice input, real-time dictation	High	No	Windows, Mac, Web	Included with Microsoft 365 (CAD \$115/year)
CART	Real-time captioning by certified professionals. Often used for events and webinars, may also be used in the classroom during lectures.	Professional accuracy, real-time captions	Very High (~99%)	Yes (onsite services)	Streaming platforms and devices	Remote: ~\$100+/hr CAD; Onsite: *cost may vary



Q&A and Discussion

Available Resources:

- Quick start guide for speech to text
- Instructional Video
- Forms to get started

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Thank you!

