

University of Massachusetts Medical School

eScholarship@UMMS

Community Engagement and Research
Symposia

2019 Community Engagement and Research
Symposium

Mar 22nd, 12:00 PM

Optimizing Learner Accessibility: Adding American Sign Language (ASL) and Text-to-Speech to Online Trainings

Sarah Rulnick

University of Massachusetts Medical School

Et al.

Let us know how access to this document benefits you.

Follow this and additional works at: https://escholarship.umassmed.edu/chr_symposium



Part of the Behavioral Medicine Commons, Civic and Community Engagement Commons, Communication Sciences and Disorders Commons, Community-Based Research Commons, Community Health and Preventive Medicine Commons, Health Communication Commons, Health Information Technology Commons, Health Services Administration Commons, Medical Education Commons, Online and Distance Education Commons, and the Translational Medical Research Commons

Repository Citation

Rulnick S, Rochford J, Chaves D, Amankwata B, Do V, Rodriguez M. (2019). Optimizing Learner Accessibility: Adding American Sign Language (ASL) and Text-to-Speech to Online Trainings. Community Engagement and Research Symposia. <https://doi.org/10.13028/9we3-7z26>. Retrieved from https://escholarship.umassmed.edu/chr_symposium/2019/posters/14

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 License](https://creativecommons.org/licenses/by-nc-sa/3.0/). This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Community Engagement and Research Symposia by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.

Optimizing Learner Accessibility: Adding American Sign Language (ASL) and Text-to-Speech to Online Trainings



Sarah Rulnick, MPH; John Rochford, MS; Derek Chaves, BS; Benjamin Amankwata, MS; Viet Do, MS; and Mabelys Rodriguez, MS
University of Massachusetts Medical School, Eunice K. Shriver Center, CANS Training Program



Introduction

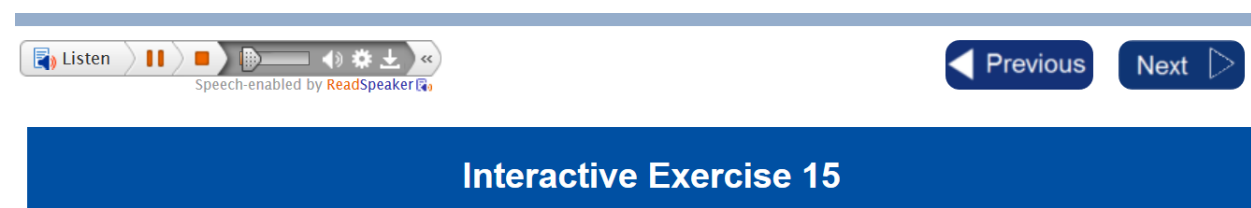
The Child and Adolescent Needs and Strengths (CANS) Training Program provides online training and certification for the Executive Office of Health and Human Services (EOHHS), MassHealth Children's Behavioral Health Initiative (CBHI).

Massachusetts behavioral health providers are required by law to be CANS-certified in order to provide services to Medicaid insured children and youth under the age of 21. The online training consists of written slides, lecture, video, and practice exercises. Providers' learning styles, abilities, and primary language spoken are quite diverse. Learning styles include visual, auditory, and experiential. To meet the varied learning needs, we added accessibility features in accordance with accessibility best practices and in response to user feedback.

Features:

- American Sign Language (ASL) - the training platform enables users to toggle between videos, with or without ASL insets.
- Text-To-Speech (TTS) capabilities throughout the training. TTS reads the text to the user and highlights that same text as it is read aloud. This feature helps people who are blind, those with learning disabilities, or non-native English speakers.
- Closed captioning and transcripts
- Screen-reader compatibility
- Alternative text for images
- Navigation without a mouse

Figure 1: Text-To-Speech in Action



Please complete the exercise. After choosing your answer, please go to the next slide for feedback. If your answer did not agree with ours, consider doing the exercise that follows this one to check your understanding. If you disagree with our answers, and want to tell us why, please click on the feedback button. When you are done, go on to the next slide of the training.

Process

Needs Assessment

The need for ASL and Text-To-Speech came from test scores and learner feedback. Deaf clinicians requested ASL (in addition to video transcripts) to reinforce content. Clinicians with learning disabilities and some non-native English speakers had improved comprehension and test scores when TTS piloted by adding it to the written text.

Decisions

- ASL interpreters were used because the providers/learners are fluent in ASL.
- Read Speaker was chosen at the Text-To-Speech application because of its accuracy.

Recruiting ASL Interpreters

- Interpreters were initially recruited through the MA Commission for the Deaf and the TLC Learning Center.
- TLC Learning Center interpreters, who were familiar with behavioral health terminology, were chosen for the project.

Method

- 3 interpreters were used to film the 200 existing film clips over 3 days. One interpreted, one watched the signer in action, while the other interpreter rested. This ensured quality, clarity and consistency.
- Each clip was signed twice and the group chose the best version.

Results

- The CANS Training Program has trained and certified over 26,000 behavioral health providers throughout MA in the use (CANS) tool.
- 79 learners have used the ASL function since its inception (December 2017).
- Text-To-Speech was used during 5,539 sessions since its implementation in December 2017.
- Adding ASL to training's 200 videos including interpreters, filming and production totaled \$22,000.
- The Text-To-Speech service is \$1,200 per year.
- Future research: evaluate user exam performance before and after the addition of ASL and TTS.



Conclusions



- Our goal is to be a positive role model for the broader on-line learning community.
- Online learning environments need to accommodate the diverse learning needs of diverse learners, which ultimately confer benefits to the diverse communities of children they serve.
- While Text-To-Speech is more economical than adding ASL to highly produced videos, each serves a valuable purpose to their respective audience.
- There is long term value in ensuring accessibility for all learners.

Acknowledgements

Funding for this project came from the Commonwealth of Massachusetts, EOHHS, Office of Behavioral Health, Children's Behavioral Health Initiative.

Interpreter services provided by The Learning Center for the Deaf.

Video production by Paul A. Roselli, Documentary film maker/owner VideoZ Corporate Film & Video Productions, LLC

Special thanks to Lena Riccardi, CANS Project Coordinator for her support of staff and users.