Webinar Q&A

Rethinking Reading Assessment with the Lexile® Framework for Oral Reading and Kid-Specific Voice Technology

Watch the recording of the webinar [here](#).

Questions for MetaMetrics

1. **Does MetaMetrics have comparative benchmarking between your reading tutor solutions and other oral reading web apps?**
   MetaMetrics does not have a reading tutor. We partner with edtech companies who have oral reading products or assessments to enhance their products and provide Lexile oral reading measures, which a) estimate the oral readability of passages and b) measure the oral reading ability of students. Working with speech recognition partners, like SoapBox Labs, we can also provide speech analysis.

2. **Does MetaMetrics offer a subscription-based Oral Reading Lexile measure analyzer for texts?**
   MetaMetrics offers subscriptions that allow publishers to submit materials, designed to be read aloud, to our content measurement department to receive certified oral reading measures that can be published.

3. **How long does the passage have to be for a given recording in order to be able to assess its Lexile level for this type of analysis?**
   We recommend at least a minute. For younger or early learners, it is possible to reduce reading time to 45 seconds.

4. **Have you heard from teachers that the Lexile (oral reading) measures feel more accurate than other interim test scores which may not truly capture a child's reading ability?**
   Lexile measures can be used in combination with other measures from interim assessments. More information is always better than less information. Because oral

reading is a foundational skill and prerequisite to silent reading comprehension, adding this measure paints a more complete picture of student literacy skills. In recent focus groups, teachers have said they appreciate these measures. As students improve their oral reading, they should be presented with increasingly more challenging passages. The Lexile Oral Reading Framework enables this student-to-passage progression.

5. **Are there applications of this partnership outside of the reading domain, perhaps in a listening Lexile domain?**

   Our current partnership with SoapBox Labs is focused solely on oral reading. However, we do offer the Lexile Framework for Listening that edtech companies can use in their products. Similar to the Reading Framework, the Listening Framework measures both listening ability and complexity of audio materials on the same Lexile developmental scale. With the Lexile Listening Framework, you can personalize learning by connecting students to audio content at their ability level, evaluate if students can comprehend what they are hearing in class, and measure student growth using a scientifically valid, objective approach.

6. **What sort of reporting do you provide for learner reading ability growth?**

   MetaMetrics has grade level norms both for Lexile reading comprehension and Lexile oral reading. We've observed an interesting pattern in which the distribution of student abilities is wider for oral reading than reading comprehension in the lower grade levels. We do not yet have growth curves for oral reading, but we will produce these when enough data has been collected.

Questions for SoapBox Labs

1. **My team is developing an app for children. We want to partner with SoapBox and use your API. How do we start?**

    Excellent! Tell us about your product and use case by filling out our [Get Started](#) form, and our team will be in touch to explore next steps.

2. **How does SoapBox's voice technology handle different regional accents and pronunciations?**

    We've ensured that our speech recognition engine understands all kids' voices by training our acoustic models on kids' accents and dialects from 193 countries. The SoapBox voice engine can accommodate unique or custom pronunciations for any population and has been independently validated to show no bias in speech recognition across race, accent, and socioeconomic backgrounds.

3. **Regarding saving time to the teacher: How many children can read at the same time in a class with this technology?**

    All children in a class can practice their oral reading at the same time using a reading app or tool powered by SoapBox's voice technology. We've built our voice engine to understand kids' speech in real-world environments, including noisy classrooms. No headsets needed!

4. **Are products using SoapBox for math assessments or just primarily reading?**

    Reading practice and assessment is a primary use case for our technology, but it's also commonly used for language learning practice, assessment apps and tools, and increasingly in [math](#) and science products too.

    In our webinar "[4 Reasons Voice-Enabled Math & Literacy Tools Are Better for Kids](#)," jump to the 38:20 mark to see VP of Speech Tech Dr. Amelia Kelly demoing how our voice technology works for a math quiz.

5. **What solutions does SoapBox provide for L2 learners, such as ESL students?**

    As the back-end technology, we voice-enable over 30 clients' English language learning tools that assess kids' pronunciation and fluency. Most of these clients use our technology off the shelf, without the need for customization, for pronunciation assessments, keyword

spotting, and conversations.

To learn more about how our voice engine can power your ELL product, please get in touch with us at hello@soapboxlabs.com.

6. **Can SoapBox's voice technology report at phoneme level so that a teacher can discover areas of challenge in relation to specific grapheme-phoneme correspondences?**

Yes, the SoapBox voice engine returns voice data on kids' speech down to the phoneme level. To read more about our phoneme breakdown feature, read our white paper "Fluency: Understanding every phoneme," which details why phoneme breakdown is a game changer for educators, supporting their instruction and leading to better learning outcomes overtime.

7. **Can you rate oral reading for prosody using SoapBox's voice tech?**

Yes, prosody is on our product roadmap. In the coming months, we'll be releasing a series of product features related to oral reading fluency on the prosodic side, such as expressiveness, syllable stress, pitch, and intonation, pauses, etc. So stay tuned!

8. **Can you talk a little more about how you account for specific decoding skills?**

Out of the box, the SoapBox voice engine supports the earliest stages of language and literacy development — from phonological and phonemic awareness to blending and decoding, letter sounds, words, and short sentences — by returning confidence scores for individual speech sounds, all the way down to the phoneme level.

Visit our Early Literacy page to learn more about how our voice engine supports teachers and students on the literacy journey.

9. **RFPs often request info about how well a speech algorithm works with ELL students. Do you have plans to examine this?**

We do already! Lots of SoapBox clients use our voice technology in English language learning (ELL) products, and we regularly conduct extensive testing of our voice engine to ensure we offer them the highest levels of accuracy and consistency. Our accuracy is based on the models we've built using tens of thousands of audio files from kids across age groups, countries, accents, and dialects, as well as audio files of different lengths, content,

and noise levels. At SoapBox, as well as offering human-level accuracy, we want to ensure that our results are indicative of user experiences, and this means making the testing set as challenging as possible.

Visit our [Language Learning](#) page for videos of young students practicing their English on an ELL platform powered by our voice technology.

10. **What does SoapBox see as its competitive advantage over MetaMetrics' other two ASR partners?**

SoapBox's advantage is our 100% devotion to kids. Our voice technology is built to cater to the idiosyncrasies and unique speech patterns of children and performs best in terms of accuracy and bias for kids ages 2 years and up, regardless of accent or dialect.

Here's some of the external validation we've received from two clients:

   a. In their [partner](#) evaluation, **MetaMetrics** found a very high correlation between the SoapBox voice engine and human annotators for oral reading fluency assessments.

   b. During extensive beta testing over a six-month period, education pioneer **Amplify** found a correlation of 96% between SoapBox's automatic assessments and human scoring, a correlation comparable to that of human-to-human scoring that exceeds market standards. More details about Amplify's evaluation and use case for our voice technology can be found in this literacy-focused [white paper](#).

11. **My biggest concern with speech recognition is equity. How can it be equally accurate for less common accents/dialects?**

Ensuring our voice technology works equitably and fairly for all kids is mission-critical to the team here at SoapBox Labs.

We build our speech models with diverse data sets including audio files from speakers all over the world with different accents and dialects. Our diverse data set, along with the sophisticated deep neural nets we use, allow our voice engine to work equally well for children of different demographics, accents, and dialects.

12. Does SoapBox offer multilingual support (i.e., the ability to compare assessment scores in native language vs. second language)?

For oral reading assessments and speech-to-text transcription, our voice engine currently works in English, with other languages (French, German, Italian, Mandarin, Spanish, and Portuguese) coming soon.

13. Has SoapBox evaluated bias? Is there anything published?

Two preeminent US-based academic research institutions have recently undertaken independent studies of the accuracy of competing speech systems and found that for kids, SoapBox performed best. One of these studies focused on the existence of bias in speech recognition and found that SoapBox performed equally well among groups of Black, Latinx, and white children from different socioeconomic backgrounds and demonstrated no bias in speech recognition towards or against any particular cohort. Public-facing reports of these studies have yet to be published. To learn more about these studies, email SoapBox at hello@soapboxlabs.com.

14. As a teacher, I've tried various different speech recognition based reading programs and been surprised at how many errors these programs made. Some were obvious but many errors resulted when phonemes sound fairly close (e.g., short "o" substituted for short "a" and speech recognition did not distinguish between the two). What work is SoapBox doing to correct for this?

Great question! Our Speech Technology and Engineering teams recently completed a project to tackle accuracy in the short sounds domain (letter names, letter sounds, and letter groups). Our new Short Sounds feature allows our voice engine to identify and score individual short sound inputs with unprecedented accuracy. This feature is currently available to lighthouse customers and will be released to all customers soon. To learn more about it, please email us at hello@soapboxlabs.com.

15. What's next in R&D for SoapBox? What's the vision for where this technology could go in K12?

SoapBox is committed to making voice technology a superpower for teachers — and their students — in the PreK-12 classroom. Voice makes assessments invisible to the student, which is important for their experience and helps to build their confidence. Voice also makes assessments more automated for teachers, which means they can perform

them more regularly and track the challenges and progress of their students more easily. The future holds more benefit and power for teachers in these voice-enabled tools — to support screening, for example.

Teachers regularly feed into SoapBox's product roadmap with, to give more recent examples, requests for new features around prosody or short sounds. Our Speech Tech and Engineering teams stay on top of the latest developments in speech technology to ensure continuous improvements are made to the makeup and structure of our voice engine, helping us enhance our kids speech recognition technology and demonstrate proof of our best-in-class position as the voice tech of choice in PreK-12 education.

More questions? Get in touch!

Have more questions for MetaMetrics or SoapBox Labs on our partnership or product offerings? Please reach out to our teams:

MetaMetrics: Contact form (metametricsinc.com/contact)

SoapBox: hello@soapboxlabs.com