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TECHNOLOGY
SERVING HUMANITY

Encouraging Anytime,
Anywhere Reading and
Personalized Learning
with Digital Tools

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How Reading Helps Ensure an Equitable Future (The “Why” of Reading)



Correlation of Reading and Future Success

- The engaged reader is "purposeful, intrinsically motivated, and socially interactive." - Guthrie, 2004
- Reading influences social ability, esp. empathy - Dodell-Feder & Tamir, 2018
- “We found that reading attitudes were the strongest predictors of mental wellbeing.” - Clark & Teravainen-Goff, 2018

How Reading Helps Ensure an Equitable Future (The “Why” of Reading)



Correlation of Reading and Future Income

- 50-year study of 17,000 people: “Reading well at age seven was a key factor in determining whether people went on to get a high-income job...and...was linked to social class even 35 years on.” - Ritchie & Bates, 2013

Many Ways to Read (The “How” of Reading)



Traditional way (reading text on a printed page) doesn't work for all

- Universal Design for Learning (UDL) principles encourage offering content in various formats for different learning styles
- Some students are solely or predominantly audio learners
- Some students may *prefer* to listen to content
- For many students, multi-modal reading (audio + text) boosts comprehension
- Ebooks facilitate “anytime, anywhere” learning

Two forms of audio reading, both have pros and cons:

- Human-narrated audio
- Text to speech (becoming broadly available)



Benefits of Text-to-Speech Audio Reading

- Hearing and seeing words simultaneously (multi-modal reading) reduces the burden of decoding for struggling readers so they can focus on comprehension.
- Allows for customization (font, font size, colors, voice, speed); repetition of sentences or paragraphs as needed
- Often offers study aids: highlighting, bookmarking, looking up the definitions of words
- Increases vocabulary and reading speed, provides exposure to correct pronunciation*

Sources of Audio Books (The “What” of Reading)



Sources of human-narrated audio books:

- Overdrive/Sora/Libby
- Audible (individual users only)
- Tumblebooks Library
- Epic (professionally recorded audio books; avail. during school hours only)
- Learning Ally (for students w/qualifying reading barriers; read by volunteers)
- Librivox (for classics, read by volunteers -- public domain books only)
- Tales2Go



Benefits of Text-to-Speech Audio Reading

- In one study, “students accessed twice as much text within the same amount of time” when using TTS vs reading text on paper*
- “The use of the TTS allowed students to demonstrate improved comprehension scores on factual and inferential (higher level thinking) comprehension questions...Teachers reported improved academic performance, better on-task behavior, and more engagement when using TTS.”*

- *Source: [National Assistive Technology for Education Network](#)

Tools for Audio Reading (The “How” of Reading)



Free Text-to-speech (TTS) Tools:

- Read&Write (Chrome ext; free version offers TTS but few other features)
- Immersive Reader and Edge (Microsoft)
- iBooks (iOS and MacOS)
- Dolphin Easy Reader (iOS, Android & Windows)
- CaptiVoice (captivoice.com; Web and iOS; free and premium paid versions)

Tools for Audio Reading (The “How” of Reading)



Paid TTS Tools:

- Snap&Read (Chrome extension)
- Open Lore
- Read on the Web (Chrome extension by Kurzweil)
- Read&Write for Windows, MacOS, tablets, Microsoft Edge

Sources of Audio Books (The “What” of Reading)



Sources of TTS audio books:

- Gale articles & books; other similar databases
- Project Gutenberg (<http://www.gutenberg.org/>; free)
- Bookshare (700,000 titles for students with qualifying reading barriers; **free**)

Tips for Building a(n) (e)Reading Community



- Create an environment in which students feel free to read in ways that work for them (reading is not optional, but they can choose how they read)
- Have students try a variety of tools and then report the pros, cons of each to the rest of the class
- For TTS reading, try different voices
- Make students the technology experts who can teach each other
- Integrate audio books (human narrated or TTS) into the curriculum so that they are a “normal” part of learning
- Model a curiosity about new tools, and of course, new books!



Bookshare is...

- an ebook library that makes reading easier. People with reading barriers such as dyslexia, blindness, and physical disabilities can read in ways that work for them:
 - Listen to books read aloud
 - Follow along with audio and highlighted text
 - Read in large print
 - Read in Braille
- **750,000 titles!** (~5K titles added each month)
 - Textbooks
 - Books for assigned and leisure reading
 - Books for “upskilling”
 - Periodicals



Who Qualifies for Bookshare?

- Under recently revised copyright law, an “eligible person” is one who:
 - “is **blind**,” OR
 - “has a **visual impairment or perceptual or reading disability**” rendering them unable to read printed works “to substantially the same degree as a person without an impairment or disability,” OR
 - “is otherwise unable, through **physical disability**, to hold or manipulate a book or to focus or move the eyes to the extent that would be normally acceptable for reading,”
- “As determined by a competent authority possessing experience in making such determinations.”



References

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- Guthrie, J.T., Teaching for Literacy Engagement. *Journal of Literacy Research*, V. 36 No.1, 2004, 1-3
- Hodapp, J. B., & Rachow, C. (2010). Impact of text-to-speech software on access to print: A longitudinal study. In S. Seok, E.E. Meyen, & B. DaCosta (Eds.) *Handbook of research on human cognition & assistive technology* (pp. 199-219).
- Ritchie, S. & Bates, T. Enduring Links From Childhood Mathematics and Reading Achievement to Adult Socioeconomic Status, *Psychological Science*. 24(7):1301-1308, 2013



Thank You (Time for Demos!)

- Emily Nostro, Collection Development Specialist, Benetech, emilyn@Benetech.org
- WebReader
- Dolphin Easy Reader
- Word in Immersive Reader