Tips and Tools to Help with Reading Comprehension and Fluency

Center on Technology and Disability

Assistive and Instructional Technology Supporting Learners with Disabilities
Reading is an important way to learn information and interact with the world around you. When transitioning to the next grade level or from high school to college, many students experience a change in the reading demands expected of them. These changes may include increased amount of materials to read, new and challenging vocabulary, greater complexity of language, and higher reading levels.

Whether reading is easy or difficult, there are many different tools that can help with reading tasks. These tools can help the reader to perceive and understand content, take notes, or access a dictionary, and can even modify reading content to simplify vocabulary or the amount of reading required. With the increase in popularity of these tools, there are more options available. They are often a part of the tools we see being used everyday by people all around us without anyone assuming the user has a disability.

**Changing the Text Appearance**

Changing the visual appearance of text can help a reader stay on track while reading, see letters and words correctly, and reduce eyestrain and fatigue. There are different ways to change the visual appearance of text, such as changing the font, letter sizing, text color, background color, line and margin spacing, number of columns, removing extra (sometimes distracting) visuals around text, and highlighting words and sentences as they are read.

Tools such as a colored overlay, an object to underline the current reading position, reading guide strips, and magnifiers can help change the appearance of printed text. Digital text can often be more customizable than print through various software, apps, websites, and Google Chrome extensions.

**Audiobooks and Text-to-speech**

Hearing materials read aloud can also be helpful for understanding the reading material. The term “audiobook” often refers to an audio recording of a person reading a book aloud, whereas text-to-speech uses a computer-generated voice. It is important to consider whether seeing the text while hearing it is helpful for comprehension. Audiobooks do not typically provide paired digital text that can be seen on an electronic screen; Text-to-speech programs require digital text, so often a person

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Whether you think reading is easy or find it difficult, there are many different tools that can help with reading tasks.
can follow along. It is possible to encounter text that cannot be converted to text-to-speech or have other interactive features because it is an image of text, such as used in some online textbooks or PDF documents. These documents require the use of optical character recognition or (OCR) technology to convert the image into regular digital text that can then be read.

**Tools for Reading Comprehension**

Reading comprehension can be supported through various tools that help the reader look up definitions, take notes, focus and pay attention better, self-monitor (e.g., timers or reading prompts), and other tools.

Looking up unknown vocabulary can greatly improve understanding of the material. Dictionaries are available in many different forms: print, handheld electronic devices, websites, apps, and dictionaries built into various reading programs, which can make the process fast and easy.

Taking notes while reading is not only helpful for gathering facts, but also helps with comprehension, especially when reviewing the notes to interpret, reflect, analyze, remember, and apply key facts and ideas. Many programs for reading digital text include built-in note-taking tools such as highlighting text and adding text notes. Some reading programs provide the ability to extract these notes into a list for reviewing, studying, and writing. There are also separate programs designed specifically for taking notes. Some can save notes directly into the program while others require text to be copied and pasted from one program to another.

Using tools that help the reader maintain focus and attention on the reading material can boost comprehension because they help increase awareness of what is being read. Examples include active seating and positioning (e.g., stability ball, standing desk, balance disc, etc.), fidgets, background noise or music, taking breaks for physical activity, and working in a distraction-free environment.

Actively engaging with reading materials can deepen understanding of content and increase your memory of what was read. Tools such as a timer and surveys can help with self-monitoring for comprehension. Tools that simplify reading vocabulary, summarize, or reduce the amount of reading can introduce the material before the reader dives into the full text or course-level language.

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How to Find Reading Materials and Tools

To take advantage of some of these tools, a user must access audiobooks or digital text, which can be acquired in a variety of ways. Special education departments in public schools and disability services at colleges and universities can offer assistance for difficulty with traditional print materials. There are many places to find free audiobooks and digital books. The National Center on Accessible Educational Materials (AEM) provides information at aem.cast.org. (See helpful articles titled, “Acquisition of AEM” and “Higher Education and AEM.”)

If audio or digital text cannot be found for a particular piece of reading material, it can be locally created using a scan-and-read software or technology that uses optical character recognition (OCR) to create digital text, such as software programs like Kurzweil 3000 and Read&Write or tablet and smartphone apps like KNFB Reader, Prizmo, and TextGrabber. There are also occasions when text appears as digital text but is really just an image of text. This limits the ability to modify the appearance and use reading tools. A tool that applies OCR to screenshots can create digital text from an image of text, such as the OCR found in Read&Write and Snap&Read.

Using a combination of appropriate strategies and reading tools can be a great help for increasing reading fluency and comprehension. For assistance in finding the right match of materials and tools, talk with school professionals, disability services, local assistive technology centers, or state assistive technology programs. Embrace and engage in the world of information with the help of reading tools that support readers through the academic journey and beyond.