

Closing the Gap with the AceReader Pro Reading Efficiency Software

By Miriam Ruff

Closing The Gap provides parents, students, and educators with the information and training necessary to assess, plan and implement assistive technology to help those with special needs learn to read proficiently. "Through reading, we gain content knowledge, get exposure to written language structure and conventions, and develop the vocabulary that is essential for success ..." This quote, published in the June/July 2009 issue of Closing The Gap (Vol. 28 No. 2, p. 11) clearly states the importance of being able to read proficiently, no matter what your background or disability.

But with the adult illiteracy rate in the United States at a staggering 38.4 percent – more than one-third of the population – what does that say about priorities, our educational system or our ability to compete in an ever-growing and sophisticated global market? According to statistics reported by the National Institute for Literacy (1998):

- **Low literacy is strongly related to crime** – fully 70 percent (almost three-quarters) of prisoners fall into the lowest two levels of reading proficiency.

- **Low literacy is also strongly related to unemployment** – more than 20 percent of adults read at or below a fifth-grade level, while 75 percent of today's jobs require at least a ninth-grade level to earn a living wage.

- **Low literacy is strongly related to poverty** – 43 percent of those with the lowest literacy skills live below the poverty line.

In addition, it's not just individual status or achievement that's at risk. According to Carol Morris of the Charlotte-Mecklenburg Workforce Development Board, "American businesses are estimated to lose over \$60 billion in productivity each year due to employees' lack of basic skills." Many employers find themselves saddled with the need for remedial training, just to bring their employees up to a minimum functional level.

What can we do? We can start by implementing proper and constant reading habits. Reis, et al (Using Enrichment Reading Practices to Increase Reading Fluency, Comprehension, and Attitudes, posted 22 May 2008) observed that for many years, educators and researchers have demonstrated the relationship between improved reading comprehension and higher scholastic achievement. With that achievement,

comes greater income, and with greater income comes greater productivity, no matter what the job.

The process of learning to read, though, especially for a child with special needs, the task can be overwhelming. Late or improper interventions, uninformed parents and/or teachers, and a lack of adequate positive reinforcement and practice can all compound the student's problems and



Figure 1: Expert Mode.

make his/her success in future academic endeavors less likely.

One way to address this issue is to create and use assistive technology, technological aids that help or circumvent the disabilities and allow the students to read, understand and retain the content being taught. These aids can be devices, such as hearing aids or Braille screens, machines, such as audio and video recorders, or specialized computer software, such as reading, writing, skills development, and more. Though, in the past, most aids were created for individuals that were blind and/or deaf, current technologies allow us to reach a wider population with a greater variety of disabilities.

One of the first electronic machines built to deliver printed content in non-print form appeared in 1934. It was called the Read-phone, and it reproduced literature and music on long playing disks. The disks held

two hours and twenty minutes of recording time, which is about 28,000 words when read at an average pace (about 250 words per minute).

In 1948, the National Bureau of Standards developed specifications for a new, reliable, cost-effective talking book machine for the blind – the tape recorder. Its use and popularity, for both literature and music, carried through to the end of the 20th century, when it was replaced with a wide array of digital media.

Alexander Graham Bell, famous for inventing the telephone, helped pioneer various forms of assistive technology. Researchers at the Bell Labs built on his work with individuals who were deaf to create the first mechanical speech *recognizer*. It would allow low vision users to dictate text to a computer so sighted people could view their work. The Lab reported that, with

training, the machine achieved 97 percent accuracy on the spoken forms of ten digits. Today, such mechanical speech recognition devices are commonplace, found in items ranging from telephone menu prompts to training and productivity software.

In 1936, H.W. Dudley, another Bell Labs scientist, created the world's first electronic speech *synthesizer*, which would allow individuals who were hearing impaired to listen to the words being read while they watched them on the screen. It was a cumbersome machine – it required an operator with a keyboard and foot pedals to control the pitch, timing and intensity of the speech, but it was an uncontested hit when Dudley brought it with him to the New York and San Francisco World's Fairs of 1939. He called it the "voice coder," but it quickly became known simply as a "Voder."

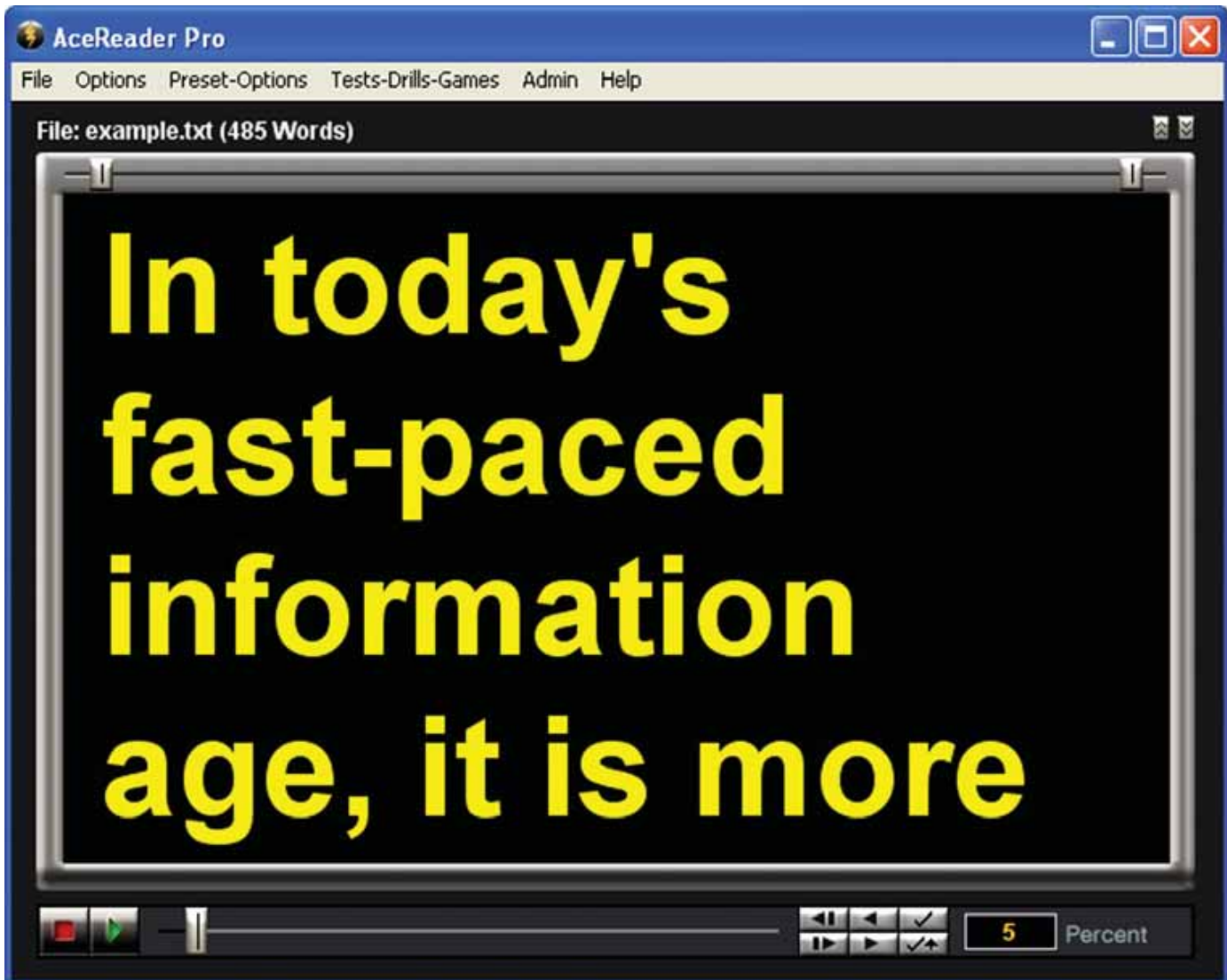


Figure 2: Custom Options (menu) – Large font, high-contrast words.

Perhaps the greatest boon to disability aids, though, came as a result of the computer revolution. With machines designed with ever-increasing memory and processing speed, with the miniaturization of computer chips and with instant access to content over the Internet, not only new software programs, but new *types* of software programs, could be created easily and efficiently.

With software, programmers could develop code-based scenarios that would emulate the prior hardware's mechanical capabilities more easily and efficiently. But not all software programs contain the same features or achieve the same results. That is especially true if the user has special needs. Some programs provide only a few readings and exercises, some include speed training but no comprehension tests, some offer drills and games, and some provide

a wide range of options and customizable features. The bottom line, though, is that a user with disabilities needs to interact with the program more easily than others and be able to work with it to *customize* his or her training.

According to Top Ten Reviews, all effective reading software programs should have:

1. A wide variety of exercises to train eye movement
2. Comprehension tests for baseline and progress notations
3. Different reading levels
4. Different types of text (i.e. different length, format, genre)
5. The ability to alter the parameters of the reading exercises (i.e. font size and color, background color, flash rate, etc.)
6. The availability of customer and technical support

(Please note: While the Top Ten Reviews site listed above contains correct information, you should realize that it does not always compare apples to apples. For example, the reviewers may compare product A from vendor #1 with product B from vendor #2 even though vendor #2 has a higher end product that should rank higher).

When comparing equivalent reading software programs side by side, one of Top Ten Reviews' top picks was StepWare, Inc.'s **AceReader Pro Reading Efficiency** software (www.acereader.com), which won the 2000 Calvin H.P. Pava Prize for advancing the application of assistive technologies that enhance the productivity and independence of brain tumor patients (you can view the April 2000 Press Release at www.acereader.com/about/press.html).

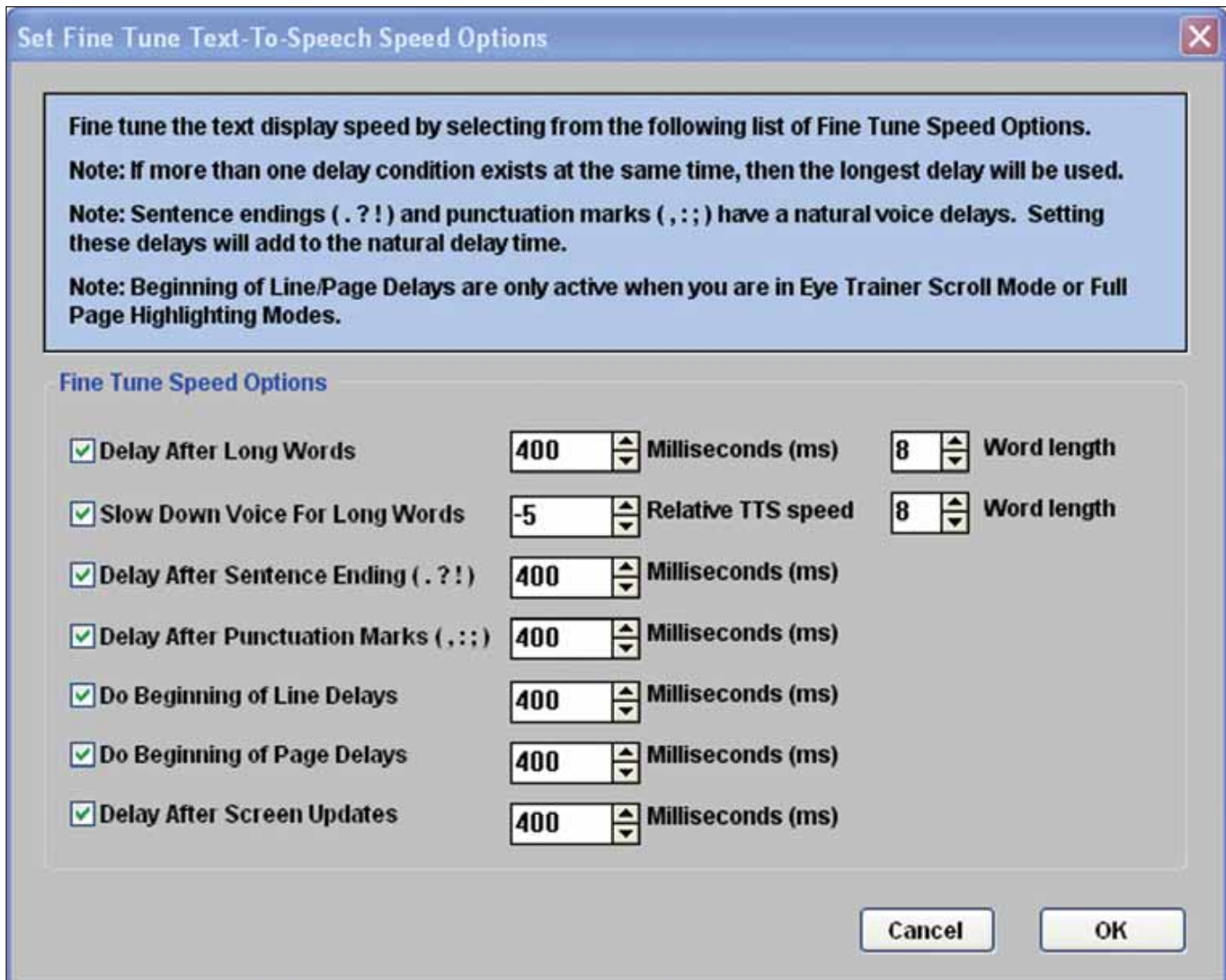


Figure 3: Fine Tune Speed Options features.

AceReader Pro is priced at \$69.95 and is available either for PC or for Mac. It can be used for all students, but it is especially attuned to those with special needs, providing assistive technology and/or rehabilitation exercises to a wide group of users. You can download a 30-day FREE trial that allows you to try *all* the different features, including tests, drills and games, before buying. The demo does have some limitations (i.e. speed limits, limited number of tests ...), but you can still get a good feel for how the program works as a whole. The user can work through the fully automated Course Mode, select activities from a pick-and-choose Menu Mode, or open the fully customizable Expert Mode (Figure 1, page 17), which gives the user total control over all the content and presentation parameters of the reading material. This Mode also serves as the main interface for persons with disabilities.

Some of the many AceReader Pro features include:

- A small download size (8 MB)
- The ability to stretch or shrink the screen
- The ability to adjust bursting rates for text (the only program that does this)
- An extensive Help menu, plus e-mail and phone support
- The ability to import files from other formats (i.e. MS Word, TXT, PDF)
- The ability to copy and paste from Web pages into the program while still online
- The ability to adjust the text (or the voice, if you're using the TTS function described below) to pause at the end of sentences or to move/speak more slowly on longer words to aid comprehension
- The ability to tailor short-cut keys for common functions

Expert Mode allows you to access the program's many different features, either for *educational or productivity purposes*. Using the navigation bar at the top, you can import or load text and set font size, color, type, background color and means

of presentation – simply go to the Options menu at the top of the screen, select Speed Options or Fine Tune Speed Options from the Menu options (with or without the TTS on, if you've purchased this feature), and follow the prompts to change the text according to your needs. You can also set target speeds and burst options from the main Expert Mode screen.

AceReader Pro also has some nice Add-On features, including four Specialty Test Sets (American History, Earth and Space Science, Famous People and Fun Facts) that each contain 130 grade-leveled reading comprehension tests and each available for \$19.95. The text-to-speech (TTS) function, which comes with a male and a female voice, lets you listen to the words on the screen. It is available for \$31 if purchased with the program or \$42 if purchased later. If you want to create your own tests, games and drills, you should purchase the AceReader Pro Deluxe version, which sells for \$99.95 and keeps track of up to five users at a time.

AceReader Pro not only helps average or even gifted students become better readers, but it interfaces well with disabled users, due to its robust functionality and user-controlled features. For example, persons with dyslexia learn best when required to use simultaneous, multi-sensory techniques. AceReader provides that environment with a variety of visual exercises, TTS functionality and user-response quizzes (multiple choice or data entry). It also allows users to adjust the text's presentation speed, as well as to regulate the amount of text to be displayed at one time, known as bursting. The burst function allows you to display and repeat a specific amount of text before moving on to new material. No other program offers that.

Individuals with auditory/language discrimination disabilities, or those learning English as a second language, can use the TTS Add-On to pronounce the words in a high quality voice while the words are flashing on the screen. The TTS option gives students a multi-sensory reading experience since they will hear and see the words at the same time. Those with visual sequencing problems have difficulty ordering information sequentially, and they may see words, letters, and numbers in reverse; those with visual discrimination problems fail to recognize the differences between similar objects, letters, and words. AceReader uses common sight words in an engaging, fun and challenging flashcard game to help them learn to identify the words without needing to sound them out.

Even individuals who are paralyzed and unable to move their heads can work with the program. AceReader uses Rapid Serial



Figure 4: Newspaper Simulation.

Visual Presentation (RSVP) as one of its two modes of operation. In this mode, words appear in the central part of the screen; users do not have to move either their head or their eyes to see and interpret the words. The Sierra Group regularly uses the AceReader Pro to address this issue. You can find a testimonial of their satisfaction with the program at the bottom of www.acereader.com/personal/testimonials.html.

Of great importance to many individuals who are disabled are the Custom Options (Figure 2, page 18) and the Fine Tune Speed Options (Figure 3, page 19, both of which can be used with or without the TTS Feature turned on.

In the Custom Options, the user can set the font color and size, as well as the amount of words to display or highlight at a time. This is especially useful for users with low vision who need larger font sizes and higher contrast between text and screen to read effectively.

Fine Tune Speed Options (Figure 3, page 19) allow you to fine tune the voice speed. You can choose how long the program should delay on long words or pause at punctuation marks. Notice the unique ability to slow the voice down on long words. If TTS is not turned on, a similar set of Fine Tune speed options are available.

The Newspaper Simulation screen (Figure 4, page 20) is yet one more out of millions of possible display modes. You can flash or highlight text in the center of the screen and/or in a manner that paces eye movement, left to right and top to bottom, like you do in normal reading. You can define how much text to flash at a time based on the number of words, lines, sentences, phrases or number of eye fixations per line. This aids not only people with mobility disorders, but, by changing the parameters to include more words or lines at a time, it helps everyone to absorb more material at a time.

Other features that are notable for helping those with special needs are key mapping (setting a single key to replace the need for using the mouse), the ability to flash or scroll text, the ability to import material from a Web site or file so that it can be read with the TTS feature and to set custom challenges to ensure that all users, disabled or not, can push their limits and reach their reading goals.

Support is one of the hallmarks of the AceReader Pro. The program has an extensive Help mode built right into the software and, unlike many other manuals, this Help is actually helpful. If you still can't find what you need, you can e-mail Bernie Marasco at StepWare, Inc. (support@stepware.com) or call 970-243-9390 ext. 2. Messages are answered within a day at the outside.

The AceReader Pro is a small program, but it tackles the reading process far above the much larger programs' capabilities. And while AceReader is similar to other programs in that it contains readings and drills, it is the Expert Mode that sets it apart from the others. By allowing each person to have total control over the configuration of the text and its presentation, it allows them to work efficiently to meet their educational, productivity and reading needs and goals. Download the demo and you'll see – AceReader is not only the best value for the money, but it's simply the best program available at this time, hands down.

ABOUT THE AUTHOR

Miriam Ruff is a freelance writer, editor and reading instructor. She has developed numerous educational curricula, as well as content-based material for the AceReader Pro Reading Efficiency program. To learn more about AceReader, you can visit www.acereader.com. To learn more about the author's products and services, you can visit www.bumbershootwriting.com. ■



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