Promoting Reading:

The book itself is one of the foundations of modern education. But, today there is a new book available to educators, one that integrates new technologies. Today's technology enhanced book is called an electronic book, or eBook. EBooks are textual documents that have been converted and "published" in an electronic format and are displayed on eBook readers, devices, or computers using eBook software programs. This new form of book is a relatively recent addition to book styles and offers students, teachers, and schools an additional tool for the teaching of reading and the integration of reading into content areas. Using the technology resources of computers and Internet access that are already present in homes, classrooms, and libraries, parents, educators, and students can begin using eBooks with little or no cost.

Gifted readers in particular can benefit from the added tools and variety afforded by eBooks. This article will provide suggestions for using eBook technology to promote reading with gifted and advanced learners.

Characteristics of Gifted Readers

Gifted readers often read earlier than the typical student and tend to read independently soon after teacher instruction. They also tend to be better readers, requiring less drill for mastery of skills (Halsted, 1990). Gifted readers can digest a large quantity of information about a topic of interest. Because of their ability to understand the nuances of language, make connections, and deal with the abstract, gifted readers like provocative stories and solving plots with twists. Books with gifted characters or multidimensional characters are also appealing.

Abilock (1999) identified five facts about gifted readers:

1. gifted readers are skilled, flexible readers who read often;
2. gifted readers monitor their reading;
3. linguistically rich texts are especially suited to gifted readers;
4. gifted readers use other strengths in response to the particular demands of the text; and
5. gifted readers are passionate readers who find books to love.

Using eBooks With Gifted and Advanced Readers

by Christine L. Weber and Terence W. Cavanaugh

Catron and Wingenbach's research identifies specific skills gifted readers possess (as cited in Vosslamber, 2002, p. 15):

- anticipation of meaning based on visual clues;
- use of prior knowledge and experience, personal identification, and reader purpose; and
- awareness of cognitive processing of a text for information/concept gathering. Links are made between the present text and what the reader has previously read, and, as a result, concepts are formed or developed.

These facts and skills are important when considering using eBooks to promote reading with gifted readers. Whereas eBooks can be used as a tool to present text, just as a paper-based book can, they also contain features that can be classified as accommodations or as assistive technology tools for reading. EBooks can provide these accommodations for reading by providing alternative formats, scaffolds, and supports for reading activities to reach all students, including gifted and advanced readers. Some of the accommodating features that eBooks can provide include: adjustable text size, highlighting, bookmarking, note taking, interactive dictionaries, and reading aloud through text-to-speech software.

Parents who homeschool their gifted child may find that eBooks allow them to adapt their child's curricula to meet their specific needs, interests, and abilities. The International Reading Association provides general suggestions for parents at school and home in their publication *Your Gifted Child and Reading: How to Identify and Support Advanced Literacy Development* (Israel & Murphy, 2003). They also provide book selections for gifted children including picture books, short chapter books, medium and longer chapter books, books about being gifted, favorite genres of gifted readers, and recommended reading for parents. Each of those categories has books available in eBook formats.

EBook Technology

EBooks, like many other forms of computer technology, have three basic components: hardware, software, and the eBook file. The hardware of an eBook, known as a reader,

Table 1
Five major eBooks formats (all free software programs) and operating platforms

	Web (html/ xml)	text	Adobe Acrobat Reader	Microsoft Reader	Palm Reader
Windows desktops	Yes	Yes	Yes	Yes	Yes
Windows laptops	Yes	Yes	Yes	Yes	Yes
Windows tablets	Yes	Yes	Yes	Yes	Yes
Windows handheld devices	Yes	Yes	Yes	Yes	Yes
Apple desktops	Yes	Yes	Yes	Yes (new models only)	Yes
Apple laptops	Yes	Yes	Yes	Yes (new models only)	Yes
Palm handheld devices	Yes	Yes	Yes	No	Yes

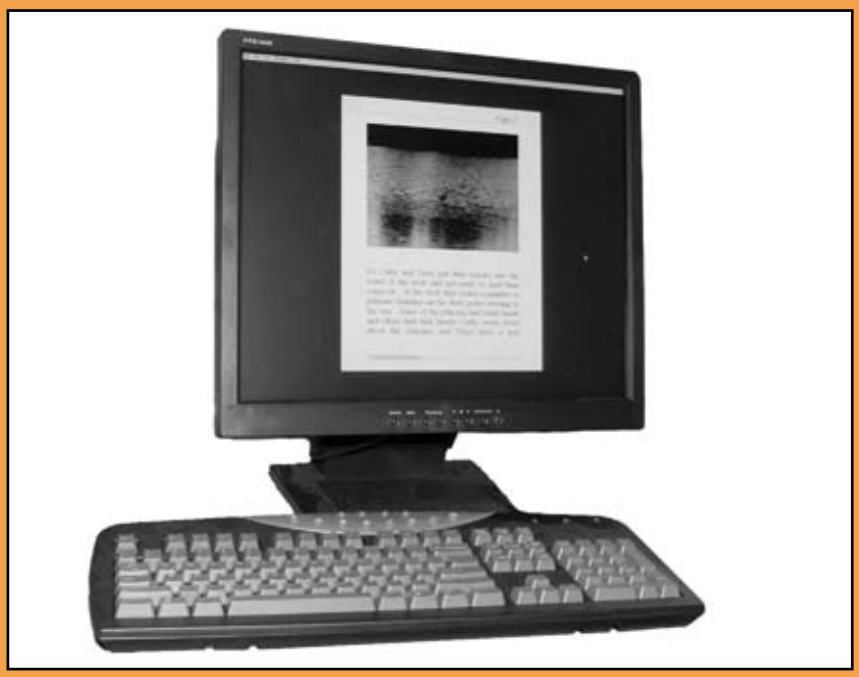

Figure 1. A desktop computer running Palm Reader (eReader) eBook software.

is a computer style device or a computer running specific software that displays the "book" onto a screen (see Figure 1). The software is the program that displays the book data on the device. The eBook file contains all of the book material: text, pictures, and other media and resources. The hardware, software, and file type must all be compatible for any book you wish to use (see Table 1). For example MS Reader software can be used only on a new Macintosh computer (models made in and after 2006), but Palm Reader (eReader) software can be used on a Palm, Mac, or Windows device. MS Reader software understands .lit files, whereas Palm Reader understands .pdb and .prc file types.

A wide variety of eBooks options exist today. Five of the most common eBook formats for reading off a desktop computer or handheld device are text, Web, Adobe Reader, Palm Reader, and Microsoft Reader (see Figure 2). Other specialized eBook formats include CD storybooks and talking book devices like LeapFrog's LeapPad. One familiar variety of electronic book is audiobooks such as books on tape and books on disc. This audiobook format has now expanded to include books on MP3, which have been read aloud by people or machines using a text-to-speech program. While not fitting the traditional definition of a book because most television programs and movies are close captioned, a running text of dialog, in essence, creates an electronic book.

Many kinds of eBooks are available today. The books range from copyright free texts of classic literature, science, and philosophy to current bestsellers. There are three basic methods of obtaining eBooks for the home, classroom, or school for little or no cost. You can purchase an eBook from a store, you can download or use an eBook from a free online library, or students can design their own eBooks.

Figure 2. Handheld or computing devices running eBook programs.

Current bestsellers are available from online bookstores for purchase and download. Audiobooks from Audible (http://www.audible.com) include recent fiction, nonfiction, and other broadcast media. Some online bookstores like ContentLink (http://www.contentlinkinc.com) only sell digital books. Other online bookstores, for example Amazon (http://www.amazon.com), sell not only hard cover and paperback books but also audiobooks and eBooks for the Adobe Reader, MS Reader, and Palm Reader programs.

People are not limited to purchasing eBooks from retailers. There are a great number of online free libraries and even a number of physical libraries (those big brick building ones) that contain and make available a large number of eBooks. Online libraries include Internet Public Library (http://www.ipl.org), Florida Electronic Library (http://www.flelibrary.org), and Project Gutenberg (http://www.gutenberg.org), which is the oldest of the online eBook resources. Gutenberg has more than 10,000 copyright free publications from their first, *Alice in Wonderland,* to the *Human Genome Project*. Some of the online libraries store and distribute books in multiple formats, and some of these libraries have become specialized with collections aimed at specific languages, content areas, or age groups. A large part of many of the free libraries' eBook collections are works that have passed into the public domain, and they may be found in many of the libraries. Visit http://www.drscavanaugh.org/ebooks/ebook_libraries.htm for more than 95 free eBook resources.

Using EBooks With Gifted Readers

Clark (1983) identifies cognitive needs that differentiate gifted children from others. EBooks provide a variety of ways to meet those needs. Access to a wide variety of books encourages exposure to (1) new and challenging information, (2) varied subjects, (3) areas of interest, and (4) difficult vocabulary and concepts. Gifted readers can also be exposed to ideas and issues appropriate to their own rate of learning and continue to pursue answers to questions beyond what might be considered in an allotted span of time.

Gifted readers are so advanced that challenging materials must be made available. Children's varied and unique interests need to be nurtured. Gifted readers may be in jeopardy of losing sight of their schools as the place to find challenging books because they don't find and interact with appropriate materials (Brown & Rogan, 1983). EBooks can provide an avenue for parents and teachers to help gifted readers grow intellectually. By using eBooks, teachers, parents, and students can create, often at no cost, a greater diversity in the available reading material, including materials at a wide range of readability levels.

Reis, Gubbins, and Richards (2001) recommend gifted readers have access to an array of classroom and library books. On the Web, teachers, parents, and students can find sites with single books, special collections, and entire online libraries, many of which make their books available at no cost to the reader. These electronic forms of books and libraries are expanding opportunities for students to have access to books. Using these resources, a reader can often find related titles, such as other books in a series or by the same author, which may not be available at either the school or local public library. For example, most libraries have the children's favorite *The Wizard of Oz*, but how many of the other books in the series are available? A number of online libraries, such as Project Gutenberg, not only freely distribute the *Wizard of Oz*, they also give away the other 13 books that Baum

wrote in the series. Entire collections based upon special topics can also be found. For example, the Electronic Text Center at the University of Virginia Library (http://etext.lib.virginia.edu) has entire collections of electronic books concerning African American, Native American, and women writers. A student can use this electronic library to obtain and read the collected works of Booker T. Washington, for example. An advantage of using these resources is a student's speed of access; once he or she finds an interesting book, usually within seconds the book can be downloaded, and reading can begin.

Using EBooks With Underachieving Gifted Readers

EBooks can be a helpful tool for encouraging gifted children who may be underachieving for a variety of reasons. It is estimated that between 20–50% of gifted students underachieve (Ford & Thomas, n.d.). Whitmore (1980) identifies three types of strategies found effective in working with underachieving behavior in students: supportive strategies, intrinsic strategies, and remedial strategies. Remedial strategies include the opportunities for students to excel in areas of strength and work on areas of specific learning disabilities. Because technology itself is attractive to many students, eBooks can provide a motivating approach for remediation.

West-Christy (2003) suggests five useful scaffolding techniques for readers who might be reluctant or remedial. These five techniques are:

- offer a wide range of reading materials,
- use prereading techniques,
- incorporate large print materials,
- engage multiple modalities, and
- teach important vocabulary.

Many of these supporting techniques are built into most eBooks programs. EBooks can provide additional books for students to increase the range of the reading materials. Most eBooks will allow the font size to be enlarged to large print. Many eBooks have a read-aloud feature with synchronized highlighting to engage reading in multiple modalities, and using eBook readers with an interactive dictionary can provide just-in-time learning for new vocabulary.

Technology experiences in the classroom have been found to contribute to student achievement, both by making students more effective in their learning and teachers more efficient in their teaching. Students are attracted to the use of computers and have been found to be much more tolerant of repetition from a computer program; in fact, they come to expect it. Research has shown that it is not the technology by itself, but instead how the technology is used by teachers and students that improves learning and increases student interest (Albright, 1996; Charp, 1998). EBook programs not only display the words of a book with pictures or animations, but can also include both an audio component and highlighting of phrases as the narrator works through the text, providing an accurate model of what good readers do, while helping to increase fluency (Besalel, 2005).

EBook Reading Accommodations and Scaffolds for Gifted Readers With Learning Disabilities

EBook programs can provide reading accommodations for students who may be experiencing print or reading difficulties or disabilities. Incidence of learning disabilities in the gifted population is 10–15% (Silverman, 2003). Many of the eBook formats, such as MS Reader and Adobe Reader, for the desktop or laptop have text-to-speech capabilities. Research on students with reading disabilities showed that comprehension improved when text-to-speech was combined with reading (Leong, 1995; Montali & Lewandowsi, 1996; Raskind & Shaw, 2000). Through the use of a control panel, a reader can adjust the speed at which the eBook is read. Research findings suggest that student control of text-to-speech speed while reading along increased performance. Findings state that some students benefit from a slower text-to-speech reading speed, while others comprehended better at faster rates (Shany & Biemiller, 1995; Skinner, Johnson, Larkin, Lessey, & Glowacki, 1995). With some eBook programs, the text-to-speech feature is augmented by synchronized highlighting of the text being read. This speech with synchronized highlighting can aid the student in recognizing the structure of written language. This spoken word support has been found to improve reading comprehension for students with reading difficulties (Wise & Olson, 1994).

An additional reading scaffold is the interactive capabilities of an eBook. Most eBook programs provide the ability to highlight text sections, and take notes. Some even add the ability to create drawings within the book. All of these features can increase a student's attending to and comprehension of a given work. Some eBook programs have interactive dictionaries, providing just-in-time learning that allow users to select any word within the eBook and get a definition instantly, have the definition read aloud, or request an instant translation to another language (see Figure 3).

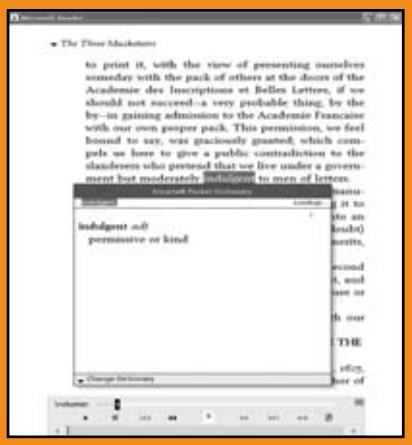

Figure 3. Using the MS Reader eBook program with an interactive dictionary.

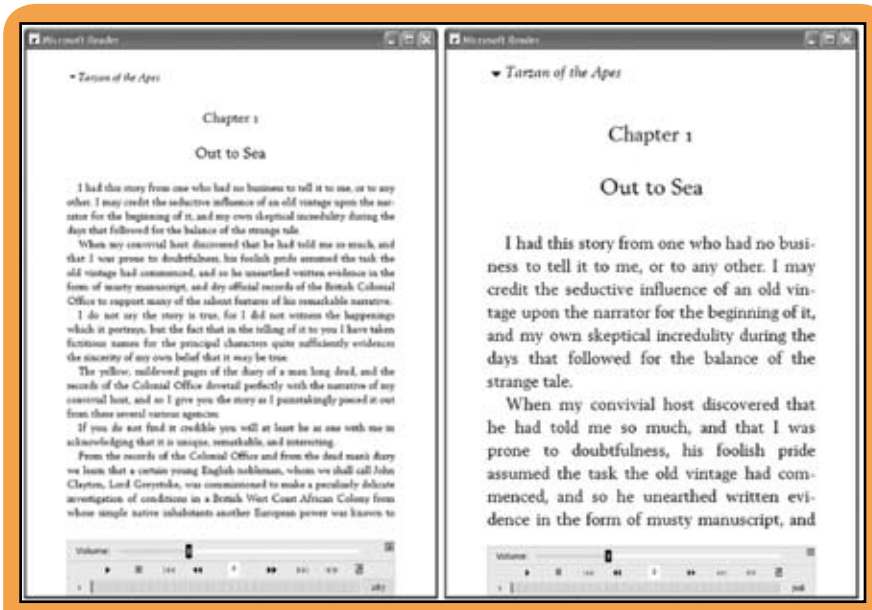

Figure 4. Using an eBook controls to change the display to large font size.

Even the display offered through eBook programs and devices can provide reading scaffolds for many students through their ability to change the displayed text size (see Figure 4). Students who struggle with reading, regardless of the reason, can benefit from changing to larger font sizes. The reason for using large print is not necessarily because these children have visual difficulties. Larger font sizes and spacing actually cause the eyes to move more slowly while reading, allowing students to track their reading more easily (Bloodsworth, 1993) and giving them more processing time. Although many people associate the use of large print text size with older persons or people with visual impairments, the benefits gained with the use of large print apply to students who may not have a learning disability, including struggling, reluctant, and remedial readers. All students, especially those susceptible to visual stress, were found to make more errors when using smaller text sizes than with larger text. From this research, Hughes and Wilkins (2000) concluded that the reading development of some children could benefit from larger text sizes and spacing than is currently the norm. Reading miscues, including misreading syllables or words; skipping syllables, words, or lines; rereading lines; and ignoring punctuation cues, were found to be virtually eliminated when students read large print books. For most eBook programs, creating a large text format is just a matter of sliding a text size bar to a larger setting.

Conclusion

EBooks and eBook libraries are resources that can expand home and classroom interaction and reading experiences by providing additional books and reading options. It is currently estimated that more than 100,000 books in eBook format are now available for free on the Internet. Today's eBook technologies present features valuable for learners with various abilities and special needs, especially gifted and advanced readers. The unique features and capabilities of eBook technologies provide the attraction, options, and accommodations that promote reading. We encourage teachers and parents to take this technology step and introduce your gifted or advanced reader to the options presented by eBooks. GCT

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Appendix A

Free online libraries that have books appropriate for gifted readers in elementary or secondary school are included below.

Elementary eBook Libraries

✪ Aesop's Fables:
http://www.umass.edu/aesop

includes 38 fables in traditional and modern forms. Most are in HTML format and some are in Flash format.

✪ BookPals:
http://www.bookpals.net/storyline

Includes 11 stories read by members of the Screen Actors' Guild (and others). Stories are read and displayed in a video screen (Windows Media, Real, and QuickTime).

✪ byGosh.com:
http://www.bygosh.com

Children's classic books in HTML format.

✪ Children's Books Online:
The Rosetta Project:
http://www.childrensbooksonline.org

1,200 antique children's books published in the 19th and early 20th century in HTML format.

✪ International Children's Digital Library (ICDL):
http://www.icdlbooks.org

The ICDL is building an international collection that reflects both the diversity and quality of children's literature from 27 cultures in 23 languages (The books are in HTML format).

✪ Reader's Theater Editions: http://www.aaronshep.com/rt/RTE.html

A collection of free scripts for reader's theater, adapted from stories by Aaron Shepard and others.

✪ RIF Reading Planet:
http://www.rif.org/readingplanet/content/read_aloud_stories.mspx

A collection of read-aloud books that changes monthly (Flash format).

✪ Stories to Read Online:
http://www.beenleigss.qld.edu.au/requested_sites/storiesontheweb/storiesontheweb.html

Links to approximately 100 stories for early childhood and elementary school children.

✪ StoryPlace Libraries (Elementary and Preschool):
http://www.storyplace.org

More than 20 stories for children along with suggested readings and activities that can be printed out.

✪ Tales of Wonder:
http://www.darsie.net/talesofwonder

Folk and fairy tales from around the world in HTML format.

General and Secondary eBook Libraries

✪ Baen Free Library:
http://www.baen.com/library

More than 75 relatively new science fiction books in Reader, Palm, Rocket, and RTF.

✪ Classic Book Library:
http://classicbook.info

More than 125 books in seven genres featured in an HTML page-by-page format.

✪ Electronic Text Center
at the University of Virginia Library:
http://etext.lib.virginia.edu

Offers thousands of xml, HTML, Reader, and Palm texts.

✪ Making of America (MOA):
http://cdl.library.cornell.edu/moa

Created by Cornell University Library, MOA is a digital library of primary sources in American social history (antebellum through Reconstruction periods). This is a full text/image journal site of 22 magazines from 1830s to 1900s.

✪ Manybooks.net:
http://www.manybooks.net

More than 600 titles in a variety of formats: Palm, Rocket, PDF, and iPod.

✪ Page-by-Page Books:
http://www.pagebypagebooks.com

Offers approximately 400 books to be read online (in HTML format).

✪ USGS Books and Other Publications:
http://pubs.usgs.gov/products/books

Listings of online books, reports, and pamphlets published by the U.S. Geological Survey's Geology Discipline.

✪ Wired for Books:
http://www.wiredforbooks.org

Collections of audio books and interviews (in RealPlayer format). Contains full versions of *A Christmas Carol*, *Alice in Wonderland*, and Beatrix Potter stories along with short stories and excerpts from other books.

Listed below are some suggested books, available for free as eBooks, that may be appropriate for gifted readers (it is a brief list, by no means extensive). All of these books are available for free from the online library Project Gutenberg (http://www.gutenberg.org/catalog), usually in a plain text format. Go to the e-library Web page and then search for either the title or the author of the book. Each of the books listed is available from other online libraries, such as University of Virginia Library's Electronic Text Center (http://etext.lib.virginia.edu/ebooks) and ReadPrint (http://www.readprint.com/online), providing books in a number of eBook formats including HTML, MS Reader, Palm Reader, and more.

Elementary

Little Women (Alcott, Louisa May)
The Secret Garden (Burnett, Frances Hodgson)
Tarzan of the Apes (Burroughs, Edgar Rice)
Hans Brinker (Dodge, Mary Mapes)
The Adventures of Sherlock Holmes (Doyle, Arthur Conan)
The Three Musketeers (Dumas, Alexandre)
Wind in the Willows (Grahame, Kenneth)
Captains Courageous (Kipling, Rudyard)
Rumpelstiltskin (Lang, Andrew)
The Call of the Wild (London, Jack)
White Fang (London, Jack)
Kidnapped (Stevenson, Robert Louis)
Treasure Island (Stevenson, Robert Louis)
Journey to the Center of the Earth (Verne, Jules)
Swiss Family Robinson (Wyss, Johann)

Secondary

Jane Eyre (Bronte, Charlotte)
My Antonia (Cather, Willa)
Lord Jim (Conrad, Joseph)
Tale of Two Cities (Dickens, Charles)
The House of Seven Gables (Hawthorne, Nathaniel)
Green Mansions (Hudson, W. H.)
Babbitt (Lewis, Sinclair)
Of Human Bondage (Maugham, W. Somerset)
Plunkitt of Tammany Hall (Riordon, William L.)
The Tempest (Shakespeare, William)
Frankenstein (Shelley, Mary)
The Strange Case of Dr. Jekyll and Mr. Hyde (Stevenson, Robert Louis)
Walden (Thoreau, Henry David)
Anna Karenina (Tolstoy, Leo)
Life on the Mississippi (Twain, Mark)
The Time Machine (Wells, H. G.)

For more online books and libraries visit http://www.drscavanaugh.org/ebooks.