E-Books and Accessibility: A Guide to E-Books and E-Reader Devices

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Today's Agenda

- Assistive Technology and Electronic Accessibility
- Introduction to E-Books
- Choosing a Device – Questions to Consider
- Types of E-Books
- E-Textbook Accessibility
- E-Reading Apps
- Types of Devices: E-Readers
- Types of Devices: E-Reader Tablets
- Device Product Pages
- Reading App and Web Reader Links
- Other e-Book Resources

Assistive Technology & Electronic Accessibility

- Students with disabilities use a variety of technology to read electronic textbooks, articles, and web content. These are called Assistive Technology.

- Types of Assistive Technology:
  - Text-to-Speech Software (Listening to text)
  - Voice Recognition Software (Dictation)
  - Literacy Support Software (Study skills, highlighting, dictionaries, etc.)
  - Screen Magnification Software (Used by students with low vision)
  - Screen Reader Software (Used by students who are blind)

- Electronic Accessibility asks this question:
  - Can technology interact with the electronic content?

➢ Not Automatically!

Introduction to E-Books

- No One-size-fits-all solution
- Try before you buy if you can

- Variety of file formats
  - Most common: mobi/azw3, epub, pdf
  - Mobi/azw3: Amazon
  - Epub: Everyone else (Nook, Kobo, Apple, Sony)
- Wide variety of delivery methods / devices
  - e-Readers, tablets, reading apps, web-based

- All have restrictions
  - Not all formats will display well
    - Limitations of the format or device – file type, content type
    - Limitations imposed by the seller / publisher – file source, encryption
    - Even those that all use epub have different encryption methods
  - You cannot simply buy e-books from anywhere and read them on any device

Publishers and Copyright Concerns

- Variety of Booksellers / Publishers
  - Want to keep their content secure
  - Want you to buy exclusively from their store – both devices and books
  - E-Book ownership is not transferrable
  - Not bound by Section 508

- Digital Rights Management (DRM)
  - Encryption used by the industry to limit use of e-Books and defend against piracy
  - Files with DRM are "locked" to a specific device or account
  - The device must be registered to "unlock" the file

➢ This leads to accessibility issues as the text is locked down

Choosing a Device: Questions to Consider

- What do I want out of the device?

  - Just for reading?

  - Multiple uses? (apps, internet, audio books, video)

  - Textbooks vs. mainstream fiction and nonfiction?

  - Ability to read for a long time without eye fatigue?

  - Ability to read outdoors without glare?

  - Built-in reading light?

  - Ability to sleep after reading at night?

    - Back-lit devices like computers and tablets can make it harder to sleep.

Accessibility Considerations

- What are my physical needs?
  - Weight of device?
  - Method of turning pages
    - E.g. Buttons? Touchscreen? Swipe or tap? Location?
  - Length of time reading? (possibility for eye fatigue)
    - Does reading on a computer screen for a long time bother you?
  - Screen reader capability?
  - Text-to-speech capability?
  - Audiobooks availability?
  - Zoom levels? In menus?
  - Contrast settings?
  - Type and size of fonts?
  - Line spacing / margin adjustment?
  - How customizable is the device?

Types of E-Books: E-Textbooks

- Not purely text
  - Often have complicated layouts, images, formulas, etc.
- Mostly web or app delivery, sometimes PDF.
- Not a downloadable file you can put on all e-Reader devices
- Need a computer or tablet with a browser or app capability
- No standard encryption method – varies by publisher
- Sources of e-Textbooks
  - Directly from the publisher, delivered on their exclusive website
  - From retailers, delivered through reading apps
- Students expect to be able to use technology with e-textbooks, but end up still having to get an alternate version through disability services just as they would with paper texts.

E-Textbook Accessibility Problems

- Degrees of Accessibility
  - Bare minimum: Screen readers can read the basic text in some fashion
  - Other aspects missing: headings, alt text, keyboard navigation, voice navigation, text-to-speech
- Both websites and apps often have limited accessibility
- The books themselves may not be accessible
  - The content is often locked to prevent copying / pasting / exporting, which means text-to-speech is also disabled
  - Onscreen OCR features DO often work for basic text-to-speech (e.g. Read & Write's Screenshot Reader / Kurzweil 3000's Image Reader)
- Interactive features are rarely accessible at all
  - It is better to assume that e-Textbooks will not be very accessible

Mainstream Retailers of e-Textbooks

- E-Textbooks only work on tablet apps or computer apps
  - Check the return policy before you buy in case the book does not work with Assistive Tech
  - Rentals are often available for e-Textbooks
  - Copy and paste ability usually indicates text-to-speech capability
- Amazon e-Textbooks
  - Check "Available only on these devices" in the Edition Info
  - Check text-to-speech availability on each book's Product Details
  - Kindle Fire, Kindle for iPad/Android, Kindle for PC/Mac
- Barnes & Noble
  - Requires special textbook app for PC or Mac called "Nook Study"
- Apple iBooks
  - VoiceOver works with the app, but the books themselves may not work
- Google Play Textbooks
  - Allows highlight, notes with export, dictionary, search

Textbook Apps – Other Retailers

- Check that an app is available for your device before purchase
- Check the return policy before purchase
- CourseSmart.com / VitalSource.com
  - Accessibility is a stated priority and standards are included in their checklist for publishers
  - Accessibility in both web and apps (visual and hearing technology)
  - Allows copy & paste
  - Rentals available
- eCampus.com
  - Allows copy & paste, search, highlight, notes
- Chegg.com/etextbooks
  - Web only (html5-based)
  - Search, highlight, notes
- Kno.com
  - Does not allow copy & paste
  - Search, highlight, notes, flashcards

Types of E-Books: Mainstream Fiction & Nonfiction

- These e-books are the kind of books generally sold at retailers such as Amazon or Barnes & Noble
  - Buy a dedicated device from the retailer and register it to your account
  - Download a reading app and login with your account
- Buy books from that same retailer or a retailer with compatible encryption

- The most common retailers for e-Books in the U.S. are:
  - Kindle by Amazon
  - Nook by Barnes & Noble
  - Kobo by Kobo

E-Reading Apps (Mainstream Books)

- Each of the major e-Book retailers has free apps for both mobile devices and computers (not every platform)
  - Amazon has a PC app that is accessible to screen readers. This is a separate download from the main app
- Other mobile reading apps include
  - iBooks
  - eBooks.com
  - Stanza
- If you already have a mainstream tablet (iPad or Android), apps may be a more flexible option

- Apps for borrowing public library books
  - Adobe Digital Editions
  - OverDrive Lending Library

Adobe Digital Editions (ADE)

- ADE is for epub compatible devices only (no Kindle)
- Software installation for PC or Mac
  - Free Adobe ID required to register the software
  - Download epub (or pdf) books from e-Book store or public library
  - When prompted, open the .acsm file using ADE (other software will not be able to unlock the contents)
  - Transfer encrypted books from computer to e-Reader via USB
  - Read books directly within the ADE software on PC or Mac

- e-Book stores use ADE to deliver purchased books
  - Barnes & Noble, Kobo, Sony (built-in to devices & proprietary software)
  - Google Play eBookstore
  - eBooks.com
  - Textbooks.com

- Public Library Lending (OverDrive) uses ADE to deliver e-Books
  - The file locks after the borrowing period expires – no late fees
  - Note: Kindle devices borrow through logon to Amazon & wireless delivery

OverDrive Lending Library

- OverDrive also has its own apps aside from ADE for borrowing books wirelessly
  - Wireless delivery directly to the device (No usb transfer required)
  - Uses the same encryption & expiration system as Adobe Digital Editions
  - Local library account login is required

- E-Readers
  - Direct download from OverDrive is a feature on some devices
  - Not an app that you install, but included on the device

- App for E-Reader Tablets & Computers
  - Free OverDrive account required to register device (instead of Adobe ID)
  - Up to 6 devices – syncs progress & bookmarks
  - iOS, Android, Windows Phone/Tablet, PC, Mac
  - Audiobooks and videos are also available

Types of Devices: E-Readers

- E-Readers are dedicated reading devices
- Designed to replicate the experience of reading a paper book
- E-Ink technology
  - The page looks just like a paper book with grey-scale ink
- Best for mainstream fiction & nonfiction books – text only
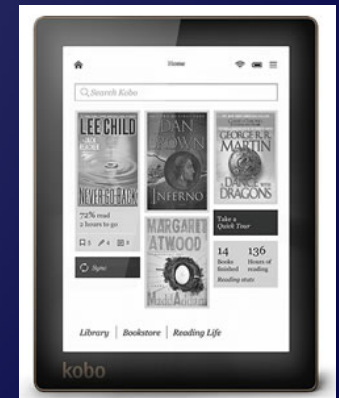- Limited internet
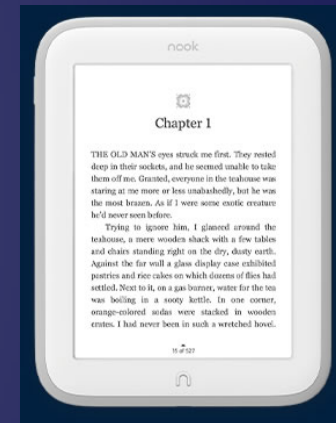- No apps

Pros of E-Readers

- Less eye fatigue
  - Not like reading on a screen
  - Screen only refreshes on page turns
  - No flicker
  - No back-lighting
- Front-lit screen – the light shines down at the text
  - Some options without any light at all
- Much lighter weight than tablets
- Dedicated reading device – no distractions
- Long battery life

Cons of E-Readers

- Very inaccessible for visual impairments
    - No audio capability at all
    - No changeable contrast settings
    - Large font sizes are available within books, but not in menus
- Do not display PDFs very well
- Text-only
- No textbook capability

Top 3 E-Readers Currently Available

- Amazon Kindle
  - Touch
  - Paperwhite
  - Voyage

- Barnes & Noble Nook
  - GlowLight

- Kobo
  - Mini
  - Touch
  - Glo
  - Aura / Aura HD
  - Aura H20 (waterproof)

Shared Features of All E-Readers

- There are minor differences that set e-readers apart from each other, but they all have these basic features in common
  - E-Ink Screen
  - 6" Screen Size (except Kobo Mini – 5")
  - Weigh 6-7 oz
  - 6-10 different fonts
  - Font sizes up to about 24pts
  - Touchscreen navigation and page turns
  - Sync across devices and apps
  - Highlighting, notes, bookmarks, and dictionary lookup

Standout Features of Kindle E-Readers

Cost
- $79-$269

Pros of Kindle E-Readers
- Highest quality e-ink technology
  - Best contrast
  - Most responsive touchscreen
- Voyage model – page turn sensors
- Model without light is available
- Best selection / price of books
- Family library sharing

Cons
- Not customizable
- Includes the heaviest e-Reader (Paperwhite at 7.3 oz)
- Light is adjustable but always on
- Screensaver shows either ads or random images
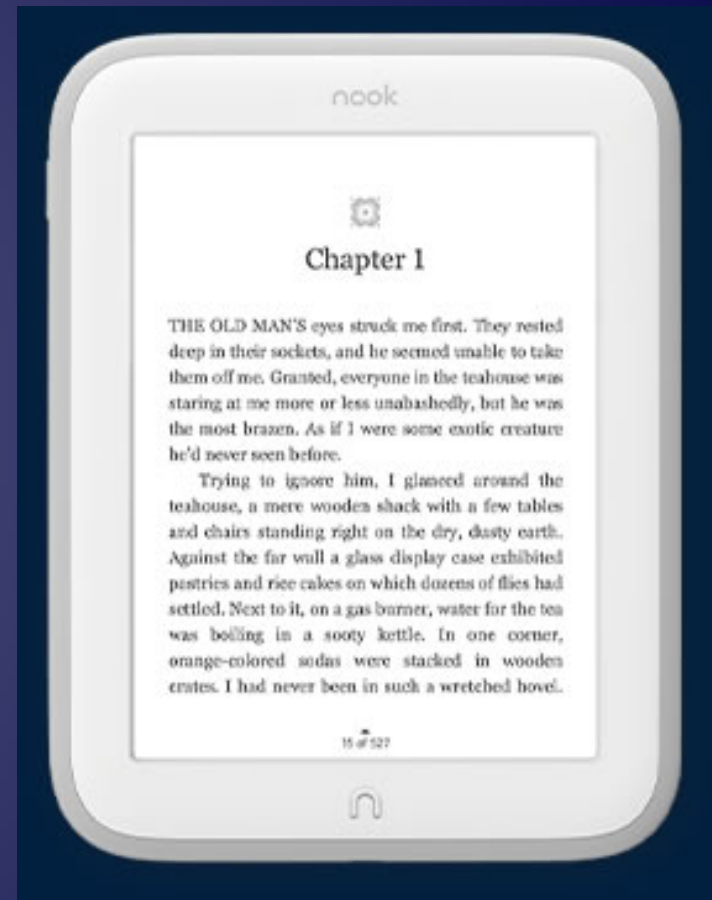
Standout Features of Nook E-Readers

Cost

- $119 (Comparable to the Kindle Paperwhite)

Pros of the Nook Glowlight

- Light can be turned on /off as well as adjusted
- Progress indicator – Page of Pages
- No ads
- Simple – not a lot of catchy features
- Very hackable

Cons

- Only one model
- Off-white case (could be a pro)
- Generic screensaver cannot be customized
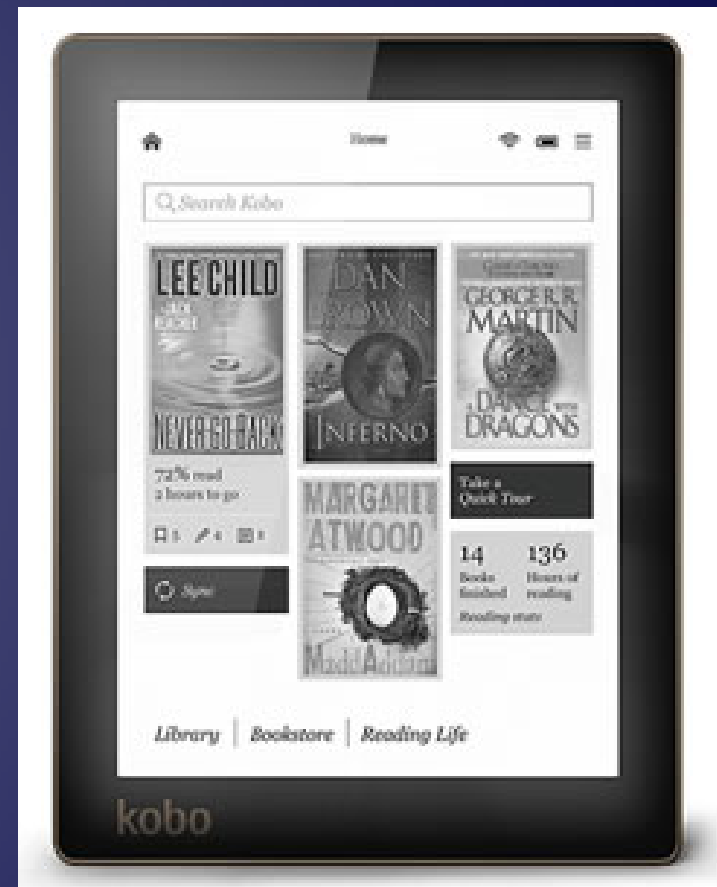
Standout Features of Kobo E-Readers

Cost

- From $99-$179

Pros of Kobo E-Readers

- Light can be turned on / off as well as adjusted
- Customizable zones for page turns
- More models available
  - Without light, Smaller screen, HD & Waterproof versions
- Lightest weight e-Reader
- More fonts and font sizes, line spacing & margin settings
- Screensaver is "currently reading" book cover
- Progress: Page of Pages, Percentage or Time remaining
- Reading stats on home screen
- No ads

Cons

- Touchscreen is sometimes unresponsive
- E-Ink screen has less contrast than Kindle
- More expensive than Kindle or Nook

Types of Devices: E-Reader Tablets

- E-Reader Tablets are designed to be more versatile than dedicated e-Readers
  - Books (text-to-speech capability if publisher allows)
  - Audio books (human narrator)
  - Textbooks
  - Magazines
  - Videos, Music, Games
  - Apps
  - Web browsing
  - Screen sizes vary from 7-10" (compare to e-Readers at 6")
  - Weight varies from 11-22oz (compare to e-Readers at 6-7oz)
- Similar to mainstream tablets such as iPads, but more limited
  - Kindle Fire – Limited to Kindle apps
  - Nook Samsung Galaxy & Kobo Arc – Android-based with Google Play

Pros of E-Reader Tablets

- Audio options are available
  - Text-to-speech (if allowed by publisher)
  - Audio books
  - Screen readers available (varying levels of accessibility)
- Generally more accessibility features (although limited)
- Contrast options
- Textbooks with print layout
- Can install other apps
- Color screen

Product Details

File Size: 1346 KB
Print Length: 353 pages
Page Numbers Source ISBN: 0451417550
Publisher: NAL (March 4, 2014)
Sold by: Penguin Group (USA) LLC
Language: English
ASIN: B00DMCV160
Text-to-Speech: Enabled ☑
X-Ray: Enabled ☑
Lending: Not Enabled
Amazon Best Sellers Rank: #1,638 Paid in Kindle St
  #11 in Books > Mystery, Thriller & Suspense >
  #16 in Kindle Store > Kindle eBooks > Mystery,

Check the Text-to-Speech setting on each Amazon book page

Cons of E-Reader Tablets

- More eye fatigue than E-Readers
  - Back-lit screen
  - Screen refreshes constantly
  - Like reading on a computer screen
- Glare – makes it difficult to read outdoors
- Heavier than e-Readers
- More possible distractions while reading
- May only be able to use apps from the retailer's app store (e.g. Amazon apps on Kindle Fire)
- More limited than mainstream tablets such as iPad

Top 3 E-Reader Tablets Available

- Amazon Kindle Fire
  - HD 6 & 7
  - HDX & HDX 8.9

- Barnes & Noble Samsung Galaxy Tab 4 Nook
  - Samsung Nook 7
  - Samsung Nook 10

- Kobo Arc
  - Kobo Arc, Arc 7
  - Kobo Arc 7 HD, 10 HD

Standout Features of Kindle Fire Tablets

Cost

- $99-$379

Pros of the Kindle Fire

- Magnification in menus as well as books
- Screen reader – with IVONA voice, 5 rate options
- Bluetooth keyboard or braille display capable
- Simultaneous reading and listening with Audible (have to purchase both e-book and audio book)

Cons

- Only Apps from the Kindle app store – limited selection

Standout Features of Nook Tablets

Cost

- $179-$319

Pros of the Samsung Nook Tablets

- Samsung Galaxy / mainstream tablet base
- Google Play for apps
- Large font in menus
- TalkBack works (with nonstandard, limited controls)

Cons

- TalkBack – Explore by touch does not work

Standout Features of Kobo Tablets

Cost

- $139-$399

Pros of the Kobo Arc Tablets

- Google Play for Apps – Samsung Apps
- Some magnification in menus (not in store)

Cons

- Only 3 fonts
- TalkBack is available, but does not read books

Questions / Comments / Discussion

- What would you choose for yourself or recommend for others?
    - e-Reader
    - e-Reader Tablet
    - Mainstream Tablet
    - Computer with browser or app
- What features are deal breakers for you?

- What have your experiences with e-Books or e-Textbooks been?

- As librarians, how does this knowledge affect you?

Device Product Pages

- Kindle e-Readers
  - http://www.amazon.com/dp/B00I15SB16/ref=fs_kb

- Kindle Fire Tablets
  - http://www.amazon.com/dp/B00KC6I06S/ref=fs_far

- Nook Glowlight
  - http://www.barnesandnoble.com/u/nook/379003208

- Nook Samsung Tablets
  - http://www.barnesandnoble.com/u/nook-tablets/379004191

- Kobo e-Readers
  - http://www.kobo.com/devices#ereaders

- Kobo Tablets
  - http://www.kobo.com/devices#tablets

Reading App and Web Reader Links

Amazon Kindle

- Amazon Kindle Apps
  - (https://www.amazon.com/gp/digital/fiona/kcp-landing-page?ie=UTF8&ref_=sv_kstore_3)
- Kindle for PC with Accessibility Plugin
  - (http://www.amazon.com/gp/feature.html?docId=1000632481) ("Reading on Kindle" at the bottom)
- Kindle Cloud Reader
  - (https://read.amazon.com)

Barnes & Noble Nook

- Nook Apps
  - (http://www.barnesandnoble.com/u/nook-mobile-apps/379003593)
- Nook for Web
  - (https://mynook.barnesandnoble.com/index.html)

Kobo

- Kobo Apps
  - (http://www.kobo.com/apps)
- Kobo Instant Reader
  - (http://read.kobobooks.com)

Other Reading Apps

- Adobe Digital Editions
  - http://www.adobe.com/solutions/ebook/digital-editions/download.html
- OverDrive Lending Library
  - https://app.overdrive.com/

Other e-Book Resources

General Info on E-Readers – Blogs, Reviews, News

- The eBook Reader.com
  - http://www.the-ebook-reader.com/
- MobileRead
  - www.mobileread.com

Reviews and Comparisons of Various E-Readers

- Top Ten Reviews eBook Reader Comparisons
  - http://ebook-reader-review.toptenreviews.com
- CNET Best e-book readers of 2014
  - http://www.cnet.com/topics/ereaders/best-e-book-readers/
- National Federation of the Blind Kindle Fire HDX Review
  - (https://nfb.org/blog/atblog/kindle-fire-hdx) (2013 Model)

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