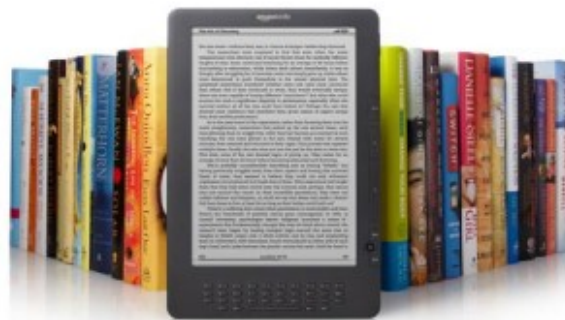




# Are eBook readers (like Kindle) suitable for scientists or researchers?

My job as a lecturer as well as a scientist entails me to read a lot. Fortunately, I love books, reading as many as two books (mainly non-fiction and popular science books) a month for leisure.



Amazon Kindle DX  
([www.techshout.com](http://www.techshout.com))

Consequently, I was thinking of getting some eBook reading device that would enable me to electronically store and read my journals, documents, and technical and non-technical books. Unlike most techie people, I have no interest in Apple's iPad though it supports eBook reading.

iPad supports more varied functions (such as internet browsing and multimedia) than the well-known Amazon Kindle. However, iPad's greater versatility does not automatically mean iPad is a better eBook reader than Kindle. A dedicated eBook device, such as Kindle, may instead perform its sole function as an eBook reader

extremely well.

The major drawback of iPad is its backlit screen, which makes it hard to read text for long. This is also a major reason why computer screens make a poor platform to read large amounts of text for long. Staring at the screen's brightness strains and hurts the eyes. iPad cannot also be used under direct sunlight due to the glare from the screen. Moreover, iPad's battery life cannot match that of eBook readers. Kindle's battery life, for example, can last for a month without recharging.



Smart ad by Amazon. Kindle, not iPad, can be used under a strong sunlight.

In Malaysia, MPH bookstore appears to be the sole agent selling eBook readers. They currently sell four brands: iRiver, Hanlin, BenQ, and Oasis (unfortunately, no Kindle). A few months ago, I went to the MPH bookstore branch at Midvalley to test these devices. I went away very disappointed.

These eBook readers had one or two major faults. iRiver Cover Story and BenQ had a touch screen feature, meaning that we could touch the screen to navigate the device, akin to iPhone's or iPad's touchscreen feature. However, touchscreen feature comes with a heavy price: screen glare. In addition, the BenQ reader menu navigation was quite unresponsive. I had to tap BenQ's screen or click the buttons several times (often quite hard) to navigate the menu options. Other eBook readers have other serious problems. The most serious problem was that all of these eBook reader rendered PDF documents badly. The text in a PDF document, for example, appeared with blurry or jaggy edges. Searching text in a PDF document was strangely a hit-and-miss affair. It could find some words but fail to find others (even if the word I tried to search was displayed right in front of

me).

This was why I finally chose to buy the Amazon Kindle. Even though I could not physically test one (no Kindles in Malaysia), I have read good enough reviews about it from the net. I purchased, via online, the best Amazon Kindle device: Amazon Kindle DX. I chose it because it has the largest screen size (9.7") and screen resolution (1200×824 pixels) than all other eBook readers. Well, if you are going to get a device to read eBooks, get one with a big screen, right? Why torture your eyes on a small screen?

Moreover, the Amazon Kindle DX I bought has been improved to have a better screen contrast by 50%, so that text and images now appear sharper.

After waiting for about two months, my Kindle DX finally arrived. I unpacked it and noticed that Amazon had stuck a piece of paper on the Kindle's screen to remind me to charge my Kindle prior to first use. I tried to remove this paper but could not. I grumbled on why Amazon had used such a strong glue to stick the paper on the Kindle's screen (of all places).

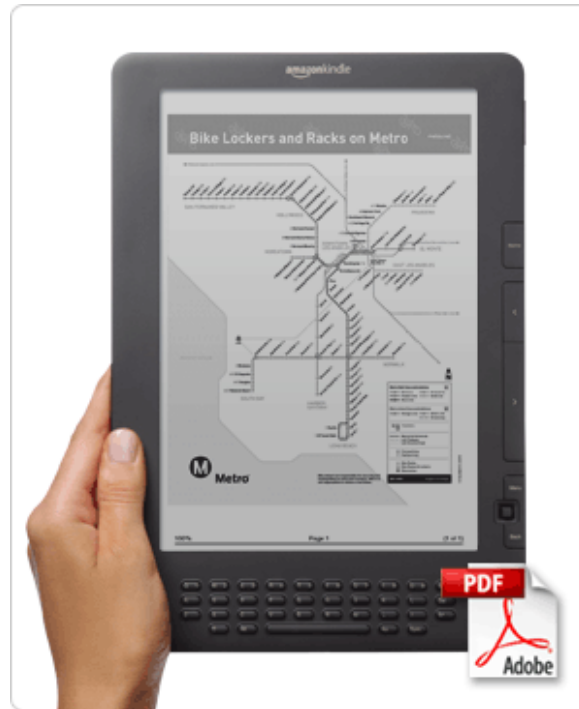
It was only later that I realized, much to my embarrassment, that the paper I thought I was seeing was actually the Kindle's screen! *Duh...* It is no exaggeration then Kindle's screen display is often said to look like text and images printed on paper.

I carry my Kindle DX for about three months now, so is Kindle DX suitable as a tool for scientists or researchers? To me, any eBook reader must comply with the following criteria before it can become a suitable tool for scientists:

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- **Rendered PDF documents that are easy to read and to navigate.** A PDF document may be rendered accurately, but if the text or images are displayed too small, this makes the document difficult to read. Although most eBook readers can magnify (zoom) the text or images, such magnification or zooming capability makes navigating the document more difficult because it involves cumbersome scrolling either horizontally or vertically to read or view the entire sentence or image.

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- **Capability to organize documents.** Storing many documents means file organization is crucial because it would help us to more easily locate documents.
- **Highlighting text and adding notes to PDF documents.** Reading technical documents often means we would highlight one or more key sentences and make notes by the side. Capability to add notes means an eBook reader must have either a physical or virtual (screen) keypad.
- **Bookmarks.** Bookmarking PDF pages is crucial to remember the last page read or pages that contain information that we wish to return to read or refer to later.
- **Transfer of files from computer to eBook reader.** We must be able to easily transfer documents from our desktop computers or notebooks to our eBook readers.

The above criteria are heavily based to support the PDF file format because, as mentioned earlier, most scientific articles and technical books are saved in the PDF format. Other common file formats used in scientific documents, but to a much lesser degree, are pure text (TXT), Word (DOC), or PowerPoint (PPT) file formats.



Kindle DX renders PDF documents very well ([buykindlereader.org](http://buykindlereader.org))

Okay, is Kindle DX suitable in my work as a lecturer and scientist? The good points of Kindle DX are as follows:

- Due to Kindle DX's large screen, it is often able to display PDF documents with very clear and legible text and images. In fact, Kindle's rendition of PDF documents is, by far, the best I have seen compared to those eBook devices sold by MPH. Some PDF documents with small fonts will appear small on Kindle, but rotating the Kindle to landscape mode rotates the PDF document to landscape mode as well. This makes the images and text appear larger, and often legible enough to read.
- Kindle DX supports bookmarking for PDF files.
- Kindle DX supports text search for the currently opened file or for all files.
- Kindle DX supports "collections" (or folders) which allows us to organize or group related files together.
- Very easy to transfer files from my computer into Kindle DX (or vice versa). A simple USB cable is all that is needed to connect the two devices. The usual copy-and-paste command is then used to transfer files between the computer and Kindle.

- Long battery life, especially with the Wireless feature turned off.

Now, the bad (but significant) shortcomings of Kindle DX are as follows:

- My major gripe is Kindle DX has a very limited internal storage (about 3.3 GB usable storage) and no support for external storage. Because most journal articles and technical eBooks are in PDF format that occupy a much larger storage than the usual eBook file formats, Kindle DX can store only a limited number of PDF documents. As I mentioned earlier, I have a total of 15 GB of eBooks, so I cannot store all of them (or even those I refer often) in my Kindle.
- Kindle DX does not support text highlighting or adding notes for PDF documents. If you are scribbler like me, this can be infuriating as I am not able to jot down notes or my thoughts.
- Kindle has a much slower navigation for large PDF files than the computer. This means it is slower to jump quickly from one page to another on the Kindle. Text searching is also slow especially for large PDF documents. This is more of a problem for navigating inside technical books (with hundreds of pages) which would have a large file size as well.

Kindle DX has many good points. It is easy to use, feels solid, and renders documents, especially PDF files, very well. I believe Kindle DX is the best eBook reader out there, far better than other brands. The problem is not so much about Kindle DX but on the current eBook reader technology that makes Kindle DX or any other eBook readers out there unsuited yet for serious scientific readings.



Notebook: Remains a scientist's essential tool

For scientists, the notebook (not iPad) is still the best device to store, read, skim, and search through tons of documents. Scientists and notebooks are rarely apart. Scientists rarely just use the notebook to read articles. The notebook is also often used for serious work such as to analyze and interpret data, write reports, internet browsing for information or for scientific articles, and emailing. Consequently, it is hard for scientists to justify carrying an eBook reader (just to store eBooks) and a notebook (for doing the other science work) - might as well carry just the notebook.

eBook readers (including iPad) are most suited for leisure reading, and Kindle DX is undoubtedly, by far, the best one out there.

*P.S.*

*If you are like me who have an US address and a usable credit card in the US, you would be able to shop at the Kindle store which has far more eBooks than other stores offered by other eBook reader companies. You would also be able to do light internet browsing (for free) using the Kindle.*