E-Books: Past, Present and Future

In 1945, Vannevar Bush for the first time mentioned about the concept of e-book in his seminal article '*As we may think*' published in *The Atlantic Monthly.* In that article, Bush described about the 'memex' a conceptual mechanical device used to store, retrieve, and display personal books, records, and documents. Taking this idea, Andries van Dam, a computer science professor at Brown University, has developed several models and interfaces for the e-books during the last three decades. Almost at the same time, Alan Kay developed the Dynabook, which is similar to today's laptop computer. Under Project Gutenberg project, on 4 July 1971, Michael Hart first time created 'Declaration of Independence' a digital book and sent it to many people over a network.

After Internet became popular in1990s, some publishers started publishing and selling e-books along with their print versions. With the launch of NetLibrary by OCLC in 1999, about 2,000 e-books became commercially available to libraries. Later, e-book providing companies Questia and ebrary, entered into the market with different access models in 2000. Both of them marketed their services directly to end-users and also promoted institutional accounts to librarians, with mixed results.

An e-book is nothing but a computer file/electronic copy of printed book that needs a device such as PC or PDA or web, to access and read. Advantages of e-books are many, including easy to carry, saving space, convenience, saving money and time, and ease-of-use. Nowadays, storage space has become cheap so it is easy to take good number of e-books on any portable device so that entire collection will be accessible at one's fingertips. Even if we have several hundred thousands of e-books, we can easily take a backup on a hard drive, which is impossible with a physical books. At the same time, there is no worries about fire, theft, etc., that have to be taken care of for their physical forms. In today's world, physical space is very expensive, particularly libraries need lots of space irrespective of their category and that problems keep increasing with the size of the library. It is one of the problems faced by all libraries in the world and for that e-books are the best answer as there is no run out of space, to add any number of books, because disc space is becoming cheaper day by day.

Few years back, several authors and publishers were worried because they thought that free books available on the Internet may devalue books and readers may demand free e-books. However, today readers have access to thousands of free books on the public domain. Also, readers are buying both print and e-books because they look for best authors and good quality books. Free books may be useful for readers because they help in knowing many things but one needs to spend lot of time and the quality may not be up to the mark.

According to a survey conducted by the Association of American Publishers, the total sales of print books in the year 2010 was approximately the same as sales in 2009. This shows that there is still strong demand for printed books. However, the e-books sales increased by 264.4 per cent in the year 2010 over 2009 ($ 441.3 million vs $ 166.9 million). On the other hand, the Publishers Association of UK found the total sales including digital products and physical books increased by 2 per cent in 2010 over 2009 (£3.1 billion) with the digital book products sales alone increased by 20 per cent (£ 180 million) from 2009.

There seems to be a flood of free e-books available now online, but most of the people can only read one book at a time. Some of the newer devices make this easier, as they can download and store thousands of full length novels from a variety of sources, including online e-book stores, like Amazon.com or Barnes and Noble, literary sites, and even public domain titles in EPUB and PDF form, as well as older Sony e-bookstore titles through Adobe Digital Editions (ADE) DRM scheme. Other devices have a seemingly vast (600,000+ titles), but very proprietary list to download from and must have Wi-Fi capability from which they should connect. These flip book style ereaders range in price from about $ 100 to around $ 350, while the multi tasking iPad hovers at around $ 500. Most of their technical features are very comparable, but there are definitely a few differences between them for the high-end readers.

Publishers are reluctant to share the revenues with the retailers and try to establish a direct contact with the consumers; however, retailers have closer relationship with customers than publishers. Today the major e-book distribution channels in the world include Amazon.com, publishers e-commerce sites, Barnes & Noble e-books store, Apple iBookstore, Kobo, Borders, Sony e-books store, etc. However, Amazon has greater share among these on e-book reading devices and e-books over others. It is noticed that 85 per cent of publishers produce books both in print and electronic version and only about 10 per cent of publishers, e-books alone.

In recent times, e-books production has increased in all categories including 3 to 26 per cent in college books, 4 to 35 per cent in high school books, 10 to 21 per cent in trade books, 7 to 16 per cent in STM books, and 0 to 16 per cent in corporate books. However, 60 per cent of publishers are still thinking whether to go forward in a big way or not. Publishers serving to the education sector are producing rich media quality content which are primarily targeted to PCs and related platforms. Nowadays, publishers are facing a lot of problems in getting similar or better content on these platforms. Content format and device compatibility are the major problems the publishers are facing than their cost or profit out of the publications.

An average adult reads between 200 and 300 words per minute. People who enjoy reading can go above 800 words per minute and maintain excellent comprehension. Therefore, e-book reader manufacturers have done everything they can to mimic the experience of paper and ink, but readers generally take longer to read an e-book than its printed counterpart. Jacob Nielsen, the guru of user interfaces evaluation tested three different e-book forms including PC, Kindle 2, and iPad and then compared them to reading a printed book. It was found that reading the e-book is ten percent slower than reading the printed version. Among these three, PC took more time to read. When compared between the iPad and the Kindle, for unknown reasons, the iPad was 6.2 percent slower over Kindle but the difference is "statistically insignificant". However, many companies are coming out with new tools and devices to facilitate faster reading of e-books. Kindle and Nook, now have the option of downloading individual stories through The Atavist app ranging from $ 1.99-$ 2.99. WordFlashReader is an open source program that promises to increase the reading speed (of electronic texts) by multiple factors, as well as increase the comprehension. It will flash the words within a text in sequence (individually or in chunks) on the screen in large font, with pauses for punctuation. It can open and display multiple text and e-book formats. AceReader is another program that helps the readers to increase the reading speed by 2/3 times.

E-readers and tablets have become so popular in 2011, as they are available in affordable cost to middle class people. Since lot of digital content is available on these readers, many people are purchasing them for their day-to-day work. Therefore, the reading habits of people, particularly mobile and youngsters, changed significantly. Nowadays e-readers also provide newspapers, comics, graphic novels and magazines to their readers.

Pew Research Center's Report (2011) found that 11 per cent of adults in the U.S. own a tablet computer of some kind and that 77 per cent of tablet owners use them every day. The report found that web browsing, reading news and checking e-mail were the most popular activities on tablets with 67 per cent of users browsing the web, 53 per cent of users reading news and 54 per cent checking e-mail daily on their tablet.

In the US several state governments have started free digital textbooks to save money and improve twenty-first century learning. A number of non-profitable organisations have started offering free open-sources as an initiative, but it will take some more time to become popular. Heavy spenders on textbooks like California ($400 million), Texas ($ 500 million) and Florida ($260 million per year) have started Open Source Textbook Projects to bring down the expenditure and give a better experience to students. Nowadays, budgets are going down everywhere and the prices of textbooks are increasing annually. On an average, the US public schools are spending $ 64.51 per student per year on their textbooks. So, the books required for four years of high school along with a reading device is costing $299 to $999. The content downloaded to these devices is either free or costs about $ 25 per license.

Publishers can load the content, which is easily updated or quickly modified as per the requirements and standards of the schools. The e-book authoring tools contains pre-built modules that allow interactive games, maps and online assessments which include true and false questions, open-ended essays, fill-in-the-blanks, etc. to help educators tailor their instruction to suit various learning styles. Eastern Illinois created a Textbook

Rental Service department that rents textbooks in-house. Every student pays $ 9.95 per credit hour each semester to rent books. If students take 15 units, they'll pay $ 149.25 for all their books.

The Harry Potter book series has been launched in a new type of digital reading experience called Pottermore. It is an interactive illustrated companion to the Harry Potter books series, which allows users to discover many things. It creates a much more interactive and immersive experience to the readers.

With all these day-to-day developments, what is going to happen to print media? Well certainly it is not going to disappear sooner like other mediums. There has been much talk of the demise of the publishing industry due to this advent, and increasing popularity of e-books. Will it hurt the book authors? Does the publishing business need to worry? There is no doubt that this technology affects the bottom line for publishers, which in turn will definitely complicate things for authors trying to penetrate the already ruthlessly finicky publishing industry to obtain a book deal. But to the authors/entrepreneurs who understand the publishers' true level of involvement and backing, there is no need to worry. In fact, if looked at closely, one can clearly see that this has opened a number of channels for new authors that didn't exist a few years ago, except for those fortunate enough to have enough money to self publish on a fairly large scale.

Some of the areas that are fundamental for the development of e-books include:

- General issues related to digital books (electronic books, e-books)
- Issues related to e-book reader (hardware), personal digital assistants, etc.
- E-books user interfaces, e-book authoring tools and techniques
- E-book publishing, e-publishing, and related issues
- E-books pricing patterns–costing models, e-books licensing
- Evaluation of e-books/e-book collections
- Use and user studies of e-books in various types of libraries
- E-books readers and e-reading habits, etc.
- Impact of e-books on various types of users
- E-books consortiums, digital libraries, etc.
- E-books–copyright issues, Digital Rights Management
- E-books growth and standards
- E-books pricing and marketing issues
- Ongoing developments and future trends in e-books

The purpose of this special issue of *DJLIT* is to give an overview of the research going in and around the e-books. Prof Meadows has seen all the developments in printing and publishing industry from its analogue era to today's Internet publishing; he provided an overview of developments in publishing and technology related to e-books in his article.

E-books are more popular among the youngsters but not all people particularly in India. The reasons for this may be several. Dr Ramaiah's article provides an overview of users' perception about e-books in India. Though the Indian readers are aware of the advantages and limitations of e-books, they continue to prefer and use printed publications.

Usage of electronic books is one of the important aspects for developing collections in the university libraries. The pages viewed, pages copied, pages printed, unique documents usage, and user sessions were identified to determined the extend of usage in academic institutions. Kaba and Dr Raed Said provide the results of usage reports for ebrary database in the UAE. They found that a large number of institutions do not optimally use ebrary services so in-house training programmes are essential to improve their usage.

Providing access to library resources is most important so that users will know the books that are available in the library. Today the main access point for any library's collections is the Online Public Access Catalogue. In order to increase the usage of e-books, it is necessary to develop and maintain library catalogue and provide searchable collection for electronic books. There are number of automated tools that are used for creating online catalogue and eCataloguer is one the examples of that kind. Dr Nageswara Rao and Dr Moorthy discussed about the development of an automatic tool for developing bibliographic database using MARCXML records in their paper.

Divakar's article provides an overview of existing scenario of the e-books and their implication on the libraries.

Finally, a comprehensive bibliography by Dr Ramaiah provides all the published literature from the beginning till date in journals, books, conference proceedings, dissertations and theses, etc., were covered. It is very useful source for any researcher to start work on e-books.

I am extremely grateful to Dr AL Moorthy, Director, DESIDOC for inviting me as Guest Editor for this special issue. I am also grateful to all the authors, particularly to Prof. Meadows, who took time from his busy work schedule and provided lead article to this issue.

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