TECHNOLOGY AND THE FUTURE OF THE BOOK

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Introduction

Everything is turning to technology. This has affected the way humans have lived including the way we store and source for information. We are becoming a global society that is more virtual. We download music instead of purchasing CDs. We research on the net rather than going to the library and reading books. Yet, as Kyle Bean remarked, "books also have personality – they have textures and smells which the internet can't offer". In the midst of all these we are tempted to ask, what is the future of the ordinary i.e. normal book?

Definitions

Publishing, essentially, is the act of putting together written, visual or audio materials and releasing them as a cohesive whole to the public and even the world at large. For a work to be considered as published item, it must have certain attributes. In general, these attributes include:

- a title
- copyright notice
- introduction
- main body
- illustrations
- an index

It also generally means there is cover art to give the work identity.

Originally, publishing was done in the form of books, whether as papyrus scrolls or bound in covers. Publishing continued in this form until paper was taken out of the equation and replaced by digital files placed online.

A digital book (also e-book, eBook, electronic book) is therefore a text, sound or image-based publication in digital form produced on, published by, and readable on computers or other digital devices, sometimes, the equivalent of a conventional printed book.

The digital publishing revolution may, in retrospect, be as world-changing as Gutenberg's introduction of the printing press. Digital publishing makes works available instantly, anywhere in the world, while eliminating the high costs of transportation, storage and retail facilities. Since digital publishing became widespread in 2000, the sales of digital works have accelerated astronomically.

Some History

Digital publishing can be traced back to the formation of Project Gutenberg in 1971 by Michael Hart. He digitized the Declaration of Independence. This document became the first digitized publication and led to the first free online public-domain library.

Twenty years after its inception, Project Gutenberg held fewer than 100 books, but with the inception of the World Wide Web around 1994, volunteers and contributions helped Project Gutenberg grow exponentially.

By June 2010, Project Gutenberg held over 32,000 digitized books and was adding 10 to 14 more each day. Gutenberg was the inspiration and model for dozens of similar digital libraries. Today, millions of texts are available in some digital form (by October 2010, over 15 million books were available in digital form on Google Books alone, and many scholarly journal publishers have digitised their entire backlists).

The Processes of Digital Publishing

There are several ways of 'doing' digital publishing:

You can take an actual, physical book, scan it and save it as a PDF.

You then can upload this PDF to a website owned by you, or by someone else, or by a digital publisher, or a digital aggregator (a company or organisation that brings together digital material from a variety of sources. Once there, the reader can read it online as a digital book or, if you allow him to, download the file. If the reader downloads the book, usually for a price, this method allows you to control whether the book can only be read on the computer or if it can be printed. Adobe's PDF format allows you to prevent printing and copying.

This is what the National Library of Nigeria has done with newspapers and reports of commissions of inquiry set up by governments over the last 50 years.

Website Publishing

A digitally published book can be a website itself or part of a website. You can design a website that allows illustrations or photos to accompany different pages and you can place buttons on the website to allow the reader to navigate between the pages.

Other Media

You can publish virtually anything online. For example, you could publish a collection of family album. Digital publishing also can include videos or music. Anytime you upload a video you created to YouTube or another site, you are publishing it for all to see. If you are on MySpace and upload a song you wrote and performed so visitors can listen to it, you are publishing.

Born Digital

With modern word processing tools, most documents and manuscripts produced today are in electronic format and are therefore born digital. They do not require to be scanned and can be published directly. That is how we get our online newspapers today.

Digitisation Tools

Tools for digitising items include scanning and digital photography.

Digitisation equipment can be separated into 'contact' and 'no-contact'. 'Contact' equipment, i.e. flatbed scanners, requires that the original be flat against the scan bed to get a scanned image. This approach will only work if your original is flat or can be pressed flat without damage to it.

No-contact equipment includes overhead scanners or book scanners and digital cameras that are able to obtain a digital image with the bare minimum of contact with the original.

Scanners

Choosing the equipment for scanning your originals will depend largely on the characteristics of the collection: in general terms, photographic materials are usually scanned on a flatbed or a transparency scanner while bound volumes and oversized flat materials such as maps and plans require a digital camera or an overhead scanner.

The dynamic range of the scanner is important: it describes the tonal density of the information that the scanner will be able to capture and generally speaking the higher this is the better, particularly for dense originals such as photographic prints and transparencies.

The software that runs the scanner is also important. It should be straightforward to use and an ability to run batch scans will save time as the scan bed can be loaded with originals and more or less left to get on with it.

Digital cameras

Digital cameras are developing for both the home and professional market and are priced from several hundred to thousands of pounds. 'Home use' cameras are aimed at non-professional users for taking general casual photography.

There are two kinds of professional digital camera.

The first has developed from medical and industrial uses and is a complete unit that creates sophisticated digital images.

The second is where the film from a traditional camera is replaced with computer sensors which transmit the image to a computer rather than to film; this is known as a digital scanning back.

The first type has been around for longer and has been used in imaging projects for several years. Digital scanning backs are developing for professional photographers as a replacement for traditional film cameras, although they are also being used in project work. One of the advantages of the scanning backs is that they use the lenses and camera body of a traditional professional camera.

Professional digital camera set-ups will generally require the operator to understand the basics of photography and this is a cost that projects need to consider.

Advantages of digital publishing

Instant availability: digital publishing makes works available instantly anywhere in the world while eliminating the cost of transportation and retail facilities. An e-book can be offered indefinitely, without ever going "out of print".

Economy of Space: in the space that a comparably sized print book takes up, an e-reader can potentially contain thousands of e-books limited only by its memory capacity. If space is at premium, such as in a backpack or at home, it can be an advantage that an e-book collection takes up little room and weight.

Translation capability: e-book websites can include the ability to translate books into many different languages, making the works available to speakers of languages not covered by printed translations. Depending on the device, an e-book may be readable in low light or even total dark.

Facilities for physically challenged individuals: Text-to-speech software to read the text aloud for visually impaired, partially sighted, or elderly people, search for key terms, find definitions, or allow highlighting bookmarking and annotation. Devices that utilize E Ink can imitate the look and ease of readability of a printed work while consuming very little power, allowing continuous reading for weeks at a time. Many newer readers can display motion, and enlarge or change fonts in use.

Massively improved accessibility and circulation of publications: e-books can be printed for less than the price of traditional new books using new on-demand book printers. Compared to print publishing, it is cheaper and easier for authors to self-publish e-books. Also the dispersal of a free e-book copy can stimulate the sales of the printed version.

Low publishing costs: most of the tools required to build Web sites and make electronic publications can be obtained for free. A small Web site can be developed and hosted for around $20 per year (yes, it's true). Large offline collections can be circulated on CD for only a few dollars.

Fast publishing: it is possible to publish a new document and inform people of its availability in only a few minutes. This makes "real time" reporting possible, as well as the provision of time-sensitive services such as market information.

Control of publishing: the ability to self-publish frees organizations from constraints such as the strict language and subject matter controls imposed by journals. This allows publication of "grey literature" and other information that may not previously have been available in any form.

Limitations to digital publishing

Of course, there are some disadvantages and limitations. I have listed some below:

Digital publishing does not improve accessibility for everyone. Obviously, it is only available to people who have access to computers and/or the Internet.

Some degree of computer literacy is required to make effective use of a digital publishing system, and a somewhat higher level to plan, install and administer such a system. These skills are usually limited or absent in organizations that are just starting to get involved.

Effective use of a digital publishing system often requires changes in an organization's internal workflow. Staff resistance to change is often very high, particularly in projects that introduce new information technology.

While printed books remain readable for many years, e-books may be needed to be copied or converted to a new carrier or file type over time. PDF and epub are growing standards but are not universal.

Not all books are available as e-books. Paper books can be bought and wrapped for a present and a library of books can provide visual appeal, while the digital nature of e-books makes them non –visible or tangible.

E-books cannot provide the physical feel of the cover, paper and binding of the original printed work.

An Author who publishes a book often puts more into the work than simply the words on the pages. E-books may cause people "to do the grazing and quick reading that screens enable, rather than be by themselves with the author's ideas." They may use e-books for reference purposes rather than reading for pleasure and leisure. Books with large pictures (such as children's books) or diagrams are more inconvenient for viewing and reading.

A book will never turn off and would be unusable only if damaged or after many decades. The shelf life of a printed book exceeds that of an e-book reader, as over time the reader's battery will drain and require recharging. Additionally, as in the case of microfilm, there is no guarantee that copies will last. Bits become degraded over time. Documents may get lost in cyberspace, and hardware and software can become extinct at a distressing rate. E-book readers are more susceptible to damage from being dropped or hit than a print book. Due to faults in hardware and software-book readers may malfunction and data loss can occur. As with any piece of technology, the reader must be protected from the elements (such as extreme cold, heat, water, etc.), while print books are not susceptible to damage from electromagnetic pulses, surges, impacts or extreme temperatures.

The total cost of an e-book (including the cost of the reader) far exceeds that of a single book, and e-book files often cost the same as their print versions. Due to the high cost of the initial investment in some form of e-reader, e-books are cost-prohibitive to many of the world's population.

Furthermore, there is no used e-book market, so consumers will neither be able to recoup some of their costs by selling an unwanted title they have finished, nor will they be able to buy used copies at significant discounts, as they can now easily do with printed books.

Because of the high-tech appeal of the e-reader, they are a greater target for theft than an individual print book. Along with the theft of the physical device, any e-books it contains also become stolen. E-books purchased from vendors like Amazon or Barnes & Noble.com are stored "in the cloud" on servers and "digital lockers" and have the benefit of being easily retrieved if an e-reading device is lost.

Digital publishing activities in Nigeria/West Africa

Broadcasting

As part of the country's digitization programme, cable operators were given May 31, 2008 as the deadline to switch over from analogue to digital transmission, ahead of the June 2012 deadline for other broadcasters.
The then Acting Director-General of the National Broadcasting Commission, Mr. Yomi Bolarinwa, suggested in 2008 that 90 per cent of cable broadcasters in the country had attained digitization. The broadcast industry therefore appears to be doing well.

Publishing

Have Nigerian newspaper and book publishers adopted any digital innovations in the light of their importance today?

It is possible to read most Nigerian **newspapers** online for the day of reading: back issues are usually not available. Of **book publishers**, only Ahmadu Bello University Press (I sincerely hope I am wrong) has published some items online for subscription. Only two organizations have so far subscribed to these publications.

Ifeduba, however, found in a study published in 2010 that e-marketing and distribution innovations had been adopted by 50% of Nigeria's publishers:

- Buying/Selling via internet stores
- Internet pricing and fulfilment

- Online book adverts
- E-publishing partnerships

Institutions

Many national institutions in Nigeria have advertised bids over the last couple years for digitization activities. These appear to be mostly for archiving and preservation of material rather than for original publishing. The following institutions, among many others, have ongoing projects:

- National Library of Nigeria
- Nigerian Press Council
- Obafemi Awolowo University Ile-Ife
- Nigerian Institute for International Affairs
- National Universities Commission

All of these institutions have either digitized newspapers, dissertations, gazettes or reports of inquiry into various incidences in the contrary, but have not hosted these works yet.

Challenges to digital publishing in Nigeria/West Africa

Payment for E-Books

Security for payments is the single most essential requirement for electronic commerce to flourish. Caincross (2001:107) highlights the problem thus: "Ordering is simple, compared with paying. The currency of the internet is the credit card, which accounts for about four out of five e-commerce transactions. But many potential customers either dislike paying by credit card or indeed do not have one."

In Nigeria, the use of credit cards is almost non-existent. This poses a challenge to the publisher who is thinking of selling books online. As other payment methods are still crude, this is a challenge that must be handled before success can be expected in e-publishing.

Infrastructure

Our infrastructural problems in Nigeria have become legendary. We have low band weight, and erratic power supply. These facilities are absolute necessities for digital publishing.

Skilled Manpower

Digital publishing requires skilled and committed staff in various aspects of the industry. These are not easy to assemble in Nigeria. Poaching is common and staff turnover is very high.

The future of books

Some years ago it was predicted that coal was energy of the past because of hydroelectric and nuclear power plants. How wrong that was.

It was also predicted that people would stop going to cinemas because films were being produced on CD-ROMs and easily downloadable from the internet, but Silverbird is laughing all the way to the bank with its cinema halls in Abuja, Lagos, Port-Harcourt, Jos. In many countries beyond Nigeria cinemas are bursting charts in earnings with new films such as Avatar or Transformers.

In making predictions, the experts often fail to recognize that humans are beings who like to meet and socialize with each other. Life would be meaningless if lived in isolation – so people still flock to cinemas.

Now that books are being digitized, what can one predict for the future of books?

As books go digital new questions, both philosophical and commercial, arise:

- how, physically, will people read books in future
- will reading habits change as a result
- what happens when books are interlinked with other content

- what will "the book" be, in the future

Looking into the future it seems to me that the biggest changes are likely to affect books as follows:

Reference books

These are likely to migrate online. Examples are encyclopaedias (Wikipedia), telephone directories, dictionaries, cookbooks.

Text books

Like web pages, digitized books can have hyperlinks. These links may point to and from specific phrases or words inside books so helping with reading and understanding. Citations and bibliographies are also obvious examples for such links. This linking to source material will make primary sources much more accessible and therefore help scholarly research.

Fiction

Most fiction books may continue to be paper bound. People do not read fiction in order to accomplish a specific task in a limited amount of time. They also want media suitable for unhurried reading in beds, buses, airports. People want books also as souvenirs.

There will certainly be a future for the book, but not perhaps in exactly the form that we know now.

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