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Publishing in an Electronic Age: Prospects and Challenges

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Abstract

Publishing, from inception till date, has transited through different stages – courtesy of technological discoveries and inventions. From the invention of printing machine by Johan Gutenberg in Germany, technology has continued to revolutionise printing and influenced publishing generally. With technological advancement, the publishing profession is heavily electronic-oriented with virtually all its activities from manuscript sourcing to productionelectronic-driven. Publishing has no doubt arrived at electronic age. Though electronic publishing is novel and resourceful, it is not without its challenges. The issue of prospects and challenges of electronic publishing therefore constitute the focus of this paper. The paper examines the conventional publishing processes which follows a Content -Aggregation -Production-Marketing-Distribution -Sale-Consumption continuum as against Electronic (digital) publishing which maintains Content - Aggregation - Marketing - Sale - Consumption sequence. The paper also examines the prospects and challenges of electronic publishing and round-off with conclusion.

Key words: Publishing, Electronic publishing, Prospects, Challenges.

Introduction

Publishing is an age long profession which has witnessed series of transformation especially as a result of technological discoveries and inventions. Mid-15th century witnessed the invention of printing technology and this revolutionised the production of printed books. Printing held sway until the 1930s when publication of books and journals on magnetic media, microfilms and microfiche followed suit. Computing technology was developed in 1960s, and later towards the end of 20th century, other media such as optical discs and digital versatile discs for recording of information were invented (Shukla, Deepak, Jharotia, Anil Kumar, Goel, Harish Kumar; 2011). The unrelenting transformations in publishing and printing which began with Johannes Guttenberg's fifteenth century enduring discovery became more sporadic in the late twent-ieth century with the formation of Project Gutenberg in 1971 by Michael Hart. Project Gutenberg was the first provider of free electronic books, or eBooks. Michael Hart, founder of Project Gutenberg, invented eBooks in 1971 and his memory continues to inspire the creation of eBooks and related technologies today. Michael Hart digitised the *Declaration of Independence* and this docume-nt, which was the first digitised publication, led to the first free online public-domain library. Twenty years after its inception, Project Gutenberg held fewer than 100 books, but with the inc-eption of the World Wide Web around 1994, volunteers and contribu-tions helped Project Gutenberg grow exponentially. In June 2010, Project Gutenberg held over 32,000 digitised books and was adding 10 to 14 more daily. Gutenberg was the inspira-tion and model for dozens of similar digital libraries. Today, well over a million texts are available in some digital form.

The maxim that the world is a global village is a truism. Technology has placed the univ-erse on our palms. Everyth-ing is turning to technology. Techno-logy is influencing and dictating our *modus operandi* of sourcing, storing, disseminating and utilis-ing information. Our world is becoming a global society that is more virtual. We download mus-ic instead of purchasing CDs. We

research on the net rather than going to the library and reading books. We text message, send email, and text or video chat instead of writing letters. All these have impacted signifycantly on publishing which is speedily veering from traditional paper printing to electronic publishing.

Spectrum of publishing

Publishing is a multifaceted profession. It is a profession of multiple professionals hence it is procedural and in stages. Conventional publishing has the following broad operational stages.

a. *Manuscript acquisition:* Acquisition of manuscript is the first and foremost activity in publishing. Manuscript acquisition implies "to acquire" and is otherwise called 'commissioning' or 'sourcing'. Manuscript is the basic raw materials from which books are made. There are two basic ways of acquiring manuscripts namely: solicited and unsolicited manuscripts.

b. *Origination and Design:* Processing the manuscript for press is a series of activities which is carried out by multiple professionals and coordinated by the editor. Manuscript processing begins with manuscript assessment; it is a formal evaluation of the manuscript acquired for the house and if found publishable, it is handed over to the Origination and Design unit for the following activities listed below.

(i) Typesetting, formatting, and layout.

(ii) Editing of galleys and proofreading of page proofs by the editor.

(iii) Writing out illustration and cover briefs and vetting their composition to ensure correctness.

(iv) Placement of all tables, graphs, charts, pictures, illustrations, etc.

(v) Ensuring correct sequence of book matters.

(vi) Rightful placement of the company logo, compliance with the house style, and indication of the ISBN, Cataloguing-in-publication (CIP) data, and bar-code.

(vii) Preparation of index by the indexer.

(viii) Approval of the camera ready copy (CRC) for press.

c. *Production:* This is the mass production of Camera Ready

Artwork (CRA). It is a process that has several stages which are divided into three namely:

i. Pre-press: filming, manual/ digital separation and plate making
ii. Press: running of impression, mass printing
iii. Post-press: folding, collating, sewing, binding, trimming, checking and repairs, packaging and delivery.

d. *Distribution and Marketing:* This entails promotion, sales and distribution. It is a series of activities which culminate to the exchange of the printed publication with physical cash.

Electronic publishing

Electronic publishing (EP), otherwise called e-publishing, is a technology-driven publishing process whereby all activities are carried out electronically. E-publishing is a new trend in publishing whereby camera ready copy is forwarded to the publisher electronically for publishing operations. Electronic publishing is a series of activities which entails electronic technology, computer technology, communication technology and publishing activities. This can be represented thus:

Electronic technology
+
Computer technology
+
Communication technology
+
Publishing activities
=
Electronic Publishing

Electronic publishing is the process for production of typeset quality documents containing text, graphics, pictures, tables, charts, equations, etc. It is the application by publishers of a computer aided process by which they find, capture, shape, store and update information content in order to disseminate it to a chosen audience. Electronic publishing output can take the form of digital book (also called e-book, eBook, or electronic book) which can be a text, sound or image-based publication in digital form produced on, published by, and readable on computers or other digital devices. Electronic publishing makes works available instantly, anywhere in the world, while eliminating the high costs of transportation, storage and retail facilities.

Since inception, electronic publishing has experienced different phases. Brown (2008)

identifies the following three phases:

i. Period up until the early 1990s – print based information system.
ii. From the mid 1990s to the early 2000s – period of confusion. New dimension to the information industry (set of new legal, business and technical challenges).
iii. From the early 2000s – strong electronic publishing drive, with digital versions of information outselling and outperforming their analogue equivalents.

Brown (2008) also observes that there are seven changes that propelled the development of electronic publishing. These changes are as follows:

i. Changes in technology
ii. Changes in the business model
iii. Changes in the product/ service concept
iv. Changes in user behaviour
v. Changes in scientific disciplines
vi. Changes in copyright
vii. Changes in demography

Types/Genres

E-publishing is a very broad term that includes a variety of publishing models such as electronic books (e-books), print-on-demand (POD), email publishing, wireless publishing, electronic ink and web publishing; among others. With the spate of technological advancement, it is certain that more types of e-publishing will develop in the near future. Now, let us look at these different forms of e-publishing one by one.

E-books – E-books, also called electronic books, are products of e-publishing. E-books are electronic versions of books which are delivered to consumers in digital formats. E-books require additional software to make reading possible. There are a large number of devices being developed to make reading e-books easier for consumers. Special software, which makes documents or pages of a book easier to read on a screen, is also being developed by software companies. A standard for e-book software, known as the open-e-book standard, or OEB, has been developed as a standard format for e-books, but competing standards such as

Adobe's PDF exist. The potential market for electronic books is quite high and is therefore gaining acceptance. Figure 1 below gives series of graphic information on ebook.
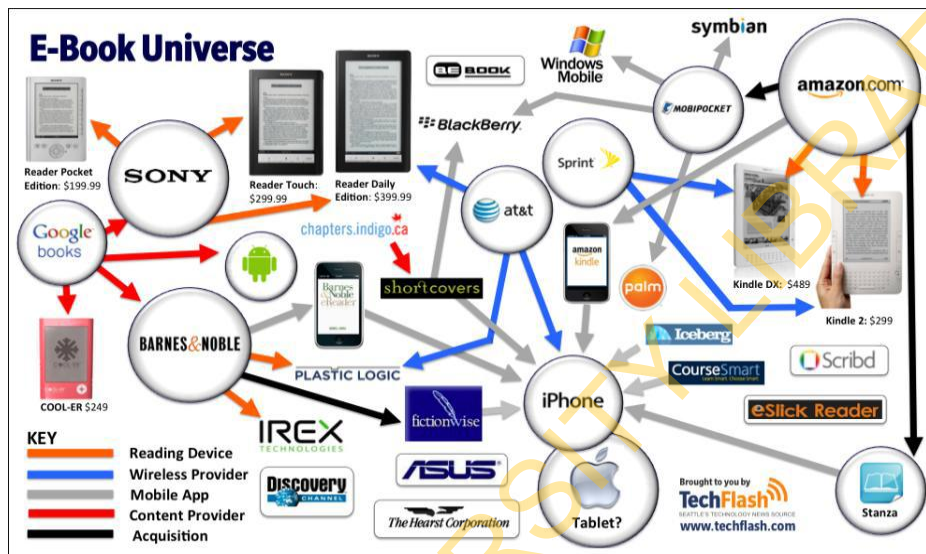

Figure 1: *Details on Electronic Books*
Source: Milanova, M. (2011). *E-Publishing and Its History and Latest Development.*

It is remarkable to submit that:
i. The e-reader market is expanding rapidly.
ii. The number of cell phones growth worldwide is at a very high rapidity and this is very complimentary to electronic publishing and electronic books.
iii. People use cell phones – smart phones as e-readers.
iv. There are predictions that smart phones and tablet computers will reach 2 billion in the next few years.

Print-on-demand – Print-on-Demand, called POD for short, is a new method for printing books. This method allows books to be printed one at a time, or on demand. In other word, the technology permits one to print copies of books as demands are made. Rather than occupying the warehouse with unsold copies of books, a publisher can service orders as they come irrespective of whet-her the copies demanded are few or many. This method frees publishers from the process of doing a traditional

print run of several thousand copies of books at a time. The technology invol-ves complex laser printing syste-ms and electronically formatted text which the printers can read. POD is quite applauded in the publishing sector because it is a good intermediary step between the regular method of printing paper books and electronic books. However, because POD is still a method that uses paper and cannot be delivered as cheaply and quickly as electronic books, in the long run, POD could decline in popularity when consumers become comfortable with electronic reading software and e-book reading devices.

Electronic Ink – Electronic Ink is a developing technology and a brand of e-publishing which could be used to create a newspaper or book that updates itself. Electro-nic Ink could also be used on billboards, clothing, walls and homes to allow content to appear. In addition, this content could be programmed to change at any time. For example, you could have a billboard that rotates different ads, or you could receive a coupon in the mail that is frequently updated with the latest offer. For media companies, the possibilities are almost endless. Someday your electronic newspaper will simp-ly update itself every day. Electr-onic Ink technology is being developed by two companies, namely: E Ink Corporation and Xerox.

Email publishing – Email publis-hing or newsletter publishing is another type of e-publishing. Email publishing is a popular choice among readers who enjoy the ease of receiving news items, articles and short newsletters in their email box. The ease of delivery and production of email newsletters has led to the devel-opment of a massive number of available email newsletters, mai-ling lists and discussion lists on a large variety of topics. Some businesses have even launched services that do nothing but deli-ver newsletters to consumers. Newsletters are also widely used by media companies to comple-ment their web and print offerings. Many authors and writers publish their own newsl-etters in order to attract new readers and inform their fans about new books and book signings.

Web publishing – Web publishing is not a novel practice any longer, but it continues to change and develop with the introduction of new programmi-ng languages. Hyper Text Mark-up Language (HTML) is still the most widely used web program-ming language, but Extensible Markup Language (XML) is also making headway. Extensible Markup Language (XML) is valu-able because it allows publishers to create content and data that is portable to other devices. Nearly every company in the world has some type of website, and most media companies provide a large amount of web-based content.

There is no gainsaying that electronic publishing is already gaining ground. This is corrobor-ated by the survey carried out by Pew Research Center in 2011. The findings of the research showed that:

- The people who read e-books read more than those who read printed books.
- They read 60% more that the people who prefer traditio-nal books, newspapers, mag-azines.
- 42 % preferred reading on their own computers.
- 41 % preferred using e-readers to read.

- Only 23% - 29% used smart phones or tablets for reading.
- 61 % preferred buying e-book to reading printed books from library.
- 81% think that the traditio-nal books are more comfor-table for children than e-books.

Process of electronic publishing

We attempt in this section to give some hints on the process of electronic publishing. The processes are procedural, multif-arious, media-dependent and media-specific hence our attem-pt here is by no means encompa-ssing and comprehensive. There are several ways of publishing electronically. The very element-ary method is to take a printed physical book, scan it and save it as a PDF. One can then upload the PDF to a designated website or a digital publisher. Once this is accomplished, the reader can read it online as a digital book and or if permitted, the reader can download the file. There are degrees of permissions granta-ble to the reader which includes permission to download the book, usually for a price; permis-sion to read only on the compu-ter and permission to print.

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Adobe's PDF format allows you to prevent printing and copying.

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 from one page to the other.

Virtually one can publish any stuff online ranging from music to video, pictures, paintings, drawings, illustrations, etc. Anytime one creates and uploads a video to YouTube or any other site, one is actually publishing it for all to see. In the same vein, when one uploads a song which one has written and performed on MySpace for others to access and listen to; one is engaging in electronic publishing. Also, modern word processing tools have enabled publishing electronically. With modern word processing tools, most documents and manuscripts produced today are in electronic format and are, therefore, born digital. They can be published directly. Online newspapers and magazines are products of this process.

Electronic publishing is a process of digitisation and relies on digitisation tools. These digitisation tools include items for scanning and digital photography. Digitisation equip-ment can be separated into 'contact' and 'no-contact'. 'Contact' equipment which is 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 inclu-des 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. Logic-ally speaking, the choice of scanning equipment depends on the characteristics of the one's intended publication. Generally, 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. Digital cameras can be for both home and professional market depending on functions, quality of use and capacity. Professional digital camera which is instrum-

ental to digitisation will generally require the operator to understand the basics of photography.

The process of print publishing and electronic publishing can be summarised and compared thus:

Print (Traditional) publishing

Content –>Aggregation
–>Production –>Marketing
–>Distribution –>Sale
–>Consumption

Electronic (digital) publishing

Content –>Aggregation
–>Production –>Marketing
–>Distribution –>Sale
–>Consumption

Figure 2: *Comparison of the processes of print publishing and electronic publishing*
Source: Adapted from *www.pwc.com.*

Two notable stages in print publishing are inactive in electronic publishing. These are production and distribution stages. Production is the printing processes while distribution is the movement of goods and services from the source through a (distribution) channel, right up to the final customer, consumer, or user, and the movement of payment in the opposite direction, right up

to the original producer or supplier.

Prospects

The prospects of electronic publishing include the following, among others.

1. *Speed:* A notable advantage of e-publishing is speed. It produces and delivers at a great speed. Publications can be uploaded to the web as soon as they are ready without waiting for months or years as is the practice in conventional publishing.
In the same vein, e-publishing makes it easier for users to find and access data and information required directly and very quickly. It permits a swift searchability as one can readily seek and find one's desired information.

2. *Interactivity:* E-publishing is highly interactive and enables interactions as documents can be accessed, read, comented on and amended easily than can be done with print. The ease with which e-mail can be sent, or forms filled means that there can be much greater feedback through the Web.

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3. *Low production cost:* Generally the production cost of e-publishing is low. A lot of overhead, operational and material costs have been eliminated. It is easy to audits (by adding or deleting) the materials published electronically, and get the updated version for publication without significant cost. Electronic publishing has removed much of the cost and risk involved in print publishing. Some statistics indicate that a 70% saving can be made over print. Also, a considerable cost is saved on distribution.

4. *Accessibility:* Electronic publishing is accessible to all users regardless of geographical location. It is far cheaper for researchers to get one computer with Internet access than to subscribe to many journals, so electronic journals will be a tool for further breaking down the barriers to democratic research.

5. *Preservation of florae:* A residual advantage of electronic

publishing is that it reduces the use of paper and this means maintaining the trees which are usually cut off and manufactured into papers, cards and boards. This byadvantage of forestry conservation is of huge benefit to mankind in cash and kind.

6. *Multiple links:* Linkages that are readily permitted through one article to several others is an unquantifiable advantage of e-publishing. Links are the mainstay of the hypertext format, and should be exploited. Papers do not only link to those they have cited, but with a bit of effort, they can be linked to those that cite them. Rather than just recreate a print journal in exact format, which many of the commercial publishers are doing, advantage should be taken of all the possibilities of the Web to add value, for example by using animation, virtual reality and interactive mathematical charts .

7. *Safety and storage:* More information can be stored electronically than on paper

and e-published materials can be sent across the globe in a few seconds. The actual time it takes for a book to get published is much faster than in traditional publication. While it may take two years or more for traditional publications to attain fruiti-on, e-publishing can be as quick as three weeks to only a few months after acceptance. Storage in itself is a great advantage to this form of publishing. Unlimited space on the internet makes it easy for everyone to maintain files. Since most e-publicatio-ns are sent via PDF files, or compatible word process-ing docs, it is even quick and easy to go in and make chan-ges to a publication. Traditi-onal publishers are often unwilling to make changes to a manuscript because it invo-lves so much extra work.

8. It takes less time to produce unlike the printed version which stays with the publish-ers for years. It is faster and can be produced within a relatively shorter period.

9. Accident rate or deformity rate is relatively far less than it is in conventional publish-ing. The rate of occurrence of error is quite minimal becau-se there are very few stages involved.

10. *Marketing opportunity:* E-publishing has an advantage of market opportunity. Publi-city is spontaneous, i.e., imm-ediately you place it online; it is available to as many people that access that route. Unlike conventional publish-ing where you have to carry your books from one place to another in search of personal buyers. E-publishing has a marketing advantage of a greater range.

11. E-publishing also has ISBN, i.e., each title that is publis-hed electronically also has its own identifier. In essence, works that are published electronically could also be cited or referred to by the author which means e-publishing is a plus to the author(s) because they do not have to queue for ISBN with other conventional pub-lishers.

12. *Royalty:* This is what author's get for their publication. It is

an advantage for the authors in E-publishing. They are paid higher royalty than conventional publishers which is always 10%. Some E-publishers can pay as much as 50% to their authors because they spend less in the publishing process.

13. E-publishing also retains all other rights which printed publications enjoy such as
    i) the option to print on papers later;
    ii) adaptation to electronic media such as radio and television; and
    iii) adaptation to films or movies.
Publishing electronically therefore does not deny the author of any of the rights that are open to printed publications.

14. E-publishing is, in a way, a short-cut for writers to become published because it takes less effort and also scrutiny is also less emphasised.

Challenges

Electronic publishing in Nigeria encounters the following challenges.

1. Rate of sales of e-publishing is by far less when compared with publications printed on paper. As a matter of fact, many people are not aware of e-publishing, how do you then buy what you are not aware of?

2. Writers in e-publishing are responsible for providing market for their titles.

3. Writers do not receive advance royalty as it is in printed books. In conventional publishing, writers could be remunerated ahead of sale.

4. *Piracy:* This is another great concern that is moving against the tide of e-publishing. It is easier for pirates to operate electronically. Just as the cost is cheap for publishers, it will even be cheaper for their pirates. Again, it is easier for a recipient of an e-book to make cosmetic changes and resell as a new publication; rate of falsification and alteration is higher so e-publishing is prone to a higher level of falsification.

5. *Price:* The prices of e-published products are not relatively cheaper. In spite of a relative cheaper production cost on the part of the publisher, and lower overhead, the cost is not very friendly.

6. *Comfort:* The print paper can be read in any place and at any position that suits the reader but the book published electronically cannot have such benefit except only with the existence of enhancing device. .

7. *Financial requirements:* There are financial and time costs related to the use of electronic publishing. The user must have a computer monitor, software, service provider and browser.

8. *Technical difficulties:* The reader must possess some basic computing and networking skills in order to take advantage of electronic.

The Nigeria Experience

On a general note, electronic publishing in Nigeria as of today is still at its teething stage. Though there are some publishers who have advanced greatly in electronic publishing operations, not any that we know have totally imbibed electronic publishing. Total imbibement, to say the fact, will take several years to come in Nigeria when we consider the fact that going e-publishing fully entails not only the publishers who produce electronic books but also the teeming readers who must also consume electronic books electronically. What is commonly obtainnnable presently is partial electronic operations in aspects of publishing such as manuscript sourcing, editing, origination and design, pre-press, and promotion and mark-eting.

Perhaps, this prevailing experience will continue to abide until:

• The energy generation and distribution in Nigeria improves tremendously.

• The internet connectivity and bandwidth availability is efficient and guaranteed.

• Economic status of the citizennry who constitutes the consumers improves significantly so that they can be able to afford the associated costs of electronic publishing.

Conclusion

It cannot be contested that electronic publishing is advancing worldwide at a galloping rate

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and Nigeria will not be an exception. When we cast our minds back at the advent of the global system for mobile teleco-mmunication (gsm) in 2003 and evaluate the rate at which its adoption has transformed our social, economic and profession-nal lives; then one will need no conviction that it is only a matter of time before electronic publis-hing becomes fully operational in Nigeria. However, the teething problems associated with it have to be fixed and our society has to be better positioned technologi-cally.

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