



Use of Technologies in Book Production

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Abstract

The study focused on the use of technologies in book production. The traditional process of book production was exhaustively discussed at length before linking it to the new technologies, which include digital publishing as the process of creating and distributing digital content. The role of digital production of books was discussed in the study, as well as the benefits to users and the publishing industry. Also, the adoption of digital production of books was captured in the study. Challenges affecting it were also discussed. The study recommends that with the acceptance and adoption of Information and Communication Technology (ICT) in book production, the management of the publishing industry should ensure that, production are of good quality and must be maintained by investing and acquiring high grade modern ICT-based publishing equipment meant for book production and Publishers should have a functioning channel for effective communication and directory of all customers' transactions to keep them abreast of new productions either through their phones, e-mails, websites, YouTube, blogs or Whatsapp.

Keywords: Book; Use of Technology, Book Production; Book Finishing

Introduction

A book is an object used to preserve information in text or images; it is often constructed of paper, papyrus, parchment, or vellum that has been tied together and covered (British Library, 2018). Additionally, it can be a piece of written or printed fiction or non-fiction, typically on sheets of paper tied or fastened together inside covers. This physical configuration is known by the technical name codex. The codex supersedes the scroll as the oldest hand-held tangible support for lengthy written compositions or records. In a codex, a single sheet is referred to as a page and each side of a leaf (Allison, 2023). A book is the archetypal example of a creation of such length as to need a significant time commitment to both create and still be considered a time investment to read.

A book is a non-periodic printed document with at least 49 pages, exclusive of the cover pages, that is published in the nation and made available to the public, according to the definition issued by UNESCO in 1964 (The Editors of Encyclopaedia Britannica, 2025). The keyword in the definition was "printed," because at that time, advances in book printing technology made print runs larger than 500–1000 copies with more than three printing sheets financially viable, effectively prohibiting self-publishing as we know it today and excluding all booklets with fewer than 48 pages. A book has been a tangible item that was typically portable, often collected, and

valued as a reservoir of human knowledge since the time of the inscribed clay tablets (2500 BCE) until the advent of the digital revolution (1990s) (Islam, 2023). The book has changed physically over time, and today's book historians use the term "book" to refer to almost any written or printed work that has been circulated or made public in some form (Eliot & Rose, 2007). Once it has been published and made accessible to the various user categories, it becomes available.

The process of converting a draft manuscript into a finished book for printing or an eBook is called book production (Rainey, 2023). The simplest kind of book manufacturing comprises editing, design, formatting, printing, and ebook conversion. The creation of books is crucial to the business of publishing. In the traditional publishing model, a book is produced by a reputable publishing industry with a staff of experts handling the book's design, sales, marketing, and several other publishing-related tasks. Traditional publishing is the more formal method of disseminating an author's toilsome labour, but it also takes more time. The majority of conventional publishing firms exclusively work with literary agencies and do not accept submissions from writers directly (Shenoy, 2024). However, industries have started to see their conventional areas challenged by the growth of self-publishing and ebook sales. They receive terrible news, but authors and readers benefit since they now have greater flexibility than ever before. For a book to be published using the traditional approach, it has to pass through the writing and book trade.

Statement of the Problem

Traditional techniques of book production have been significantly replaced by technology driven approaches. Despite being comprehensive and well-known, traditional book production is sometimes slow, costly, and very limited, placing publishing choices in the hands of a small number of well-established firms. Many aspiring writers have had less chances as a result of this procedure, and readers who want rapid and inexpensive access to information have not received it as quickly.

In this 21st century, books are now produced and distributed more quickly, more cheaply, and more widely due to the growth of information and communication technology (ICT), particularly digital publishing. The monopoly of conventional publishers has been broken by e-books, online publishing platforms, and print-on-demand services, giving consumers and writers additional choices. Notwithstanding these benefits, obstacles including inadequate ICT infrastructure, the high expense of purchasing sophisticated publishing equipment, copyright violations, digital illiteracy, and opposition to technical advancements still prevent widespread adoption, especially in poorer nations.

Therefore, there is a pressing need to examine how technologies are being used in book production, the role of technology in digital publishing, the benefits of digital publishing, the adoption of digital publishing in Nigeria and the challenges affecting the use of technology in publishing.

Aim and Objectives of the Study

The overall aim of the study is to explore how technologies are being used in book production. The specific objectives include to:

1. understand the role of technology in digital publishing;
2. explore the benefits of digital publishing;
3. find out the adoption of digital publishing in Nigeria; and
4. identify the challenges affecting the use of technology in publishing.

The Concept of Writing

The meaning of the concept varies according to the context of use. Writing, on the other hand, may be characterised as a kind of communication that uses visual signs or symbols to convey spoken words. Although writing first began as a niche activity for elites, it is now thought that a writing system must be accepted and used by a linguistic group to be considered writing. Therefore, writing may be seen as a traditional form of communication that utilises visual cues within a certain linguistic group. A spoken language may survive without a writing system tied to it, but writing cannot exist independently without a spoken language. Writing is, in a nutshell, the art of human communication via the use of visible markings (Olson, 2009).

Publishing Process

Publishing can simply be referred to as a coordinated activity that ensures that content in the form of ideas or messages is disseminated from its originator to the general public. To put it another way, publishing is the process by which an idea is transferred from its creator (the author) to its consumers (the readers or listeners) in a developed and concrete form. This shows that before an author's concept reaches the intended audience, it may be enhanced, edited, simplified, and modified as part of the publishing process. As a result, several players are involved in the publishing process who work together to fulfil the processed goal (Keh, 2014). In a nutshell, publishing is the process that makes it easier to create and distribute material in the form of books and other publications.

The Book Concept

The Book has been the major vehicle for the exchange of ideas as well as cultural diffusion (McKitterick, 2012; Mohammed, 2001; Wu et al., 2023). It is regarded as the embodiment of message, teaching, communication and literature that transcends geographical limitations and time and space. After the development of movable type in the 15th century, books gained popularity and have since gained social, cultural, and economic value among cultures (Robert, 2002). The format, colour, physical look, or content of a book describes it. Early books were written on parchment, papyrus scrolls, clay tablets, or wooden tablets. Later, to reach as many readers as possible, books were written on paper and bound in codex form (four-dimensional) (Finkestein & Alistair, 2005). The term "book" today is often used to describe a printed work of a respectable length that is bound in codex form and distributed to the general audience (Kovac et al., 2019).

The term book can refer to a variety of publications that resemble books, including journals, periodicals, and newspapers.

Book Trade

Book production involves many players who supply goods and services to the industry as raw materials that are processed into a finished product in the form of a physical book (Wu et al., 2023). Therefore, the relationship of supply and demand in the manufacturing and distribution of books as commodities is of significance to the book trade (Robert, 2002). For instance, a book in manufacturing and distribution results from the availability of cheap labour and paper supplies combined with demand from economically viable citizens. In summary, book commerce relates to the business elements of publishing and disseminating books during a specific historical period.

With the advent of technologies in publishing, the traditional means are gradually falling off. The use of technology has streamlined the procedure and made technological book creation more convenient and economical (Salani & Tapfuma, 2025). When digital technology emerged, the procedures for producing, distributing, and selling books underwent structural changes. Publishers, printers, and every other business that deals with paper and books, such as libraries and information centres, are catching on to the plan and progressively integrating modern technology into their daily operations. Although consumers in Nigeria still purchase and utilise print materials despite the country's delayed adoption of new technologies, it is argued that publishers who do not digitise their present and future book titles risk losing out in the growing publishing business (Stamp and Hodson, 2010). The chance to provide digital textbooks as a potential cost-saving option for students has been made possible by the ongoing improvements in technology. The way that books are created, published, marketed, and read may have a significant influence on the environment.

Digital technologies, including print-on-demand, e-readers, ebooks, and audiobooks, have grown in significance, and they now play a significant role in the industry's environmental transformation (Haco-Obasi & Chukwu, 2021). The publishing sector is evolving as a result of the introduction of new technology. This implies that there are new prospects for automated book manufacturing, among other things. One may save time and money by automating the process of producing books. This is so that one may assign the laborious, time-consuming duties of organising, cleaning, formatting, and converting to sophisticated software platforms. By automating the book manufacturing process, one may be more creative with the finished product, save production time, and ensure that the book complies with all specifications for electronic publication. Additionally, automation and online procedures are practical since they enable publishers to operate remotely. All we require is a computer and an internet connection.

The Role of Technology in Digital Publishing

The publishing sector has undergone radical change as a result of the digital era. Unlike the past, when books were only available in physical form and were only sold in brick-and-mortar stores, today's publishers have instant access to millions of readers worldwide (Verhoef et al., 2021). The process of producing and disseminating digital information is known as digital

publishing. Text, music, video, and other types of material are all included in this. It may be used for both private and business needs. The advantages of digital publishing are numerous. It enables a quicker publication schedule and a larger audience reach. Digital information may also be quickly edited and updated as required. It is, therefore, the perfect platform for dynamic and constantly changing content. Technology plays a crucial part in digital publishing. Over the past ten years, the publishing sector has seen a major transformation. The industry of book publishing has experienced a true game-changing shift because of digital technologies.

The rapid use of digital devices like smartphones, tablets, and Kindles, print-on-demand manufacturing processes, and social media marketing have all contributed to this transition (Moghrabi et al., 2023). We can produce, share, and consume digital material in many different ways thanks to technology. Technology makes digital publication feasible, allowing for everything from straightforward text to intricate multimedia experiences. Although the digital revolution has altered how books are read, authored, published, and sold, questions still exist about how technology may impact traditional reading habits. The capacity to understand shifting reading habits, make better decisions with data and analysis, and streamline workflows are the three main advantages of digital technology for the book publishing industry. For readers, more affordable prices and easier access to titles are appealing.

The Benefits of Digital Publishing

Comparing digital publishing to conventional print publication has several advantages. The fact that producing a digital magazine is far less expensive than producing a print journal may be the most evident advantage (Bingol & Gumus, 2024). Additionally, compared to print media, digital articles may be produced and circulated considerably more swiftly. There are no expenses related to storage, theft, or the return of unsold material since e-books are distributed through digital content management systems (CMS) (Joseph & Jha, 2015). Publication procedures, including reformatting and editing, simplicity of input, redesigning, general layout, and printing, are all improved with digital publication. There is also the possibility for new types of digital material, such as original digital texts that are accompanied by contemporaneous evaluations and commentary (Shatzkin 2008), as well as the availability of content in numerous formats and viewing modes depending on user preferences (Kleper, 2001). In order to draw in today's information consumers, Abulude (2014) argued that readers must be able to connect online to discuss, develop, and distribute material to their separate unique resources.

The Adoption of Digital Publishing in Nigeria

Since the first electronic book was released in 1971, there has been an upsurge in the buzz around e-books and digital publishing. Mobile network companies like Glo, Airtel, and MTN have created digital platforms for e-publishing and information sharing in reaction to the government's diminution of the telecommunications monopoly (Abulude, 2014; Haco-Obasi & Chukwu, 2021). Open access resources, electronic books found on digital publishers' websites, general and specialised databases accessible through the internet on PC, smartphone, tablet, e-reader, and e-pal formats are some of the newly developed book sellers. E-books designed expressly for cell phones and PDAs are available on several websites, like fictionwise.com, gutenberg.org, and

memoware.com. Then, these electronic books are compiled for handling and physical usage, either on CD-ROMs or by being downloaded via print-on-demand (POD) technology. This demonstrates how digital technology has given information users control and a choice in how to get the information they need.

Digital technology does not ignore the book's physical look. The internet has revolutionised the formerly bound-by-covers pages by giving authors the chance to collect ideas, compose a book, upload it to a website, and make it available for purchase. According to Bankole (2005), one notable accomplishment of the early publishers in Nigeria was their positive relationships with their writers, which led to the exposure of the works of early literary giants like Chinua Achebe, Wole Soyinka, and Amos Tutuola. However, things have taken a drastic turn as a result of new technologies. Publishers reportedly became less willing to produce monographs as sales of printed monographs declined, according to Joseph and Jha (2015). Even authors who devoted years to their monographs' research and writing had trouble finding publishers. Ani and Ogboh (2018) report that, despite being low at the time of their study, educational publishers in southeast Nigeria are gradually increasing their use of digital technology. This is because publishers have been using e-books to release books that consumers would not have been able to find in traditional retailer bookshops due to insufficient demand for the traditional print run. Despite not being as advanced as other nations, Nigeria's scenario demonstrates that the usage of digital material is progressing steadily and gradually.

Challenges Affecting the Use of Technology in Publishing

There are numerous challenges affecting the use of technology in publishing in Nigeria. According to Ikpaahindi (2011), clients in Nigeria either detest using credit cards to make purchases or do not have them at all, which makes it difficult for the publisher to sell his books online. Ikpaahindi (2011) emphasises the need for reliable electricity and sufficient internet bandwidth in digital publication, both of which are missing in Nigeria. Ani and Ogboh (2018) claim that the high cost of digital equipment, frequent power outages, the high cost of using alternative power sources, and the lack of adequate regulations for the protection of electronic intellectual resources are some of the obstacles preventing Nigerian publishers from adopting digital technology. These factors increase piracy and lower the profit that can be derived from e-resources. E-publishing, particularly for those in Africa, is providing some perplexing issues for publishers (Ahmed & Babalola 2015). These difficulties include the difficulty in creating e-reading software that is compatible with a variety of formats, the prevalence of piracy, the uncertainty surrounding the ownership of intellectual property, the lack of credibility of publishers, and the transient nature of internet content as opposed to the permanent nature of print format. Bashorun et al. (2013) listed additional obstacles to digital publishing in Africa as inadequate electricity supply, language barriers with e-publishing equipment imported from developed nations, a lack of skilled labor, low and inconsistent internet connections, abnormally high costs to obtain regular, stable, and uninterrupted internet facilities, deficient publishing infrastructure, insufficient sustainable funding, and high tariff charges for telecommunication services. According to Abulude

(2014), some of the significant challenges faced by digital publishing include the high cost of purchasing e-publishing infrastructure, piracy, plagiarism, power surges, and inadequate content quality management.

Conclusion

The study is on the use of technologies in book production. Many publishers are leery of the technology requirements for producing books, but they shouldn't hold back from entering the eBook market. By selecting the appropriate technology partner and provider, publishers may quickly benefit from technological breakthroughs and the adoption of technological gadgets. The still-profitable print publishing industry should be scaled back in favour of a digital publishing venture that gives higher returns.

Suggestions

The study suggests thus:

1. The management of the publishing industry should guarantee that production is of high quality and must be maintained with the acceptance and adoption of ICT in book production by investing in and obtaining high-grade contemporary ICT-based publishing equipment designed for book production.
2. To keep their clients informed about new productions, publishers should have a working channel for effective communication and a directory of all customer transactions, whether through their phones, e-mails, websites, YouTube, blogs, or WhatsApp.
3. The management of the publishing sector should keep up-to-date databases of customer information and ensure that strong catalogues and stock listings are extensively disseminated for public consumption.

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