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OBSTACLES IN THE PUBLICATION OF PRINTED AND NON-PRINTED MATERIALS IN THE DIGITAL AGE: A LITERATURE REVIEW FOR THE YEARS 2020–2025

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ABSTRACT

The development of digital technology has brought about major changes in the publishing industry, affecting both print and non-print materials. The public now tends to favour information sources that are faster, more accessible and more practical via digital media, thereby impacting the existence of conventional publishing. This article aims to examine the various challenges faced in the publication of printed and non-printed materials in the digital age. The method employed is a literature review, analysing various journals, academic articles, and relevant sources published between 2020 and 2025. The findings indicate that the publication of printed materials faces obstacles in the form of declining reader interest in print media, high production and distribution costs, and competition from more efficient digital media. Meanwhile, the publication of non-printed materials faces challenges such as copyright issues and digital piracy, limited digital literacy, dependence on technological infrastructure, and intense competition for content on digital platforms. Furthermore, changes in public behaviour regarding access to information require publishers to engage in continuous innovation and digital transformation. Consequently, adaptation strategies through the development of hybrid publishing models, the enhancement of human resource competencies, and the optimisation of information technology are crucial steps to ensure the sustainability of the publishing industry in the digital age.

Keywords: *Print publishing, non-print publishing, the digital age, digital transformation, dissemination of information.*

INTRODUCTION

Advances in information and communication technology have brought about significant changes in various aspects of life, including the publishing industry. Digital technological progress enables information to be produced, disseminated and accessed more quickly and efficiently than with conventional media. These changes have spurred the emergence of various forms of non-print publishing, such as e-books, electronic journals, digital repositories, and various internet-based publication platforms. On the other hand, print publications such as books, magazines, newspapers, and printed journals are still used by some members of the public, despite

facing various challenges due to the development of digital technology.

Digital transformation has altered the public's behaviour in accessing information. People tend to choose information sources that are faster, more practical and more flexible via digital devices. This situation has led to a decline in interest in print media and an increase in the use of digital media as the primary source of information. Consequently, the print publishing industry is under considerable pressure, in terms of readership, distribution and revenue. Many print media outlets have even had to change their business strategies in order to survive amidst the ever-evolving competition from digital media.

On the other hand, non-print publishing is not entirely free from obstacles either. Although it offers ease of access and distribution efficiency, digital publishing faces various challenges, such as limitations in human resource capabilities, increasing competition amongst publishers, publication quality that is not always guaranteed, issues of copyright and digital piracy, as well as dependence on technology and the internet. Furthermore, the rapid pace of technological development requires publishers to continually adapt in order to meet the increasingly dynamic needs of users.

The publishing industry in Indonesia also faces increasingly complex challenges as digitalisation advances. Publishers are required to innovate in production, marketing and distribution processes in order to remain viable. For publishers of printed materials, the main challenges lie in high production costs and a declining readership. Meanwhile, publishers of non-print materials face issues regarding information security, the quality of digital content, and increasingly fierce competition in the digital environment.

Given these circumstances, it is important to conduct a study on the barriers to publishing both printed and non-printed materials in the digital age. This study aims to identify the various barriers faced by the publishing industry and to analyse the measures that can be taken to address the changes brought about by the development of digital technology. The findings of this study are expected to provide a more comprehensive understanding of the dynamics of the publishing industry and to serve as a reference for publishing managers in developing adaptive and sustainable strategies in the digital age.

RESEARCH METHODOLOGY

This study employs a **literature review** method with a qualitative descriptive approach to analyse various barriers to the publication of print and non-print materials in the digital age during the period 2020–2025. A literature review was chosen as it enables the researcher to identify, collect and synthesise various research findings, scientific articles, books, conference proceedings and reports relevant to the theme of publishing amidst the development of digital technology. This method aims to gain a comprehensive understanding of the changes in the patterns of production, distribution and consumption of published materials that occurred during that period. A literature review is a research method used to systematically collate and analyse various published sources of knowledge.

Data collection was carried out by searching various scientific databases, such as Google Scholar, Scopus, Dimensions, Garuda, and relevant national and international journals. The inclusion criteria for this study encompass publications published between 2020 and 2025, discussing the publication of print and non-print materials, digital

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transformation in the publishing industry, information technology challenges, digital copyright, changes in reader behaviour, as well as the economic and management aspects of publishing. Meanwhile, sources not directly related to the research focus or containing insufficient information were excluded from the analysis. Following the selection process, the literature meeting the criteria was classified according to the main themes emerging from the research.

The data collected was then analysed using qualitative descriptive **content analysis**. The analysis involved identifying patterns, trends and dominant issues relating to the barriers to publishing printed and non-printed materials in the digital age. The findings of the study are presented in the form of a narrative description to illustrate the various challenges faced by publishers, such as content digitisation, competition with digital media, intellectual property rights issues, changing reader preferences, limited technological resources, and the sustainability of the publishing business model. It is hoped that this approach will provide a comprehensive overview of the state of the publishing industry for the period 2020–2025, as well as recommendations to support the adaptation of publishing in the era of digital transformation.

RESULTS AND DISCUSSION

Publishing is an activity involving the management, production and dissemination of information to the public through various media. The publishing process comprises several key stages, such as manuscript editing, design, layout, production, distribution and the marketing of published works to readers. Publishing not only serves as a means of conveying information but also plays a role in the dissemination of knowledge, education, communication and the development of society's culture. Through publishing, various intellectual outputs, research findings and written works can be published so that they may be utilised by the wider public.

Advances in information and communication technology have brought about significant changes to the publishing system. Initially, publishing was synonymous with print media such as books, newspapers, magazines and printed journals. However, the development of digital technology has led to a transformation in publishing towards electronic or digital formats, such as e-books, e-journals, digital repositories and various other online publishing platforms. This transformation has simplified the production and distribution of information, as publications can be accessed quickly without being constrained by time or place. Furthermore, digital technology enables publishers to reach a wider readership at a lower distribution cost compared to conventional publishing.

According to Purwadi and Irwansyah (2020), publishing is a vital component of the scientific communication system, serving to disseminate information and research findings to the public. Advances in e-publishing technology present opportunities for publishers to enhance the effectiveness of information dissemination via digital media. On the other hand, these developments also require publishers to adapt to technological changes and meet the public's demand for fast and convenient access to information.

In the modern world, publishing has become one of the sectors most affected by the development of digital technology. Changes in public behaviour regarding the acquisition of information mean that publishers must be able to adapt to the needs of users who increasingly prioritise rapid and flexible access to information. These

conditions have prompted publishers to develop digital-based publishing systems in order to remain competitive in the digital age. Consequently, publishing today is no longer solely focused on physical products, but also on digital information services accessible via the internet and other electronic devices.

Definition of Printed Materials

Printed materials are information media presented in physical form and produced through the printing process. Examples of printed materials include books, newspapers, magazines, printed journals, brochures and various other documents that can be read directly without the use of electronic devices. Printed materials have long been the primary means of disseminating information, education and public communication, as they are considered to have a high level of credibility and are easy to use by a wide range of people.

According to Choliq (2023), print media has its own distinct characteristics compared to digital media, namely its ability to provide a more comfortable and immersive reading experience for readers. Furthermore, print materials also have advantages in terms of documentation as they can be stored for long periods. However, the development of digital technology has led to a decline in the use of print materials due to changes in public behaviour, with people increasingly preferring digital media, which is considered more practical and easily accessible.

The publication of printed materials also faces various challenges in the digital age, such as high production costs, distribution costs, and a decline in the number of print media readers. Competition with digital media has forced many publishers to innovate and change their strategies in order to maintain their existence amidst the rapid development of information technology.

Definition of Non-Print Materials

Non-print materials are information media presented in digital or electronic form and require technological devices to access them. Forms of non-print materials include e-books, e-journals, digital proceedings, institutional repositories, websites, and various other digital publication platforms. The development of non-print materials is inextricably linked to advances in information technology and the internet, which enable information to be accessed more quickly and widely.

According to Azhari (2024), the development of digital systems in the publishing world has simplified the processes of managing and distributing information. Digital publishing allows for more efficient publication as it does not require the printing and physical distribution processes involved in print publishing. Furthermore, non-print materials also make it easier for users to search for, store, and access information anytime and anywhere.

Definition of the Digital Age

The digital age is a period of technological development characterised by the increasing use of electronic devices and the internet in various aspects of human life. In this era, information can be produced, stored, processed and disseminated in digital form, enabling rapid access to information without geographical boundaries. The advent of digital technology has brought about significant changes in various fields, including education, communication, the economy and the publishing industry.

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The development of the digital age has led society to become increasingly reliant on technology for obtaining information. People tend to favour digital media as it is considered more practical, faster and easier to access via electronic devices such as smartphones and computers. This situation has led to a shift in readers' behaviour from print media towards digital media. Consequently, the publishing industry is required to undergo digital transformation in order to keep pace with technological developments and the needs of modern society.

According to Akil (2022), the development of the digital age presents both opportunities and challenges for the publishing industry. Digital technology enables information to be disseminated more quickly and widely; however, it also intensifies competition amongst publishers and demands a high degree of adaptability to technological changes. Therefore, publishers need to develop innovative strategies to survive and thrive in the digital age.

Challenges in Print Publishing in the Digital Age

The development of digital technology has had a significant impact on the sustainability of print publishing. One of the main challenges faced is the decline in the public's interest in reading print media. Modern society tends to favour digital media as it is considered more practical, easily accessible, and capable of providing information quickly via electronic devices such as smartphones and computers. This situation has led to a decline in the use of printed books, newspapers, magazines and journals, particularly amongst the younger generation who are more familiar with digital technology. This shift in information consumption patterns has a direct impact on the decline in the number of print media readers, thereby affecting the sustainability of the conventional publishing industry.

In addition to the decline in interest in reading print media, high production costs also pose a major obstacle to the publication of printed materials. The print publishing process incurs significant costs as it involves the use of paper, ink, printing services, and labour in the production process. The ever-rising price of raw materials has caused publishing production costs to increase further. This situation has led to higher retail prices for printed materials, thereby affecting the public's purchasing power. For small-scale publishers, high production costs pose a serious challenge as they can hinder the publishing process and reduce profits.

Another obstacle is the relatively high cost of distribution. The publication of printed materials requires a physical distribution process to ensure products reach readers in various regions. This distribution entails significant costs for transport, storage and delivery, particularly when reaching areas far from the publishing centre. In the digital age, this situation poses a major challenge, as digital media can distribute information more quickly and cheaply without the need for physical delivery. Consequently, many publishers are struggling to maintain the efficiency of their print distribution.

Competition from digital media is also a key factor affecting the sustainability of print publishing. The advent of the internet and various digital platforms allows the public to access information instantly via websites, social media, e-books and electronic journals. Digital media is considered more flexible as it can be accessed anytime and anywhere without the need to purchase a physical product. Furthermore, much digital information is available free of charge, leading the public to prefer digital media over

print media, which requires a purchase. According to Choliq (2023), the development of digital media has increasingly threatened the existence of print media as the public has shifted to using internet-based media as their primary source of information.

Changes in readers' behaviour have also become a significant obstacle to the publication of printed materials in the digital age. People today prefer information that is presented quickly, concisely and in an easy-to-understand manner. The habit of reading for long periods via print media is beginning to decline, as readers tend to opt for digital content that can be accessed instantly via mobile devices. Furthermore, the growth of social media has made the public more accustomed to obtaining information through visual and audiovisual formats rather than lengthy texts in print media. These behavioural changes mean that publishers of printed materials must innovate in order to remain capable of attracting readers' interest amidst the increasingly rapid development of digital technology.

CONCLUSION

The development of digital technology has brought about major changes to the publishing industry, affecting both print and non-print publications. Advances in information technology have made it easier for the public to access information via digital media, which is perceived as faster, more practical and more flexible. This situation has led to a decline in the use of print media and an increase in the use of digital media as the public's primary source of information.

Print publishing faces various obstacles, such as a decline in interest in reading print media, high production costs, expensive distribution costs, and competition from the ever-expanding digital media sector. Furthermore, changes in reader behaviour—with readers now preferring information that is quick and easily accessible—also pose a major challenge to the survival of print media in the digital age. Meanwhile, the publication of non-print materials faces obstacles in the form of digital copyright issues, content piracy, dependence on technology and the internet, and increasingly fierce competition between digital platforms.

Despite facing various obstacles, the development of digital technology also presents opportunities for the publishing industry to innovate and undergo digital transformation. Publishers need to develop adaptive strategies, such as digital publishing, the use of social media, the development of hybrid publishing models, and the improvement of human resource quality, in order to survive and thrive in the digital age. Through innovation and the ability to adapt to technological developments, the publishing industry is expected to continue fulfilling its role as a means of disseminating information and promoting literacy amongst the public.

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