

## **Bibliometric Analysis of Research Trends in Mass Communication and Digital Media**

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### **Abstract**

The piece investigates the evolution of mass communication and digital media research, which, amidst the rapid growth of digitalization, continues to experience the key problems of information fragmentation and digital literacy disparity. To fulfill this goal, the paper seeks to chart scientific progress and trace the trends in research through the use of a bibliometric method. The greatest problem that has been tackled is the shortage of a complete bibliometric map of this multidisciplinary field, particularly over the past decade. By utilizing Scopus data for the years 2008-2025 and after applying restrictions on the number of articles obtained, 65 articles were extracted. The VOSviewer tool also came in handy in this instance. The bibliometric analysis carried out in this study identified the trend of publications, the most influential topics, the contributing countries, and the keyword clusters. The results point to a publication pattern that, although varied, is gradually developing, with three thematic clusters and a very strong presence of digital media and social media topics. The consequences of this research emphasize the importance of enhancing the collaboration between researchers and providing a direction for future studies in the field of mass communication and digital media.

**Keywords:** Bibliometrics, Digital Media, Mass Communication

### **INTRODUCTION**

The evolution of mass communication and mass media, in particular, has been marked by a series of major changes, especially with the swift digitalization and infiltration of social media in various sectors. The public message dissemination is now led by digital media, which has taken over many functions of traditional media. Nevertheless, such a significant change gives rise to several major issues: the fragmentation of information, content overload, and a digital literacy gap, all of which severely affect the public's capacity to effectively receive and interpret messages.

Examples of institutions and scientific journals using social media platforms such as Twitter for the rapid dissemination of information have

been reported by several studies (Erskine & Hendricks, 2021; Nason et al., 2015; Thelwall et al., 2013), public education was broadened (Chan et al., 2020), and audience engagement was increased (Bombard et al., 2011; Costa et al., 2021) thanks to such platforms. Moreover, digital media are applied in communication for healthcare, social campaigns, and public advocacy (Brown et al., 2019; Burden et al., 2017; Dwivedi & Sen, 2025; Fahey et al., 2024). However, a scholarly bibliometric mapping of mass communication and mass media topics is still uncommon, particularly in developing countries.

Most of the previous studies were centered on the use of digital media in the examined areas relative to health, politics, education, marketing, and public services (Akande, 2007; Blanco-Pons et al., 2019; Boudreaux et al., 2014; Jones et al., 2017). These studies demonstrate growing scholarly interest in the role of digital media in social participation, cultural representation, and information dissemination (Adley et al., 2025; Burity, 2016; Mihailidis & Thevenin, 2013). However, a clear research gap exists: scholarly studies specifically mapping publication patterns, topic trends, contributing countries, and conceptual developments in the field of mass communication and mass media through a bibliometric approach are still very limited. In Indonesia, the phenomenon of digital communication is growing rapidly, yet systematic analysis of the development of academic literature in this field is still scarce. The absence of scientific mapping makes it difficult to determine research directions and potential new research areas are not optimally identified.

Therefore, this research is important to provide a comprehensive overview of the development of mass communication and mass media science through bibliometric analysis. The purpose of the study is to: First, find out from the publications the trends, the countries of the authors who contributed, and the major keywords that have been used in the fields of mass communication and mass media research; Second, look at the citation networks to check scientific influence; and Third, locate the non-thematic areas which can be very receptive to research. The novelty of this research lies in the integration of bibliometrics to analyze two major fields of mass communication and digital media simultaneously, using comprehensive data from an international publication base, and providing a local context-based perspective on global developments. Thus, this research not only enriches communication literature, but also provides a strategic foundation for academics in determining the direction of future research.

## **RELATED WORK**

Various types of research have been used to analyze literature on mass communication and digital media, ranging from systematic reviews, bibliometric analysis, scientometrics, to traditional literature reviews. On the other hand, the application of bibliometric analysis has been quite limited in the study of mass communication and digital media. Hence, this part of the

paper will look into a few past studies which have taken a bibliometric approach to their analysis of the literature in these areas.

Ramadhani & Pratiwi (2024) studied the political communication on the growth of social media by means of bibliometric analysis. This study used a computational bibliometric analysis method using Publish or Perish software to collect publication data from Google Scholar with the keywords "Social Network Analysis" AND "Political Communication" OR "Social Media" for the period 2020 - 2023. The VOSViewer application was also used to provide visualization of the analysis results from the obtained database. The results of this study show that the number of publications related to the topic is 495 articles, with the highest number of publications in 2023 and the lowest publications in 2020.

Other studies have discussed mass communication and digital media, but this study focuses more on Global Study Trends Related to Social Media and Political Communication in Elections using Bibliometric Analysis (Ismail & Yahya, 2024), using the Scopus Database (2019-2023). The main findings of the study mention the fluctuating dynamics of the number of published documents during the period studied, the dominance of author affiliations from the United States, and the distribution of subject areas that emphasize the central role of Social Sciences and Computer Science. Bibliometric analysis in this study does not mention the number of document publications during the mentioned time period.

Furthermore, research conducted by Nafisah et al., (2025), entitled Map of digital open module research in reading learning: Bibliometric analysis in a decade, Data was extracted from the Dimensi database covering the years 2014-2024 and analyzed using VOSviewer software. The results show an exponential growth in publications over the past three years, with research largely focused on content development, process effectiveness, digital accessibility, and educational platform integration. Bibliometric visualization identified four thematic clusters: individual learning needs, pedagogical awareness, instructional design effectiveness, and institutional implementation.

In accordance with the bibliometric characteristics analysis, this study comprehensively reviewed all available literature and covered a wide range of publication sources, including journals. We also consider that mass communication and digital media are multidisciplinary fields, so the literature is spread across many types of publications. Furthermore, several studies related to mass communication and digital media have emerged since the last bibliometric analysis in (Ismail & Yahya, 2024; Nafisah et al., 2025; Ramadhani & Pratiwi, 2024). Therefore, this study aims to update previous findings. To our knowledge, no recent bibliometric analysis has specifically examined the literature on mass communication and digital media in the last decade.

RQ1 : What are the research trends in mass communication and digital media based on the number of publications per year?

- RQ2 : What are the main topics and research streams in the field of mass communication and digital media?
- RQ3 : The author countries present the most published publications in mass communication and digital media research?

## **THEORITICAL FRAMEWORK**

### **Mass Communication**

Mass communication is understood as the process of conveying messages to a wide audience through media that allows for rapid, structured, and large-scale distribution. A major transformation in mass communication occurred when digital media began to replace traditional media, particularly in the dissemination of professional information and public education (Erskine & Hendricks, 2021; Kelly, 2016). Social media such as Twitter has been shown to increase the reach of scientific messages and encourage interaction between institutions and audiences (Thelwall et al., 2013; Chan et al., 2020).

Different research additionally demonstrates that mass communication via digital media is very instrumental in the Healthcare sectors, social campaigns, and public education (Bombard et al., 2011; Costa et al., 2021; Brown et al., 2019; Burden et al., 2017; Dwivedi & Sen, 2025). So, today's mass communication theory remains intrinsically linked to digital dynamics rather than being a separate thing and is furthermore blended with communication practices based on a network.

### **Digital Media**

Digital media refers to a platform based on technology that allows fast, interactive, and cross-border distribution of information, thus changing the way society gets and produces knowledge (Akande, 2007). Besides, digital media opens up new frontiers for the spread of visual, educational, and cultural content, such as the case of augmented reality being used to communicate through more immersive ways (Blanco-Pons et al., 2019). In health and social communication scenarios, digital media is essentially about the public engagement and facilitating a more interactive, responsive communication process (Bombard et al., 2011).

Digital media's role of providing users with access to useful information such as health and lifestyle is further deepened by the development of digital applications and services (Boudreaux et al., 2014). Digital media also makes a major contribution in the spreading of news and shaping the opinion of public, for instance, in the reporting of global health crises (Brown et al., 2019). Besides, digital media has been found to have a very significant effect on the turnout of public political participation through the illumination of health and social information (Burden et al., 2017). Through

the provision of cultural and religious contents, digital media helps to portray and express social identities (Burity, 2016).

Furthermore, social media platforms like Twitter and Instagram are enhancing people's ability to learn and collaborate professionally by facilitating the quick and broad spread of knowledge (Chan et al., 2020). Besides that, digital media is capable of activating big crowds for community involvement by using well-organized, communication-through-engagement strategies (Costa et al., 2021). In spite of all this, digital media offers some significant drawbacks in the form of misinformation spread and lowered public trust in online sources of information (Dwivedi & Sen, 2025). Yet, social media has considerable potentials to be used for successful public health going through community-based approaches and social influence (Fahey et al., 2024). Moreover, studies confirm that digital media, especially Twitter, plays a vital role in spreading scientific knowledge and promoting academic publications' accessibility (Erskine & Hendricks, 2021). Precisely, digital media is a core element of the current communication environment which keeps on changing and developing as the world goes more and more digital (Garza-Reyes, 2015), whereas its ethical considerations and communication framework can be quantitatively analyzed by a bibliometric approach (Heersmink et al., 2011).

### **Bibliometrics**

Bibliometrics is basically a quantitative method for studying scientific progress through measurable parameters such as publications, citations, keywords, and co-authoring patterns (Heersmink, van den Hoven, van Eck, & van den Berg, 2011). This method involves a systematic sequence of actions like identifying keywords, doing database searches, screening documents, and statistical analysis of publications (Garza-Reyes, 2015). Besides this, it can be further combined with knowledge mapping techniques like mind mapping to explore the limits and developmental trends of a specific research domain (Tranfield, Denyer, & Smart, 2003).

In addition, the bibliometric visualization process is often assisted by tools like VOSviewer, which are capable of generating visualizations such as citation network maps, keyword maps, and thematic clusters on a large scale (Hudha et al., 2020). Besides, VOSviewer also facilitates the visual presentation of relationships between concepts, thus helping researchers quickly grasp the scientific structure of a field (van Eck & Waltman, 2010). Hence, bibliometrics offers an extensive analytical framework to evaluate trend, academic impact, and the evolution of ideas in mass communication and digital media studies.

## METHODOLOGY

The bibliometric analysis of this paper was conducted following the methodological guidelines of Garza-Reyes (2015). The procedure was well-ordered with defined steps that other researchers could easily follow in repetition. Besides that, according to Tranfield, Denyer, & Smart, (2003) bibliometric analysis can also be visually presented with a mind mapping approach to show the extent of knowledge boundaries of the studied field. The use of bibliometric analyses in different scientific fields is widespread mainly because they emphasize quantitative studies of journal articles, books, and other types of written publications (Heersmink, van den Hoven, van Eck, & van den Berg, 2011). This work's bibliometric analysis was based on five steps that included identifying search keywords, getting initial search results, narrowing down the search results, assembling preliminary statistical data, and analyzing data, as depicted in Figure 1. These stages were undertaken to ensure the data's accuracy and to give a well-rounded evaluative account of the research area of mass communication and digital media.

**Figure 1.** Five Phases of Bibliometric Analysis (Garza-Reyes, 2015)



Source: Processed by Researchers (2025)

### 1. Defining search keywords

The research study was carried out on 20th November 2025 through a series of keywords related to the field of mass communication and digital media. The search was done by using keyword strings which were applied to the title, keywords, and abstract of each article. TITLE-ABS-KEY ("mass communication " AND " digital media"). Based on predetermined keywords, the article search process was conducted through electronic databases as information sources. This study used the Scopus database because it is one of the largest, most reputable scientific databases, providing a wide range of indexed and peer-reviewed journal articles, thus ensuring the quality of the articles obtained.

### 2. Initial search results

An initial search using the keywords mass communication and digital media yielded 120 documents in Scopus. The search period was unlimited because this study aimed to describe the latest developments in mass communication and digital media research. Based on our findings, articles related to this topic first appeared in early 2003, as seen in Table 1. Unfortunately, research interest declined in 2004 and 2005, but then increased again in 2006, while the first article was published in 2008.

**Table 1.** The terms mass communication and digital media first appeared in journal articles/proceedings

Author	Title	Source	Year of Publication
Vaughan, M.W.	Best practices and future visions for search user interfaces: A workshop	Conference on Human Factors in Computing Systems Proceedings, pp. 1052–1053	2003
Withalm, G	Media Semiotics	Encyclopedia of Language Linguistics, pp. 631–643	2006
Lüders, M.	Conceptualizing personal media	New Media and Society, 10(5), pp. 683–702	2008

source: Researcher data 2025

### 3. Refinement of Search Research

After obtaining the initial results, all articles were screened according to the inclusion criteria set for this study. Two (2) criteria were applied to filter the search results: (i) IC1: Original research articles written in English; and (ii) IC2: Publications appearing exclusively in peer-reviewed journals. Therefore, conference proceedings, book chapters, books, newspapers, letters, and editorials were excluded to ensure that the dataset contained only high-quality scientific contributions. Duplicate articles were also removed during this stage. After finishing the refinement process, the outputs were saved in the CSV format for further data analytics. Table 2 shows the number of articles kept after the refinement.

**Table 2.** Refinement of Search Research

Search Keywords	Number of documents in Scopus
TITLE-ABS-KEY ("mass communication " AND " digital media") AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (LANGUAGE, "English"))	65

Source: Researcher data 2025

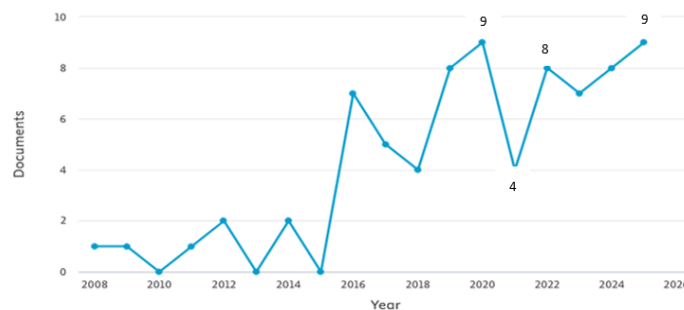
### 4. Compile Preliminary Data Statistic

Earlier it was mentioned that the refined search results were exported and saved as CSV files. Later, these files were run through Mendeley Reference

Manager (RMS) to fill in the metadata of the collected papers, such as authors, titles, keywords, abstracts, and journal details (i.e., journal name, year of publication, volume, issue, and page numbers). The dataset was checked for correctness, and any missing content was supplemented. The cleaned data were finally dissected and categorized according to yearly publication tendencies, publication outlets (journals), contributing authors, and subject areas.

### Research trends in mass communication and digital media based on the number of publications per year (RQ1)

**Figure 2.** Trends in mass communication and digital media research worldwide



Source: Screenshot of Scopus data (2025)

Figure 2 shows the yearly publication trends of studies in the fields of mass communication and digital media. Research globally in this field keeps an up and down pattern. The number of publications started to increase significantly in 2020 which 9 publications were recorded but it dropped sharply to 4 publications in 2021. In spite of this drop, the trend of research is still advancing with increased interest in the following years. The present results are in line with the previous ones showing that research on mass communication and digital media is likely to grow significantly by 2025 (AR, Tasruddin, & AR, 2025).

### 5. Data Analysis

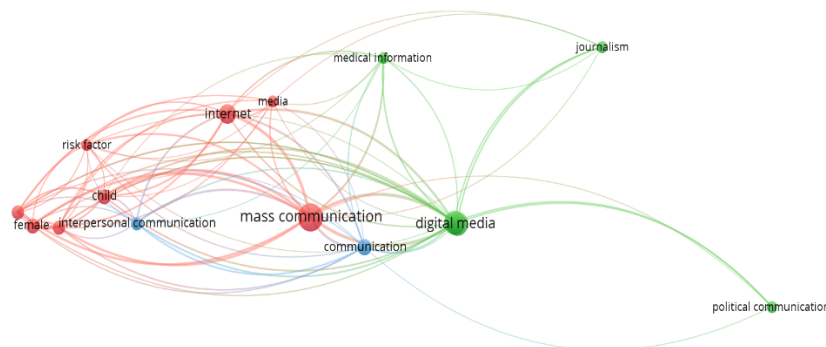
Bibliometric data stored in CSV format will be visualized using the Vosviewer software. As explained by Hudha et al. (2020), Vosviewer is a tool designed to analyze and generate graphical bibliometric maps. The software is widely used because it can process large datasets and present extensive bibliometric visualizations in a way that is easy to interpret. Van Eck and Waltman (2010) also highlight that Vosviewer is capable of handling large-scale maps and producing co-citation maps from major scientific journals. In addition, the software can generate keyword maps that function as topic modeling. As a free and accessible tool, Vosviewer continues to be utilized extensively in research involving data mining.

## RESULTS AND DISCUSSION

### Area Visualization Theme Using Vosviewer

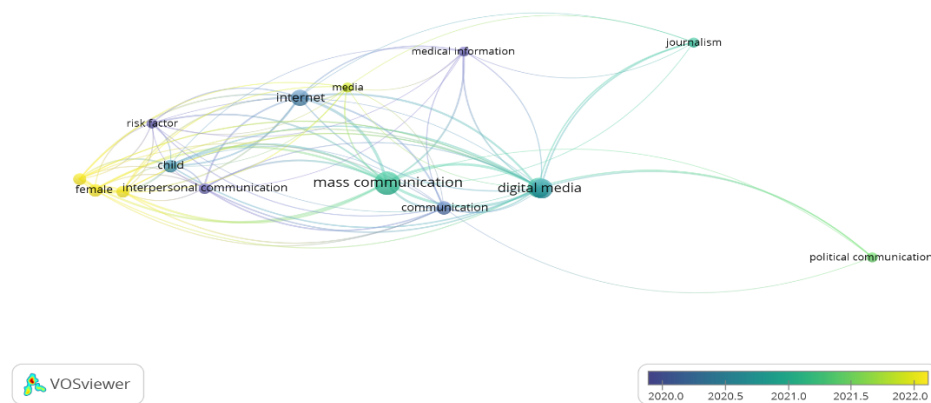
In this section, a bibliometric analysis is conducted to visualize the findings based on the most frequently occurring keywords. This analysis is very useful because it can show topics that have been researched over the past 22 years (2003-2025). Vosviewer also provides a cluster analysis that illustrates the relationships between topics (Hamidah, Sriyono, & Hudha, 2020; Hudha et al., 2020), especially in the study of mass communication and digital media. Through this process, this study successfully mapped the bibliometric analysis in three visualization forms, namely: (1) data network visualization in Figure 3; (2) overlay visualization in Figure 4; and (3) density visualization in Figure 5.

**Figure 3.** Visualization of the Scopus Database Network using Vosviewer



Source: Vosviewer 2025 data

**Figure 4.** Overlay of Scopus Database Visualization using Vosviewer



Source: Vosviewer 2025 data

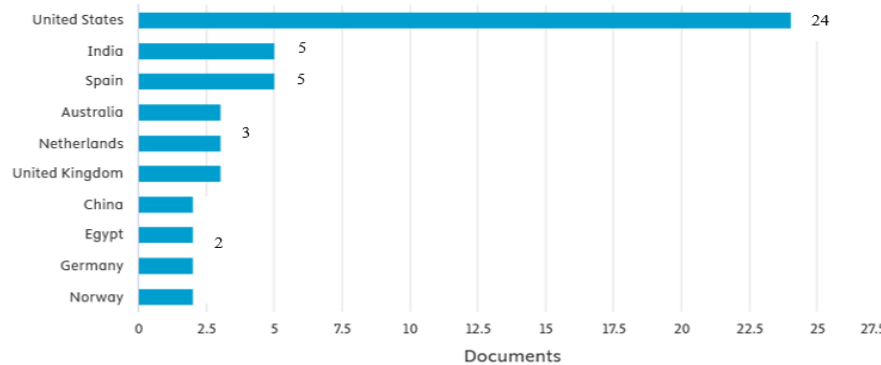
In Figure 3, the visualization of items (keywords) related to mass communication and digital media is displayed using circle symbols by default in VOSviewer. The importance of each keyword increases along with its frequency of appearance keywords that appear more often are represented by larger circles. As expected, mass communication and digital media emerge as the dominant research topics because they have the highest occurrence. When color coding is applied, each circle is assigned a color that represents the cluster it belongs to (van Eck & Waltman, 2010). Figure 4 shows the research topics in terms of years, but the most frequently appearing keywords from 2020 to 2022.

### **Main topics and research streams in the field of mass communication and digital media (RQ2)**

The network visualization in Figure 3 depicts three clusters and their relationships within the topic area under study. Each cluster consists of several keywords that have a strong correlation among themselves in the map structure. For each cluster, there are several occurrences of high-frequency keywords that represent the research focus conducted in previous studies. For example, Cluster one is marked in red with the frequently appearing terms Mass Communication (14), Internet (14), Women (8), Children (8), Men (7), Adults (7), media (5), risk factors (5). Cluster two is marked in green with the frequently appearing terms Digital Media (21), Social Media (21), Journalism (5), Medical Information (5), Political Communication (5). Meanwhile, Cluster three is marked in blue with the frequently appearing terms Communication (10), Interpersonal Communication (6).

### **Countries of authors contributing the most publications in mass communication and digital media research (RQ3)**

**Figure 5.** Top Ten Author Countries by Publication Number



Source: Screenshot of Scopus data (2025)

Figure 5 shows the top ten author countries based on the number of publications, among which the United States has the highest number of studies, producing 24 publications, followed by England and Spain with 5 documents, Australia, the Netherlands and the United Kingdom with 3 documents, while China, Egypt, Germany and Norway only have two documents, in research on mass communication and digital media.

## CONCLUSION

This study addresses the lack of comprehensive bibliometric mapping in mass communication and digital media research. The findings reveal fluctuating yet growing publication trends, three major thematic clusters, and the dominance of the United States as the leading contributor. The analysis also highlights the centrality of digital and social media topics across global scholarship. However, the study is limited by its reliance on a single database and English-language journal articles, which may exclude relevant works. Further investigations should use a variety of databases, give attention to non-English publications, and delve into the thematic evolution in more depth with the help of advanced bibliometric or mixed-method approaches.

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