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Research Article

Navigating the Infodemic: A Bibliometric Analysis of Media Literacy Research in the Social Media Landscape

Crisha Mae E. Villaruel, Joanna Marie V. Gregorio, Nomer Kirby S. Bonifacio, Gladilyn G. Dulay, Jennifer P. Solis*

Department of Information Technology, Bulacan State University – Bustos Campus Bustos, Bulacan, 3007, Philippines

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*Corresponding author:

E-mail:

jennifer.solis@bulsu.edu.ph

ABSTRACT

The rapid growth of digital platforms has contributed to the faster spread of misinformation. As a result, the researchers become increasingly interested in media literacy as a way to help people understand and respond to the information they encounter online. This research paper provides a detailed bibliometric overview of global research on media literacy and misinformation published between the year 2016 and 2025. Using a Scopus dataset with 18,035 entries, data were cleaned and filtered using RStudio and Bibliometrix resulting to 856 records. The tools Biblioshiny and Vosviewer were used in investigating the published trends, influential sources and authors, citation patterns, and subjects structure. The findings showed a large increase in research output, especially after 2020. It indicates increased public concern during the COVID-19 pandemic. Annual scientific production has also greatly increased, reaching its peak in 2025, showing that researchers are continuing to prioritize media literacy as an important in contemporary age. Citation patterns show that during earlier publications, especially those published between 2017 and 2020, remains important and extremely influential and has serving as a foundation for future research. Leading publications like the *Journal of Media Literacy Education* and *Media and Communication* became an important publishing outlet, while a small group of highly influential authors have shaped what most researchers focuses on and discuss in the field, influencing the direction of future research and helping to build the ongoing discussion in media literacy academically. Overall, this bibliometric study highlights both the growth of the study and the key contributors shaping its further development.

Keywords: *digital literacy, disinformation, Information literacy, misinformation*

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Introduction

In an advance society where a single post can either destroy a reputation or make someone life an overnight success, social media has become one of the most powerful tools in shaping today's generation and the world. Every click like, can influence the public opinion build identity and even affects the real-world events. Behind all this digital connectivity there is an equivalent dangerous reality, it is the internet has become a place where misinformation, fake news and digital deception spreads so easily. From manipulated health claims to politically charge propaganda false information spreads widely online in an alarming rate creating confusion, mistrust and division among people (Navarro-Sierra et al., 2024). A similar situation occurred in the Philippines during the Covid-19 pandemic when misinformation spread faster across the social media platforms. The development emphasise the need for stronger media and information literacy programs as well as more effective fact-checking efforts and public awareness initiatives (Sabonsolin, 2022). According to Vaccari, C., & Chadwick, A. (2020) The emergence of Artificial Intelligence (AI) possesses new dangers in people's lives as technologies such as deepfakes and other forms of fake media information blur the line between the truth and distortion. These technologies manipulate videos, images, and audios to appear real, making it increasingly hard for users to identify falsification.

This internet problem really individuals from across different age groups specially younger populations and older adults. Minors and children gets expose to the internet and digital platforms too early and most of them don't really understand the risk brought by online contents and what they see, these makes them to become the prey of unethical digital practices. Many adults and older individuals continue to face challenges in determining whether the information they encounter online is accurate or misleading. As a result, they are often more vulnerable to misinformation or scams and other form of online manipulation. This features the growing need to strengthen digital awareness and critical thinking skills across all age groups. In this context media literacy has become

important tool for helping individuals navigate digital information environments and it also has become the key defense mechanism. Recent evidence suggest that media literacy interventions can significantly improve an individuals ability to assess the credibility of online information and identify false or misleading content that display the practical effectiveness of media literacy education in fighting misinformation. (Lu et al., 2024). From the study of Anstead et al. (2025), media literacy enables people to access and seriously evaluate media content. messages essentially and responsibly, helping them to detect bias, verify credibility, and understand the ethical implications of digital communication. Likewise, Rahim and Zare (2021) point out that digital citizenship complements the media literacy by promoting ethical technology use and responsible online participation or evaluation of digital information.

Over the past decade, researchers have increasingly investigated media literacy as man to fight misinformation, especially in the context of social media. Yet most of the studies focuses on educational plan or conceptual discussions, leaving a gap in quantitative overviews that track how global research on media literacy and misinformation has evolved. This gap highlights the need for a systematic and data-driven approach to analyze trends, key contributors and rising topics in the fields study (Navarro-Sierra et al., 2024). Recent bibliometric investigation like from Dwivedi & Zen (2025) have expand the examination of fake news, media trust and misnifromation research through science mapping and trend analysis approach. To address this, the present study conducts a bibliometric analysis of publication on media literacy and misinformation index in the Scopus database from 2016 to 2025. The dataset includes studies related to media literacy, misinformation, fake news, social media and digital literacy. Through graphs and maps like keyword co-occurrence, citation analysis, and source distribution the study examines research growth, thematic focus and intersection across communications, education and health sciences (Durr Missau, 2024).

This research study is important because provide a broader understanding of how scholar have address misinformation through media literacy research. By using the tools like Biblioshiny and Vosviewer to analyze the how journal citations moved, and the different topic groups, the study shows how research on media literacy has grown from where it has been and started getting more attention. The results of this study can help teachers, policymakers, and researchers in strengthening digital literacy initiative and creating interventions that improved the individuals ability to seriously evaluate online information. These are recognize as important components of 21st-century skills, especially information, media and technology literacy (Rogayan Jr. et al., 2021). Specifically, this bibliometric study will look in ways to fill the gap in the field by focusing on these objectives:

1. To determine growth in research on media literacy and misinformation from 2016-2025 in terms of.
 - a. Annual Scientific Production
 - b. Annual Citation Per Year
2. To identify the most cited documents, relevant sources and authors, about media literacy and misinformation globally.
3. To analyze the co-occurrence network about media literacy and information.
4. To analyze thematically the high frequently search keyword relative to media literacy and misinformation.
5. To provide a visual representation of the key themes and research hotspots within a specific field of study through word cloud analysis.

This study is aiming to provide a clear picture of the current state of research on media literacy and misinformation and to guide future researchers in this field.

Materials and Methods

Study Design

This study used a bibliometric design to analyze media literacy and misinformation studies from 2016-2025. Starting with the choosing study topic and getting of the Scopus dataset. RStudio, Biblioshiny, and VOSviewer was used for data cleaning, standardization, and visualization. This tools was used to

examine trends, citation, authors and keyword relationship in dataset.

Data Source

The dataset consists of 18,035 records retrieved from Scopus database. These records cover publications from 2016 to 2025 and include materials related to media literacy, misinformation, fake news, disinformation, digital literacy, and social media.

Data Extraction

The search strategy is originally applied in Scopus followed a structured set of keywords related to media literacy, digital literacy, and misinformation. The search string used to retrieve the records was TITLE-ABS-KEY ("media literacy" OR "digital literacy") AND TITLE-ABS-KEY ("fake news" OR misinformation OR disinformation OR "digital footprint"). This query was design to identify publications that address media literacy-related competencies and their relationship to misinformation and digital and social media environments. The retrieve dataset cover publications from 2016 to 2025 and include journal articles and other peer reviewed articles and review papers relevant to the study. The complete dataset was received in Excel format and then converted into csv format and proceed to data inspection and cleaning procedures.

Data Cleaning

Data pre-processing was conducted to prepare the data for analysis. The processes started cleaning the initial dataset in RStudio. The initial retrieve dataset from the Scopus consist of 18,035 raw records. Data cleaning was conducted using a combination of custom R scripts and the Bibliometrix package. After the data cleaning process, 865 relevant sources remain. The cleaning process was done in two parts. First part was filtering based on scope where only publications from year 2016-2025 that match the selected keyword remain. The study focuses on terms related to media literacy, digital literacy, fake news, misinformation, disinformation and digital footprint. The second part was quality cleaning that includes removing the duplicate records and non-English articles also exclusion

of records with incomplete information. Afterwards, the dataset was standardized by correcting inconsistencies in author names and affiliations or keywords to make sure all information was consistent for accurate analysis and mapping. The final dataset was then prepared for descriptive statistical analysis and bibliometric network mapping.

Data Analysis

Bibliometrix function such as biblioshiny were used to analyze publication trends, citation, authors and sources. VOSviewer was used for keyword mapping and

visualization. The analysis also included thematic mapping and world cloud generation to identify research trends.

Results and Discussion

This part of the research paper shows the result of the data analysis and interpretation from the bibliometric study on media literacy and misinformation from 2016 to 2025. It provides the trends in publication and citations, most active authors and journals and lastly the main topic that shows up in the research.

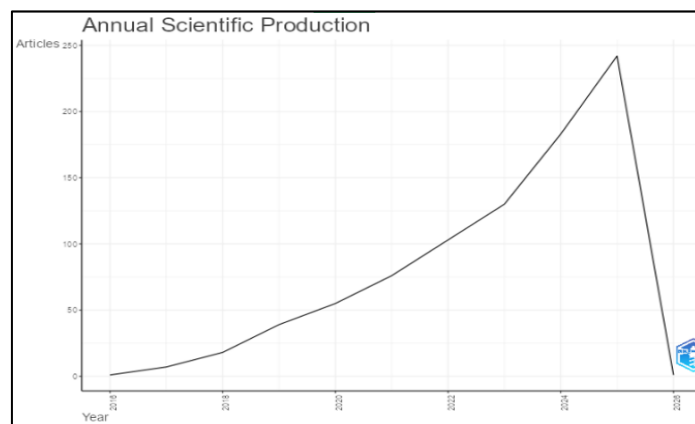


Figure 1. Annual scientific production of media literacy and misinformation research (2016–2025)

Figure 1 shows that the research on media literacy and misinformation really grew high from 2016 to 2025. It all started with just one paper in 2016 then slowly went up to 7 in 2017 and 18 in 2018. In 2019, it almost doubled to 39 and went more higher to 55 in 2020 maybe because of the global information epidemic. In 2021, the number of papers just stayed around 76. Then in 2022, it went up to about 103 and

in 2023 it reached roughly 130. By 2024, there was about 183 papers. In 2025, it looks like it hit the highest number about 242 which is the most in the dataset. This steady increase shows that a lot more researchers are paying attention to misinformation and media literacy. There is also one paper listed for 2026 which looks like an early record for next year.

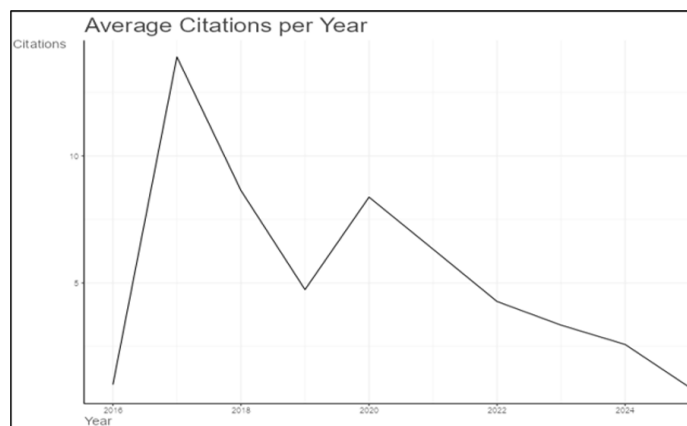


Figure 2. Annual citation trends of media literacy and misinformation publications (2016–2025)

As shown in Figure 2, the citation patterns reveals that the dataset shows the academic impact may change depending on the year of the publication. Papers that are published in 2017 was the one that stands out the most with an average of 125.14 citations each making this year the strongest in terms of academic

influence. Publications from 2018 have also performs well with an average of 69.11 citations, followed by those from 2020 which averaged 50.25 citations. These suggest that work published during these years still continues to build and guide research in the field.

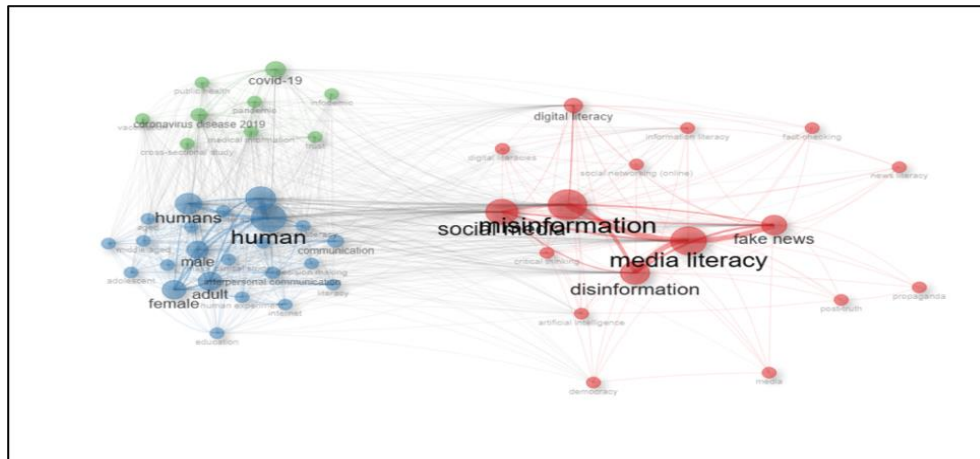


Figure 3. Keyword co-occurrence network of media literacy and misinformation studies.

The occurrence network in Figure 3 reveals that the field is dominated by a central cluster of terms including media literacy, misinformation, fake news, disinformation, and social media. These topics receives the highest contrast and PageRank values indicating that most research focus on how people interpret, assess, and responds to incorrect information on digital platforms. Keywords such as digital literacy, critical thinking, and fact checking occurs in the same cluster that emphasize the importance of knowing how to handle misleading online

contents. A second set of keywords includes human, communication, education, and literacy, indicated demographic and behavioral perspective in the literature. A third cluster led by COVID 19, pandemic, and public health, highlighted the increase in health-related misinformation research during the global health crisis. In general, the network demonstrates that the media literacy research focus around three primary themes like digital misinformation, human and educational aspects, and pandemic related health misinformation.

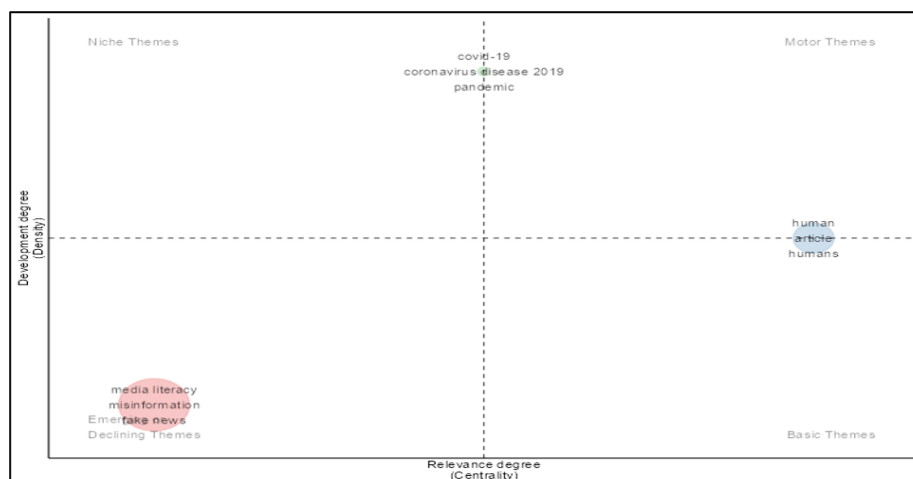


Figure 4. Thematic map showing major clusters in media literacy and misinformation research.

A thematic analysis of 250 high-frequency keywords in Figure 4 shows that the research field is divided into three connected clusters. The biggest cluster is Media Literacy (Cluster Frequency = 2364), which includes main phrases like media literacy, misinformation, fake news, disinformation, and digital literacy. This cluster display high density (Callon Density = 23.16) but almost low centrality (Callon Centrality = 6.12) this indicates that this area is well develop internally but remains a bit specialize. The Human cluster (frequency = 1,276) shows high centrality (Callon Centrality = 20.83) and density, it suggest that it serves as an important bridge across multiple research domains This cluster includes concepts like human behaviour, health literacy, communication and psychology. Meanwhile, the Covid-19 cluster (frequency = 710) display a very high density (Callon Density = 57.79) and moderate centrality (Callon Centrality = 13.09). It focus on the terms like Covid-19, pandemic, infodemic and vaccine hesitancy showing the rapid expansion od research during the global health crisis. These findings suggest that media literacy establish the foundation of research domain, the Human cluster function as a central connecting theme and the Covid – 19 cluster represents a highly interconnected area driven by public health and information – related concerns.

Conclusion

This bibliometric study we conducted shows that the researchers about media literacy, misinformation and digital literacy has been existing and growing for the last ten years because of the different global events, new technologies showing and the concern people have about spreading fake news and how true information online is. This field also changed from discussion general ideas to looking more specific ways at how people handles information on the internet. The result of this study is referring to the number of publish journals, authors and the combination of different topics about media literacy shows that this research topic investigated is broad and still keeps on advancing and growing overtime.

Recommendations

Based on the findings of our bibliometric study, some recommendations are proposed. Future researchers may conduct a comparative analysis across countries and discipline to further understand the development of media literacy and misinformation research. Educational institutions may strengthen media and information literacy programs to improve individuals evaluation skills and responsible digital engagement. Policymakers and educator may also develop evidence base intervention, public awareness campaign and fact checking to address the increasing spread of misinformation in digital environment. Future bibliometric studies may also consider incorporating other databases like Web of Sciences to provide a more wide analysis of the research landscape.

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Most importantly, thanks to God, for the wisdom, guidance and strength that have been bestowed upon the project, since the start up to the time of its successful completion. This divine guidance was quite crucial in addressing the challenges and meeting the goals of the research.

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