



Hot topics and frontiers in AI and communication research

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ABSTRACT

The use of artificial intelligence (AI) is constantly increasing across communication research and practice, yet no study has systematically mapped the hot topics and evolving frontiers of this literature over the past decade. This paper addresses this gap by examining the status and development of AI and communication research based on publication and citation data from the Web of Science (WoS) database from 2015 to 2025. Using a purposive sampling strategy, researchers searched the WoS database with the keywords "artificial intelligence," "AI," "communication," "bibliometrics," "bibliometric analysis," and "research trends," restricting the search to English-language, peer-reviewed articles published between 2015 and 2025. Bibliometric mapping (VOSviewer and CiteSpace) was applied to 499 articles to identify hot topics and trace the evolution of research frontiers. Six thematic clusters emerged: AI and big data in communication, algorithms and automation in journalism, dissemination of information in social media, the risks of disinformation, the social and cultural impact of generative AI, and the ethical dimensions of synthetic texts. The six identified themes accounted for 196, 128, 84, 20, 8, and 3 documents, respectively, with cluster 0 (AI, ChatGPT, and generative AI in communication) emerging as the dominant research focus after 2023, alongside the growing presence of other generative AI systems such as Google Gemini and Microsoft Copilot in communication-related applications. The evolution of research frontiers revealed three phases:

an early operational phase focused on algorithms and automation in journalism (2015-2021), followed by a phase centered on deep learning-based applications, and a third phase (2022-2025) marked by large-scale language models (ChatGPT) and generative AI in creative content production and language-based communication.

Keywords: artificial intelligence, AI, communication, bibliometrics, bibliometric analysis, research trends

INTRODUCTION

Artificial intelligence (AI) has now begun playing a significant role in communication (Louis & Nah, 2023). It facilitates personalized interactions and enhances users' experiences by analyzing large datasets. Thus, AI systems in the communication field can significantly influence users' satisfaction and communication processes according to their expectations and needs (Lee & Chan, 2023). In particular, the use of AI tools and systems has become an important component of communication in many areas, such as customer service, to communicate with customers and influence users' trust and engagement. Furthermore, AI can assist users in generating visual layouts by enabling a broader exploration of ideas in visual communication (Ardhianto & Nababan, 2023). This capability of AI represents a significant advance in supporting communication and human creativity.

Since AI has begun to be used extensively in the field of communication, researchers have studied its use and its potential to increase analytical rigor and improve the efficiency of data processing and analysis for communication processes. This aspect of AI in communication allows researchers to explore innovative methods for a more nuanced understanding of communication (Asif & Gouqing, 2024). In this parallel, research has suggested that the integration of AI has revealed important implications for marketing strategies, political campaigns, and media consumption behavior in the communication field (Wogu et al., 2020). Thus, researchers have begun to study these impacts and explore the influence of AI on communication dynamics in terms of various perspectives (Wogu et al., 2020).

Without doubt, the use of AI in communications has significantly influenced the ways people prefer to communicate. Moreover, the impact of AI on communication research is diverse, affecting the methods, applications, and underlying technologies involved in communication processes. One important area where AI plays a crucial role is in understanding its use and integration within the communication field. Although some studies have attempted to analyze and synthesize research in communication, they have not analyzed publications primarily focused on AI in this field using a bibliometric approach. Furthermore, they have not undertaken an analysis that may reflect the current state of international communication research on AI. Therefore, there is a notable lack of scholarly reviews in the current literature that seek to identify the present state and trends of international communication research on AI. Based on this rationale, this bibliometric study aims to address this gap by providing an overview of the state and trends of research in the field of communication, based on publication and citation data from the Web of Science (WoS) database from 2015 to 2025. In this study, the authors conducted a systematic analysis involving the search, evaluation, and synthesis of research findings and presented the results visually. Specifically, this study highlights the state of development from five aspects: the dynamic growth of publications and citations, the leading researchers and their collaborative networks, the highly influential literature, the major themes, and the development of the frontiers of communication research. Since the research question has the potential to contribute to the literature, the results of this study will add new findings to the existing knowledge in five aspects and are important to demonstrating the vein of research and the growth of AI in communication research.

LITERATURE REVIEW

Despite the importance of AI in communication research, there are only a few reviews that have analyzed the studies on the use of AI in communication research. For example, Luo et al. (2025) analyzed 1,462 publications from 2014 to 2024 in the Scopus database to identify research issues regarding social media in health communication. Their findings show that nearly half of all publications were from the USA, with other countries, including China and Australia, steadily publishing new papers. Their findings show that research has explored social media as a potential channel for the dissemination of health information. They also found

that post-COVID-19 pandemic research focused on combating health misinformation, vaccine hesitancy, and infodemic phenomena by highlighting the critical role of social media in public health crisis communication. After 2022, the researchers noted that AI-powered algorithms and adolescent health emerged as emerging topics. Another research by Situmorang and Ritonga (2025) used a bibliometric analysis to capture research trends on the role of TikTok in politics, elections, and digital activism. They analyzed 149 articles from Scopus and Google Scholar. Their results show a significant increase in publications since 2020, especially related to political campaigns, disinformation, influencer marketing, and AI. The analysis identified nine major research clusters, including political mobilization, campaign misinformation, and personalization of political messages through algorithms. They also found that TikTok has become important in Southeast Asian politics, particularly in Indonesia and Malaysia. In addition, the study of Li et al. (2024) conducted a bibliometric analysis on the keyword “media convergence” and used data from 274 academic papers published between 2000 and 2024. Their findings revealed five main areas of research:

- (1) media convergence and journalism studies,
- (2) digital and social media studies,
- (3) Internet and online interaction studies,
- (4) cultural and regional studies, and
- (5) entertainment studies.

They divided the development of media convergence into three phases: the focus on core communication theories and the emergence of new media from 2000 to 2009; the integration of new media and traditional journalism by using the Internet from 2010 to 2018; and finally, a period of cross-platform communication and AI (2019-2024). Beyond these platform- or topic-specific reviews, Guzman and Lewis (2020) proposed a broader human-machine communication research agenda, arguing that AI should be conceptualized not merely as a communication tool but as a communicative agent in its own right. Similarly, Louis and Nah (2023) conducted a systematic review spanning 1990-2022 and identified a shift in AI-communication scholarship from technical/functional framing toward socio-ethical concerns.

Overall, the reviewed studies indicate several common themes and findings regarding the evolving role of digital media, social media, and AI in the field of communication. All three studies emphasize the transformative impact of social media and AI on communication in the areas of health, politics, and media convergence. They highlight common trends, such as the post-2020 focus on misinformation, the rise of AI-driven algorithms, and the regional dynamics shaping digital media research. However, previous studies have not conducted a detailed analysis and highlighted hot topics and the evolution of frontiers in research on AI and communication. Moreover, the study of Luo et al. (2025) was about health communication, while the study of Li et al. (2024) covered a limited amount of research. Additionally, the study by Situmorang and Ritonga (2025) focused exclusively on a single social media platform. These limitations indicate that previous studies have not provided comprehensive empirical evidence on hot topics and the evolution of research frontiers in the field. Thus, it is likely to emphasize the lack of studies that provide an overview of the status and development of AI and communication research. Based on this need and rationale, this article aimed to examine the state and development of AI and communication research and to report on the hot topics and the evolution of frontiers of research on AI and communication. In bibliometric research, ‘hot topics’ refer to keyword clusters that represent concentrated areas of scholarly attention within a defined period, while ‘research frontiers’ denote the emerging and evolving thematic trajectories that indicate the direction in which a field is developing (van Eck & Waltman, 2010). This study contributes to the literature in three ways: first, by providing the first bibliometric mapping of AI-communication research spanning a full decade (2015-2025); second, by identifying the specific thematic clusters that define current hot topics; and third, by tracing the evolutionary phases of research frontiers in this domain. The technology acceptance model (TAM) offers a useful theoretical lens for interpreting these trends, as it explains how perceived usefulness and perceived ease of use shape individuals’ and organizations’ adoption of AI-driven communication technologies (Ibrahim et al., 2025). Applying TAM to the bibliometric findings of this study helps contextualize why certain themes (such as generative AI in journalism) have expanded rapidly, as these tools are perceived as both useful and increasingly easy to use by media professionals.

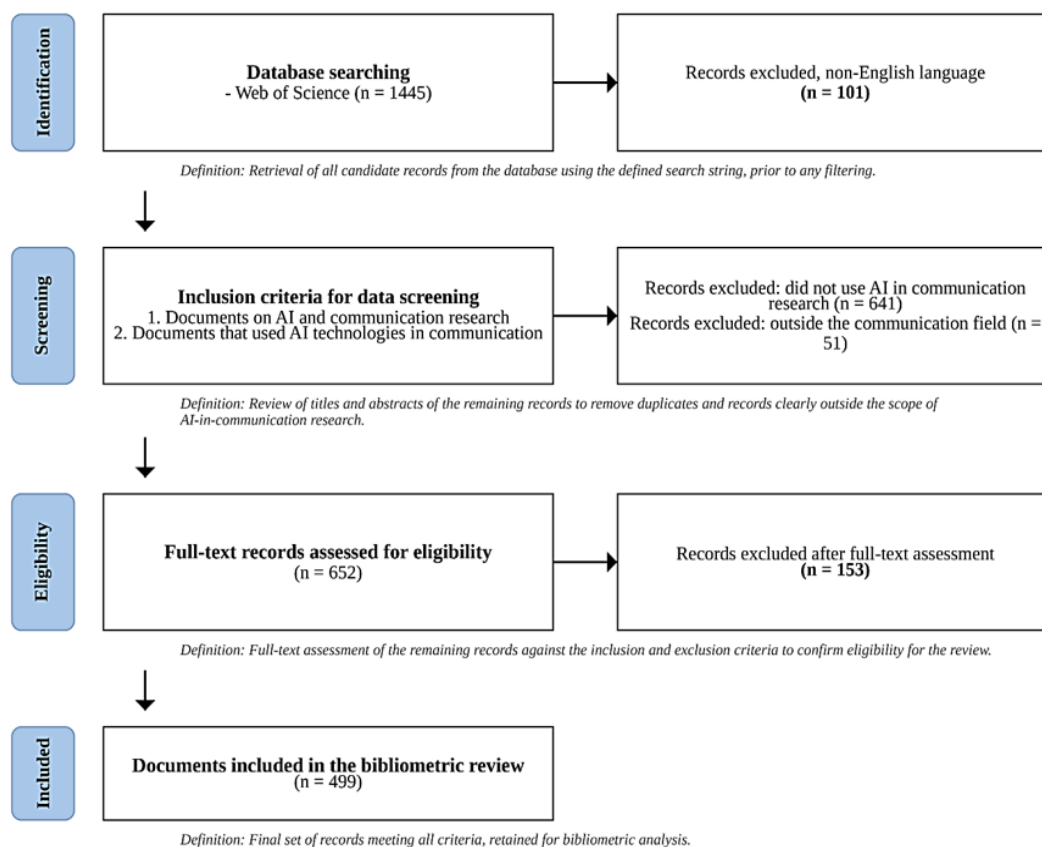


Figure 1. PRISMA flowchart for data collection (created by the authors)

METHOD

In this research, researchers used the bibliometric analysis method to answer the research questions of the study. This method allows researchers to analyze topics in a research area, trends in research topics, and relationships between these topics within a large data set (van Eck & Waltman, 2010). Thus, bibliometric analysis provides researchers with a lot of data on authors, citations, countries, institutions, journals, keywords, hot topics, and research frontiers, as well as descriptive characteristics. For these reasons, bibliometric analysis has gained popularity among researchers and in prestigious journals to review communication research in a particular field or topic (e.g., Bardus et al., 2024; Hajj et al., 2024; Ishmuradova et al., 2023). Therefore, researchers used VOSviewer and CiteSpace software to analyze the bibliometric data of publications on AI and communication research. Researchers used CiteSpace's co-citation analysis and cluster analysis to identify and analyze research patterns, hot topics, and frontier areas of research in peer-reviewed publications on AI and communication research.

Data Collection

WoS was selected as the sole data source because it applies rigorous, uniform indexing criteria across disciplines and is widely regarded as the most authoritative citation database for bibliometric research in the social sciences (van Eck & Waltman, 2010). Compared with multidisciplinary databases such as Scopus, WoS provides more consistent citation-tracking metadata, which is essential for co-citation and cluster analysis. However, reliance on a single database may exclude relevant regional or non-indexed journals, a limitation discussed further below. The authors used WoS database for this literature review. For data collection, the authors followed the preferred reporting items for systematic reviews and meta-analysis (PRISMA) (Liberati et al., 2009) to screen the documents based on inclusion and exclusion criteria (see [Figure 1](#) for the PRISMA flow chart). During data collection, researchers used a Boolean search that included two parts of the search:

- (1) AI and
- (2) communication.

Table 1. An outline and frame of research on AI and communication

Variable	Value
Research topics	AI and communication
Database	WoS
Years searched	2015-2025
Keywords used for communication	Media studies
	Interpersonal communication
	Mass communication
	Organizational communication
	Visual communication
	Strategic communication
	Cross-cultural communication
	Science communication
	Environmental communication
	Social interaction analysis
	Disaster communication
	Advertising communication
	Health communication
	Language communication
	Marketing communication
Keywords used for AI	AI
	Artificial intelligence
	Computational Intelligence
	Deep learning
	Intelligent systems
Language	Neural networks
	Document published in English language

To reach the relevant data in the WoS database, researchers used a broad range of keywords to identify additional documents related to AI and communication research. A list of these keywords researchers used during the search in the databases is given in [Table 1](#). In this study, the authors searched the data from 2015 to 2025. Data were collected on September 1, 2025. [Table 1](#) also shows the research framework of this study, as well as the keywords researchers used in data collection. Finally, 499 publications were retained for data analysis. Bibliometric metadata, including the publication year, citation count, authors, institutions/affiliations, countries, journals, and cited references, were extracted from the WoS database in Excel format for all publications. In addition, the authors obtained the characteristics of the title, abstract, and keywords from the database.

Researchers completed data collection on September 1, 2025, and searched documents published from January 2015 to September 4, 2025. The initial search yielded 1,445 documents. To ensure the quality of the included documents, the search was limited to peer-reviewed journal articles and conference proceedings. The database search yielded a total of 1,445 articles, including 570 open-access articles, 118 early-access articles, and 4 proceeding articles published in peer-reviewed journals and conference proceedings.

Inclusion and Exclusion Criteria

To collect the data for the study, researchers reached a total of 1,445 articles and conference proceedings in the WoS database. The titles and abstracts of the 1,445 documents were subsequently screened to determine their eligibility for inclusion in the study. Two researchers conducted this review by carefully checking the titles and abstracts of the documents. Any disagreements between the two reviewers regarding inclusion eligibility were resolved through discussion until consensus was reached, and a third researcher was consulted in cases where agreement could not be achieved. To obtain and identify a comprehensive review of the relevant literature, the authors included

- (1) documents published on the topic of AI and communication research and
- (2) documents presenting AI technologies used to address AI issues in communication research.

While doing this, researchers did not limit themselves to empirical studies only to gain a holistic overview of documents on the topic of AI and communication research. However, documents that did not address AI in communication research were excluded. Editorials, letters to the editor, and commentary papers were also

excluded. Following the initial screening, 946 documents were removed, resulting in a final dataset of 499 publications, comprising 483 journal articles and 16 conference proceedings, for further analysis. [Table 1](#) shows an outline and frame of research on AI and communication.

Following the PRISMA framework, the selection process comprised four stages:

- (1) identification, in which records were retrieved from the WoS database using the defined search string;
- (2) screening, in which titles and abstracts were reviewed to remove duplicates and clearly irrelevant records;
- (3) eligibility, in which full texts were assessed against the inclusion and exclusion criteria; and
- (4) inclusion, in which the final set of articles was retained for bibliometric analysis (Liberati et al., 2009; Page et al., 2021).

Data Analysis

To answer the research questions in the study, researchers used two software programs to analyze the data. These are CiteSpace and VOSviewer. These programs were used to analyze the bibliometric data and identify results related to trends, hot topics, and many types of information, including authors, countries, institutions, citations, and highly influential studies, as well as changes in research. VOSviewer is one of the most important software programs for analyzing bibliometric data and is widely used by researchers. CiteSpace is similar to VOSviewer in many ways. However, CiteSpace has other features such as burst terms, cluster analysis, and a timeline view to show the change of each cluster over time. Therefore, researchers used VOSviewer 1.6.17 and CiteSpace 5.5.R3 (64-bit) in this study for the data analysis. Although CiteSpace has since been updated to version 6.x, the core clustering and burst-detection algorithms (log-likelihood ratio [LLR], modularity Q, and silhouette) employed in this study have remained methodologically stable across releases, and analysis parameters were held constant to ensure internal consistency of the results.

For the data analysis, the frequency of publications and citations was first calculated to identify the overall research trends in AI and communication. For this analysis, researchers used the data from the analysis function of WoS. Second, researchers used the frequency count and co-authorship analysis to identify leading authors, institutions, and countries/territories, and their collaboration networks with VOSviewer. In the diagram, the node represents the author, the institution, and the country/territory. The size of the node stands for the number of publications, and the color for the cluster to which they belong. Third, researchers used CiteSpace to identify particularly influential studies and used the analysis of the co-cited reference network in CiteSpace. Thus, analysis examined the frequently co-cited literature from the 499 articles to identify the most influential literature on AI and communication research.

Fourth, researchers used co-occurrence analysis, cluster analysis, and timeline view to gain deeper insight into the most important topics in AI and communication research. These analyses were performed using CiteSpace. The co-occurrence analysis visualized the correlated networks of keywords based on their co-occurrence in the reviewed documents. The cluster analysis used in this paper mainly analyzes the keywords and not the titles or abstracts. Cluster labels were extracted using the LLR algorithm in CiteSpace, which identifies the most representative and statistically distinctive terms for each cluster. Cluster quality was evaluated using modularity Q and mean silhouette values, both of which are standard indicators of network structure and cluster homogeneity in co-citation analysis. The clustering information can represent the size, silhouette, average year, and keywords with a large weight for each cluster. A distinct advantage of using the timeline is that clusters and their changes are clearly displayed.

Finally, researchers used high-frequency keywords and burst terms to effectively represent the phases of the research and performed this analysis in CiteSpace. High-frequency keywords indicated areas of research that were mentioned repeatedly each year. Burst term analysis was used to identify keywords that exhibited significant short-term changes, thereby revealing emerging research topics for each year. As a result, the significance and originality of this study stem from the fact that it examines the current situation of AI and communication research from 2015 to 2025 using bibliometric methods and advances the understanding of AI in communication research.

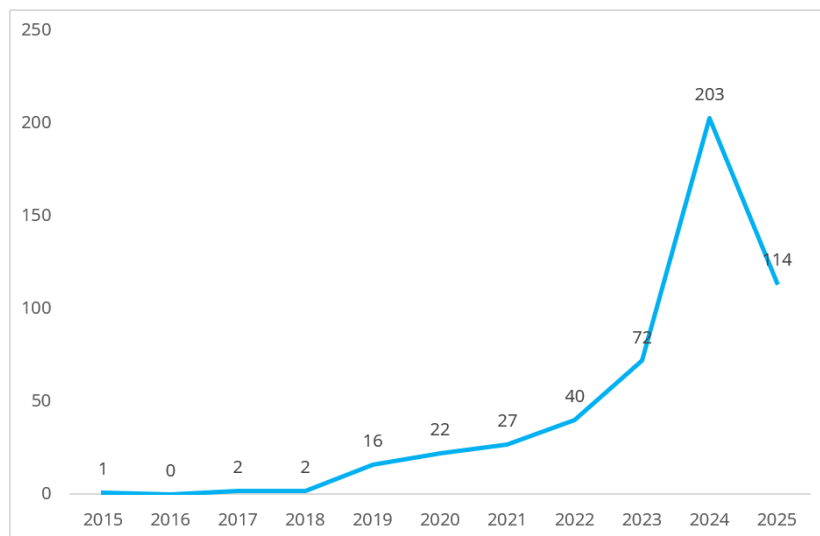


Figure 2. Trends in the number of publications in communication and AI research (created by the authors)

RESULTS

The results showed that the 499 articles in the database were cited a total of 5,602 times in the WoS in the period 2015-2025, with an average of 8.9 citations per article. This result means that the number of publications indicates the interest of researchers in the field. As shown in [Figure 2](#), the number of publications in communication and AI research increased dynamically from 2015 to 2025. [Figure 2](#) shows the number of publications for a given year.

The analysis shows that communication and AI research maintained a low level of growth from 2015 to 2018, both in terms of the number of publications. Since 2019, however, there has been a surge of interest in this area, which is reflected in a significant increase in the number of publications. In 2019, the number of articles rose to 16, and the articles in the database were cited 561 times. From 2019 to 2023, the number of publications grew to a high level, and there has been a constant increase in the number of publications. The second growth peak occurred in 2023, with 72 articles and 1028 citations. In 2024, 203 articles were published, and citations reached 955. These results indicate that the second peak in publication output occurred in 2024. Although 114 articles were published in 2025, publications released after September 1, 2025, were not included in the analysis. Thus, all of these results demonstrated a tendency for two growth peaks in communication and AI research. This trend indicates that research on AI and communication has attracted more and more attention.

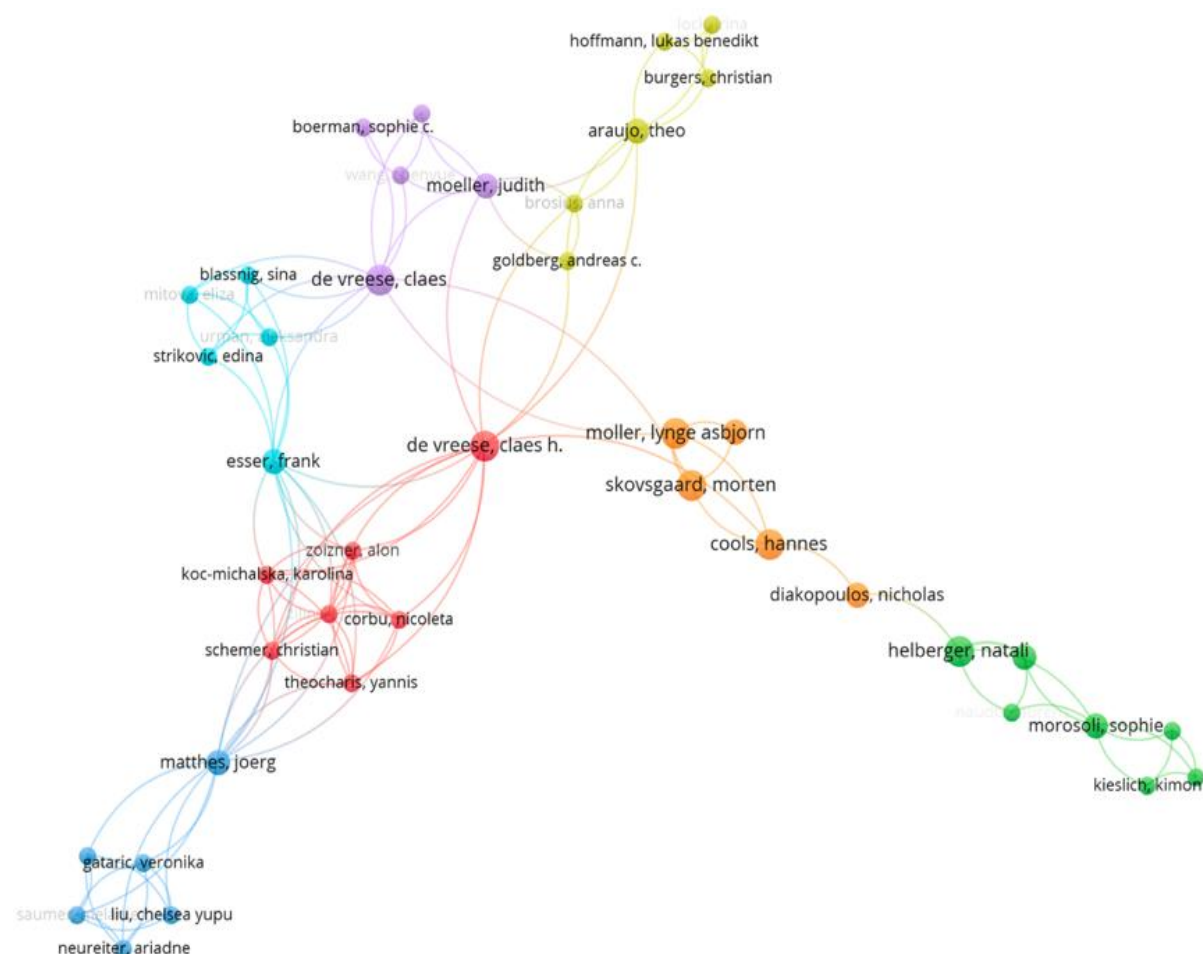
Leading Authors

Identifying leading authors, institutions, and countries is essential because these actors shape the knowledge base, methodological norms, and thematic priorities from which hot topics and research frontiers subsequently emerge; mapping this landscape therefore provides necessary context for interpreting the thematic findings presented later in this study. The 499 articles in the study were published by authors from 545 institutions in 62 countries/territories. Leading authors are important backbone forces in leading academic development, and they are assessed in terms of the number of the author's publications and citations.

As [Table 2](#) shows, Felix M. Simon, Joanne Kuai, Seth C. Lewis, Seungahn Nah, Carolin Fleischmann, Xose Lope-Garcia, S. Shyam Sundar, Simone Natale, Carlos Lopezosa, and Claes H. De Vreese appear as prolific authors. This result means that they have made distinctive contributions to the knowledge accumulation in this field of AI and communication research. Scholars such as S. Shyam Sundar, Jeffrey T. Hancock, Karen Levy, and Mor Naaman are the most cited researchers, indicating that their studies have formed an essential knowledge base for following research. They were followed by Carolin Fleischmann, Simone Natale, Seth C. Lewis, Jolanta Aritz, Donghee Shin, and Andrea L. Guzman. These results in [Table 2](#) show that the authors

Table 2. Authors ranked by number of publications and citations

Authors ranked by number of publications			Authors ranked by number of citations		
Authors	Article	Citations	Authors	Article	Citations
Simon, Felix M.	6	119	Sundar, S. Shyam	4	489
Kuai, Joanne	5	24	Hancock, Jeffrey T.	2	241
Lewis, Seth C.	4	163	Levy, Karen	1	219
Nah, Seungahn	4	32	Naaman, Mor	1	219
Fleischmann, Carolin	4	180	Fleischmann, Carolin	4	180
Lope-Garcia, Xose	4	13	Natale, Simone	4	171
Sundar, S. Shyam	4	489	Lewis, Seth C.	4	163
Natale, Simone	4	171	Aritz, Jolanta	3	152
Lopezosa, Carlos	4	3	Shin, Donghee	3	134
De Vreese, Claes H.	3	8	Guzman, Andrea L.	1	128

**Figure 3.** Collaborative research networks among authors (only authors with two or more publications were included in the analysis) (n = 447) (visualization generated using VOSviewer 1.6.17)

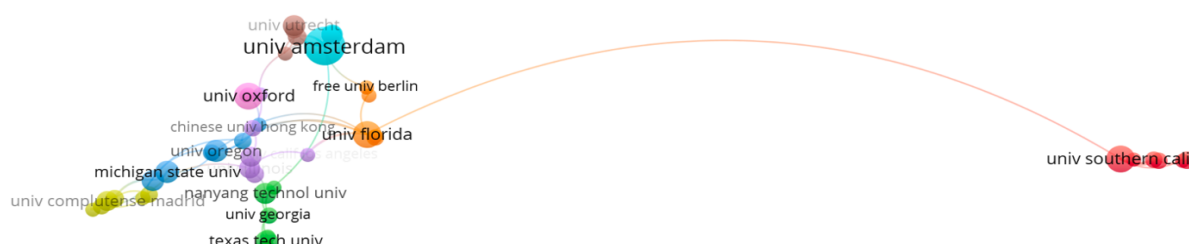
who published more than 2 papers in this study are the main authors who have been working on AI and communication research. To explore the collaborative relationships among authors, a co-authorship analysis was conducted.

Figure 3 shows the visualizations and collaboration network between authors who have published more than 2 articles on AI and communication research (n = 499). In **Figure 3**, the size of the nodes is positively related to the author's citation, and links exist when there was collaboration between authors. The results in **Figure 3** reveal that some of the lead authors worked closely together to work collaboratively on AI and communication, and that there were many research groups. The results also showed that there were slight connections between different groups. This result suggests that academic circles have formed among the lead authors and that interactions exist between some of these circles.

Table 3. Institutions ranked by number of publications and citations

Institutions (by publications)	NA	NC	Region	Institutions (by citations)	NA	NC	Region
University of Amsterdam	22	271	Netherlands/Europe	Penn State University	7	520	USA/North America
University of Florida	11	55	USA/North America	University of Amsterdam	22	271	Netherlands/Europe
University of Southern California	11	202	USA/North America	University of Oxford	11	217	UK/Europe
University of Oxford	11	217	UK/Europe	University of Southern California	11	202	USA/North America
University of Santiago de Compostela	10	85	Spain/Europe	University of Oregon	8	193	USA/North America
University of Sevilla	8	33	Spain/Europe	Michigan State University	8	185	USA/North America
Michigan State University	8	185	USA/North America	University of Salamanca	5	155	Spain/Europe
University of Castilla-La Mancha	8	49	Spain/Europe	Nanyang Technological University	7	154	Singapore/Asia
University of Oregon	8	193	USA/North America	Universidad Complutense de Madrid	6	144	Spain/Europe
University of Beira Interior	8	78	Portugal/Europe	Texas Tech University	7	118	USA/North America

Note. NA: Number of articles & NC: Number of citations

**Figure 4.** The scientific network between institutions (visualization generated using VOSviewer 1.6.17)

Leading Institutions

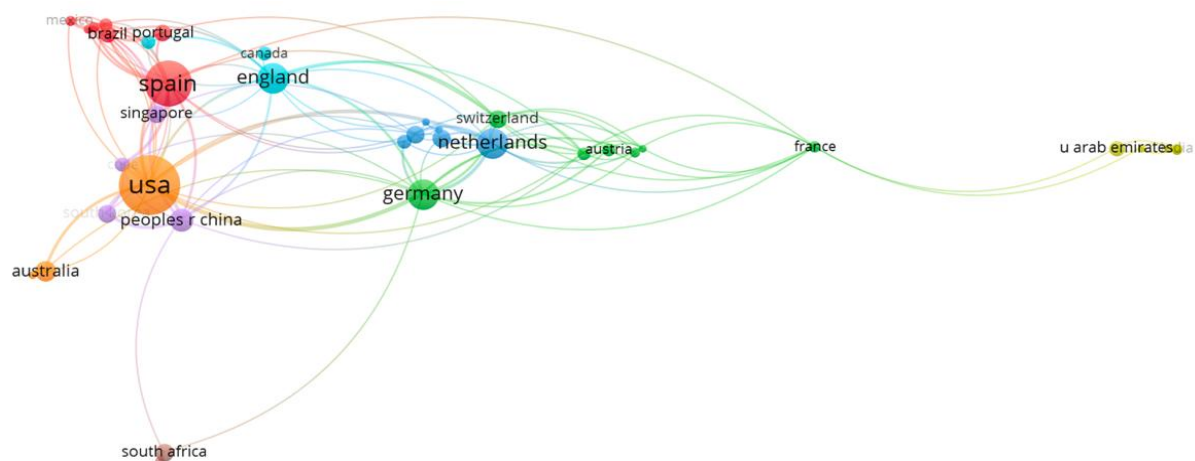
Table 3 shows the institutions leading the development of research in AI and communication research. There were 545 institutions in the database, of which 26 had published 5 articles or more. The University of Amsterdam was the institution with the highest number of publications in this field, while Penn State University had the highest number of citations. In terms of number of publications, the results revealed that most of the institutions in the number of publications ranking were from the USA, with the other six from other countries, namely the University of Amsterdam (Netherlands), the University of Oxford (England), the University of Santiago de Compostela, the University of Seville, the University of Castilla-La Mancha (Spain), and the University of Beira Interior (Portugal).

In terms of citation rankings, the results showed that Penn State University had the highest total number of citations. Although the number of publications is relatively low, the number of citations is very high. This indicates that they produce few but impactful and highly cited publications. The University of Amsterdam has the highest number of publications. This indicates a strong position in terms of quantity but a weaker position in terms of quality/impact. The University of Oxford and the University of Southern California have a high number of citations despite a moderate number of publications. The University of Oregon and Michigan State University have publications with high impact. The University of Salamanca, Nanyang Technological University, Universidad Complutense de Madrid, and Texas Tech University together have a high impact.

Furthermore, **Figure 4** shows the scientific network between institutions with more than 3 publications in the dataset ($n = 47$). The results in **Figure 4** show a close collaboration between the major research institutions in the field of AI and communication research. The results clearly show that the cooperation groups of the large research institutions are distributed in North America, Europe, and Asia. The University of Amsterdam, the institution with the most publications, also had the strongest connection strength, indicating that this institution frequently collaborates with others. The breadth of connections with others shows that the University of California-Davis is close. In addition, the results showed that the University of Amsterdam has strong connections with Karlstad University, the University of Vienna, the University of Zurich, the Free University of Berlin, the University of Utrecht, the University of Haifa, and Northwestern University.

Table 4. The main countries of AI and communication research

Countries ranked by number of publications			Countries ranked by number of citations		
Countries	Article	Citations	Countries	Article	Citations
USA	144	2,147	USA	144	2,147
Spain	85	662	England	40	840
England	40	840	Spain	85	662
Germany	39	473	Germany	39	473
Netherlands	37	429	Netherlands	37	429
China	23	210	United Arab Emirates	10	229
Australia	17	176	China	23	210
Switzerland	13	182	Singapore	13	188
Singapore	13	188	Switzerland	13	182
South Korea	13	78	Australia	17	176

**Figure 5.** The cooperative networks among the countries (visualization generated using VOSviewer 1.6.17)

Geographically, the leading institutions are concentrated in North America and Europe, with the USA and Spain accounting for the largest share and only minimal representation from Asia and Oceania.

Leading Countries

Table 4 shows the most important countries in AI and communication research in terms of the number of publications and citations. The studies in this study come from 62 countries. The 37 countries have published more than 3 papers. The results show that the USA, Spain, and England occupy the top three places in terms of the number of articles published. Authors from these three countries have published more than 200 articles and have been cited more than 3,000 times. These results show that collaborations are spread between countries in North America, Europe, Asia, and Australia. The countries in terms of the number of publications are mainly located in North America and Europe, Asia, and Australia.

Table 4 also shows that the leading countries in AI and communication research are ranked by the number of citations. The results also show that the USA is the leader in this field with more than 2000 citations. The following countries—England, Spain, Germany, and the Netherlands—are the countries with the most citations, more than 400 citations. **Figure 5** shows the cooperation networks between the countries. The results show that the US was at the center of AI and communication research and was connected to most countries, especially Spain, the Netherlands, Germany, England, Australia, Switzerland, and Brazil. In addition, England was closely linked to European countries such as Spain, the Netherlands, and Germany.

Highly Influential Documents in AI and Communication Research

A co-citation analysis was conducted to identify the literature that has exerted a significant influence on subsequent research in AI and communication. The highly co-cited studies that have been used in research on AI and communication serve as an important knowledge base for the research. Thus, the results of the co-citation analysis show the influential studies that provide perspective for the field. **Table 5** shows the ten most influential publications on AI and communication research.

Table 5. Highly influential literature in research (the top 10 studies)

Research	Title	CCF	C (B)
Carlson (2015)	The robotic reporter	47	0.1007
Broussard et al. (2019)	Artificial intelligence and journalism	40	0.1010
Guzman and Lewis (2020)	Artificial intelligence and communication: A human-machine communication research agenda	37	0.1238
van Dalen (2012)	The algorithms behind the headlines	33	0.0204
Dörr (2016)	Mapping the field of algorithmic journalism	32	0.0220
Pavlik (2023)	Collaborating with ChatGPT: Considering the implications of generative artificial intelligence for journalism and media education	32	0.0936
Diakopoulos (2019)	Automating the news: How algorithms are rewriting the media	30	0.0579
Sundar (2020)	Rise of machine agency: A framework for studying the psychology of human-AI interaction (HAI)	29	0.0639
Lewis et al. (2019)	Automation, journalism, and human-machine communication: Rethinking roles and relationships of humans and machines in news	28	0.0208
Thurman et al. (2017)	When reporters get hands-on with robo-writing	26	0.0159

Note. CCF: Co-cited frequency & C (B): Centrality (betweenness)

Table 6. Clusters of hot topics in research

Cluster	Size	Silhouette	Mean year	Keywords (LLR-style terms)
0	196	0.038	2023.6	Artificial intelligence, chatgpt, generative ai, technology, communication, ai governance, misinformation, big data
1	128	0.248	2023.6	Artificial intelligence, journalism, media, ethics, news, automated journalism, algorithms, automation
2	84	-0.007	2022.9	Artificial intelligence, algorithms, social media, automation, automated journalism, perceptions, news, impact
3	20	0.136	2024.1	Generative artificial intelligence, artificial intelligence, disinformation, impact, fake news, fact checking, media literacy, information
4	8	0.105	2024.2	Media, generative ai, hype, science, ai art, discourse analysis, stereotypes, expectations
5	3	0.267	2022.7	Artificial intelligence, ethics, anthropomorphism, automated journalism, journalistic texts, synthetic texts, authorship, large language models LLMs

The results from [Table 5](#) show that research topics on AI and communication focus on areas such as robot journalism, AI, algorithmic journalism, and human-machine communication. The publication years of the most commonly used studies range from 2012 to 2023. Early studies (e.g., Carlson, 2015; van Dalen, 2012) focused more on the role of algorithms in news writing, while the post-2019 literature focuses more on AI-human interaction and the impact of new technologies such as ChatGPT. Among these studies, works focusing on generative AI, such as Pavlik (2023), have quickly gained prominence and signal the future direction of the field. Although Pavlik's (2023) work is relatively new, it has quickly gained prominence due to its focus on ChatGPT and generative AI topics. Accordingly, the studies by Carlson (2015), Broussard et al. (2019), and Guzman (2020) stand out in terms of both citation frequency and centrality and form the foundational references for AI research in the field of communication. More recent studies (e.g., Pavlik, 2023) are rapidly gaining prominence and could further shape this list in the future.

Hot Topics of Research

Identifying hot topics in the research analyzed in the study allows researchers to explore the central knowledge nodes of research on AI and communication. In this study, the clusters are numbered from 0 to 5, with cluster 0 being the largest in terms of size. The numbers in the size indicate the number of members in this cluster. The larger the cluster number, the smaller the cluster. The silhouette value indicates the homogeneity or consistency of each cluster. If the members of a cluster tend to be more homogeneous, the silhouette value is closer to 1. [Table 6](#) shows the clusters of hot topics in AI and communication research. The results in [Table 6](#) show that the hot topics in research mainly include conceptual issues in communication research.

The clusters in [Table 6](#) are quite revealing in several respects. Cluster 0 includes the keywords AI, ChatGPT, generative AI, technology, communication, AI governance, misinformation, and big data. The research in this cluster can be generalized as the studies focus on the use of AI and big data in communication processes, the

spread of misinformation, and the need for regulation related to AI. This result is an important finding for showing the effect of AI on communication. Research has highlighted that AI has significantly changed the way information is disseminated (Ahmad & Prasad, 2023). In particular, big data analytics has contributed to communication dynamics and the spread of misinformation and users' preferences. Moreover, it was found that AI has a crucial role and impact on the spread of misinformation (Fernández & Alani, 2021). This phenomenon highlights the interaction between technology and societal vulnerability to misinformation and therefore requires research focused on regulatory measures. Therefore, it is necessary for researchers to critically examine the impact on public discourse, especially with regard to the evolving landscape of misinformation.

The most prominent keyword in cluster 1 is "journalism." Media, algorithms, news, and automation are also the most important words in this cluster. Thus, this cluster can be summarized as research that focuses on algorithms and automation in journalism and media. One of the main reasons for this focus is the increasing amount of data that is generated and exchanged via journalism and the media. The exponential growth of data requires the use of advanced machine learning (ML) techniques in the journalism field to effectively manage and identify information. Furthermore, the application of algorithms in journalism led to the personalization of news content according to people's user data. Algorithmic recommendation systems are central to shaping individual news consumption and audience engagement. The ability to personalize media content based on these algorithms not only improves the user experience but also contributes significantly to the financial profitability of news organizations by optimizing the way information is presented to consumers (Bodó, 2021). This personalization allows media companies to deliver more relevant content, thereby encouraging reader engagement and increasing interaction with their platforms. It also allows researchers to study the impact of algorithms and automation in the communications space. Furthermore, research indicates that ML technologies play an important role in detecting fake news and enable journalists and media organizations to maintain credibility of their reporting (Bani-Hani et al., 2021; Lahby et al., 2021).

Cluster 2 is characterized by "social media." In addition, four other keywords are included, namely "information," "human-machine communication," "credibility," and "age." Based on the analysis of the highly cited studies using these keywords, the research in this cluster can be generalized as studies on the dissemination of information in social media and the study of social perception and impact. These findings indicate that research in the field of communication is increasingly focused on information dissemination via social media and the study of social perception and its effects. This finding also shows that the focus has shifted from traditional media to social media platforms, signifying a change in the way information is produced and disseminated. Therefore, researchers have investigated the motivations for using social media, helping to understand users' perceptions and the social rewards that result from their engagement. In parallel, researchers have investigated the relationships between users' social interaction and the dissemination of information in the field of communication. In addition, research has shown that social media serves as an effective communication tool when disseminating information to the public, especially during crises and events (Grover & Kar, 2020). With regard to this aspect of social media, it has become important for researchers to examine the public perception of social media and its impact on the communication field (Sien et al., 2023). Specifically, social media as a public engagement tool necessitates that researchers examine its impact on social perception in public campaigns and marketing strategies, as well as public health and disasters (Wibisono et al., 2023).

Cluster 3 contains the following keywords: generative AI, AI, disinformation, impact, fake news, fact-checking, media literacy, and information. These keywords suggest that research in this cluster focused on the risks of disinformation, verification mechanisms, and media literacy. This finding shows that research in the field of communication is increasingly focusing on the dangers of disinformation, verification mechanisms, and media literacy in order to promote comprehensive approaches to media literacy education as well as the development of robust verification mechanisms to counteract the negative effects of misinformation. One of the main reasons for the increased focus on disinformation in communication research is the proliferation of "fake news." Researchers have emphasized that disinformation can significantly influence political processes and public perception by mixing true and false narratives and thus distorting public discourse (Rožukalne, 2020). Research has suggested that the rapid rise in social media use has worsened the spread of falsehoods and damaged the credibility of information (Puente, 2023). Because of this reason, media literacy may have

emerged as an important focus to educate individuals to mitigate the effects of disinformation and misinformation in communication channels (Lee et al., 2024).

Cluster 4 included the keywords “media,” “generative AI,” “hype,” “science,” “AI art,” “discourse analysis,” “stereotypes,” and “expectations.” These keywords and the articles they belong to indicate that the research in this cluster is mainly based on the social and cultural impact of generative AI in communication through hype, expectations, and stereotypical perceptions. This finding shows that generative AI has social and cultural implications, as these technologies have a significant influence on communication dynamics, identity formation, and social interactions. Research has shown that the integration of AI into communication technologies promotes personalization but at the same time reduces the emotional authenticity of interactions and raises concerns about the nature of human relationships (Singh et al., 2025). Furthermore, generative AI can lead to a spectrum of hyperreal expectations that can distort public perception and understanding of trustworthiness in communication. Furthermore, researchers have argued that AI-driven communication tools significantly shape social interactions and identities among young users, leading to social spectacles that reflect broader cultural narratives and stereotypes (Bhutani et al., 2024). Furthermore, researchers have pointed out that a critical engagement with AI technologies is necessary, particularly to understand their role in shaping social narratives and expectations (Atar, 2024).

Cluster 5 contained the keywords artificial intelligence (AI), ethics, anthropomorphism, automated journalism, journalistic texts, synthetic texts, authorship, and large language models (LLMs). The existence of these keywords in cluster 5 suggests that research focused on the ethical dimensions of synthetic texts created using LLMs in journalism and authorship identity. This cluster has close links to cluster 1, which focuses on algorithms and automation in journalism and media.

Cluster 0's comparatively low silhouette value (0.038) indicates lower internal cohesion, consistent with its role as a broad, umbrella-level cluster built around high-level terms such as ‘artificial intelligence’ and ‘generative AI’ which explains its keyword overlap with cluster 1 and cluster 3. By contrast, cluster 5 (silhouette = 0.267) and cluster 1 (0.248) show the highest internal consistency, corresponding to the most distinct thematic foci: synthetic-text ethics and journalism automation, respectively. Because LLR-based clustering operates on a co-occurrence network, shared high-level terms across clusters can carry different sub-contextual meanings depending on the surrounding keyword neighborhood.

Evolution of Research on AI and Communication

An analysis of publications in CiteSpace allows researchers to follow an evolutionary analysis to identify evolutionary processes in a particular research topic or field. [Table 7](#) shows a distribution of high-frequency keywords and burst terms by year. In this analysis, high-frequency words and burst terms represent a historical and evolutionary stage of development of communication research in a given time period.

Table 7. High-frequency keywords & bursts by year (2015-2025)

Year	High-frequency keywords	Burst terms (keywords)
2015	artificial intelligence, computational journalism, creativity, data journalism, expert systems, innovation, promise, public affairs journalism	
2016	artificial intelligence, innovation, audiences, media,	
2017	mobile devices, robot journalism, social networks, big data, fourth industrial revolution, society of information	
2018	artificial intelligence, automation, data, machine learning, robotization, ethics, journalism, robots, technology	
2019	artificial intelligence, automated journalism, bots, computational journalism, perceptions, new media, audiences, authorship, journalism, algorithms, automation, api, capitalisation, facebook, opacity	
2020	artificial intelligence, machine learning, social media, journalism, technology, news, artificial intelligence ai, algorithms, perceptions, trust, cybernetics, media, deep learning, big data, digital connection	deep learning (2020-2021)

Table 7 (Continued).

Year	High-frequency keywords	Burst terms (keywords)
2021	artificial intelligence, automation, journalism, algorithms, media, computational journalism, news, perceptions, innovation, artificial intelligence ai, gender, justice, age, big data, deep learning	
2022	artificial intelligence, journalism, algorithms, automation, media, news, automated journalism, china, power, human machine communication, social media, agency, big data, communication, datafication	china (2022-2022)
2023	artificial intelligence, chatgpt, algorithms, communication, ethics, automation, journalism, social media, trust, education, media, machine, news, impact, generative artificial intelligence	acceptance (2023-2024); news media (2023-2023); newsrooms (2023-2023); education (2023-2023); robots (2023-2023); strategies (2023-2023); systems (2023-2023)
2024	artificial intelligence, journalism, chatgpt, media, generative ai, algorithms, communication, automated journalism, news, technology, impact, ethics, social media, automation, generative artificial intelligence	responsible ai (2024-2025); transparency (2024-2025); public relations (2024-2025); discourse (2024-2025); journalism (2024-2025); generative artificial intelligence (2024-2025); social media (2024-2025); television (2024-2025); attitudes (2024-2025); voice (2024-2025); crisis communication (2024-2025); governance (2024-2025)
2025	artificial intelligence, journalism, generative ai, chatgpt, media, news, technology, social media, automated journalism, impact, ethics, generative artificial intelligence, communication, automation, innovation	online (2025-2025); participation (2025-2025); hype (2025-2025); media literacy (2025-2025); investigative journalism (2025-2025); news automation (2025-2025); expectations (2025-2025); datafication (2025-2025); fake news (2025-2025); knowledge (2025-2025); generative ai (2025-2025); algorithmic bias (2025-2025)

Note. No high-frequency keywords met the threshold in 2016 (n = 0 qualifying records)

Table 8. High-frequency keywords and burst terms in research

Phase	Year	High-frequency keywords	Burst terms (keywords)
Phase 1 (2015-2018)	2015-2018	artificial intelligence, innovation, computational journalism, creativity, data journalism	
Phase 2 (2019-2021)	2019-2021	artificial intelligence, journalism, algorithms, automation, media	deep learning (2020-2021)
Phase 3 (2022-2025)	2022-2025	artificial intelligence, journalism, chatgpt, generative ai, media	responsible ai (2024-2025); transparency (2024-2025); public relations (2024-2025); discourse (2024-2025); journalism (2024-2025)

In addition, **Table 8** shows the high-frequency keywords and burst terms in communication research in the years analyzed. When analyzing the results in **Table 8**, were identified three phases of research based on the high-frequency keywords and burst terms.

Phase 1 (2015-2018) includes the following high-frequency keywords: AI, innovation, computational journalism, creativity, and data journalism. In particular, the keywords of computational journalism and data journalism show that technology has been integrated into the processes of news production through data analysis and automation. This result shows that the focus of research during this period was on the first areas of application of AI in journalism. In addition, the keywords “innovation” and “creativity” show that AI was discussed more in terms of its innovative potential in the field of communication during this research period. This result suggests that the opportunities associated with AI came to the fore during this period. Finally, the lack of burst keywords indicates that the field is still maturing and that no sudden conceptual leaps have taken place.

Phase 2 (2019-2021) covers the high-frequency keywords: artificial intelligence, journalism, algorithms, automation, and media. This result shows that research in the field of AI is shifting to a more operational framework during this period. Furthermore, the keywords ‘algorithms’ and ‘automation’ show the proliferation of automated systems in news production and dissemination. Furthermore, the keywords ‘media’ and ‘journalism’ show the integration of AI applications into the structures of corporate media. Finally, regarding burst keywords, the keyword ‘deep learning’ (2020-2021) shows that research in the field of media and communication focused on deep learning algorithms during this research period. This result shows that

the focus of research in this period has shifted from the innovative potential of AI in journalism to practical applications supported by deep learning.

The high-frequency keywords in phase 3 (2022-2025) include AI, journalism, ChatGPT, generative AI, and media. This result shows that research in this period focused on LLMs (ChatGPT) and generative AI. This result therefore shows that AI technology is not limited to automation but is also influencing creative content production and language-based communication. The burst keywords (2024-2025) also include responsible AI, transparency, public relations, discourse, and journalism. These keywords indicate an ethical shift and an emphasis on social responsibility in relation to AI in the field of communication. In addition, the keywords "responsible AI" and "transparency" show the increasing demands for transparency and accountability in relation to the risks of the technology, while "public relations" and "discourse" make it clear that AI is being addressed in the context of discourse construction and public relations in communication practice. In summary, the above results show that phase 1 (2015-2018) focused on innovation and potential regarding AI in the communication field, while phase 2 (2019-2021) focused on deep learning and the implementation phase. Furthermore, phase 3 (2022-2025) seems to focus on AI and ethics/transparency, with a focus on social responsibility.

DISCUSSION

This study provides an overview of the stages and development of research in AI and communication from 2015 to 2025, based on articles indexed in the WoS. The evidence indicates that research in AI and communication remained limited between 2015 and 2018, with a clear upward trend beginning after 2019. Two distinct peaks in the number of publications and citations in 2023 and 2024 demonstrate that the field has gained momentum in scientific production. This result closely aligns with Situmorang and Ritonga (2025), who observed a significant increase in publications since 2020 regarding a social media platform on communication in politics, elections, and digital activism. Overall, this trend suggests that research at the intersection of AI and communication is attracting increasing academic attention and will continue to have growth potential in the future.

The results show that the USA, Spain, and the UK are the leading countries in terms of the number of publications and citations in research on AI and communication, each with more than 200 publications and over 3,000 citations. The USA is the clear leader in citations, while the UK, Spain, Germany, and the Netherlands are significant contributors with over 400 citations each. The analysis of cooperation networks between countries shows that the USA is at the center and has established strong links with European countries (the UK, Spain, the Netherlands, and Germany), ensuring worldwide dissemination of research. These results confirm previous findings that the scholarly contributions of researchers from the USA were relatively high in earlier years (Calvo-Rubio & Ufarte-Ruiz, 2021; Luo et al., 2025). Luo et al. (2025) found that nearly half of all publications were from the USA, followed by China and Australia, which have steadily published new papers. One possible reason for this may be that technological developments and contexts in the USA and Europe have provided a rich environment for AI research (Louis & Nah, 2023). This regional concentration suggests that AI-communication research remains largely a North American and European undertaking, with comparatively limited contributions from Asia-Pacific scholarship. This research infrastructure in these countries has likely led to the production of much research on AI and communication.

In relation to the highly influential literature on AI and communication research, the results mainly cover two lines of research: the roles of algorithms and the interaction between AI and humans, and the impact of new AI technologies such as ChatGPT. The results show that these studies have a significant impact on research in AI and communication. In particular, they focused on the role of algorithms in news writing, while the post-2019 literature emphasizes human-machine interaction and the impact of new technologies such as ChatGPT. The co-cited and highly influential studies (e.g., Broussard et al., 2019; Carlson, 2015; Guzman, 2020) form the foundational references for researchers working on AI in communication. This finding indicates that the research field is evolving from algorithmic journalism to a new paradigm shift based on generative AI and the interaction between humans and AI.

From the cluster analysis and hot topics of AI and communication research, the results demonstrate that six themes have gained particular focus in communications research on AI. These are the use of AI and big

data in communication; algorithms and automation in journalism; dissemination of information in social media; the risks of disinformation; the social and cultural impact of generative AI in communication; and the ethical dimensions of synthetic texts. The results regarding researcher clusters and themes are similar to those of Situmorang and Ritonga (2025), who identified nine major research clusters, including political mobilization, campaign misinformation, and personalization of political messages through algorithms on the role of a social media platform in communication. In addition, the results are partly similar to those of Li et al. (2024), who identified five main areas of research:

- (1) media convergence and journalism studies,
- (2) digital and social media studies,
- (3) Internet and online interaction studies,
- (4) cultural and regional studies, and
- (5) entertainment studies.

However, the results differ from Li et al. (2024) because cannot find any results about online interaction studies, cultural and regional studies, or entertainment.

Results regarding the cluster 0 theme show that AI creates both opportunities and risks in communication processes when effective governance approaches are addressed. As noted by Louis and Nah (2023) in their systematic review, the integration of AI into communication research has led to significant changes in media consumption patterns, as algorithms increasingly shape audience engagement and information access (Louis & Nah, 2023). The use of AI in communication has enabled personalized content delivery by using user data to curate inclusive and relevant content, enhancing user experiences and increasing engagement (Louis & Nah, 2023). However, these benefits also carry significant risks, as AI systems can inadvertently perpetuate stereotypes or misinformation based on the data on which they are trained. This surge parallels the public release and rapid adoption of ChatGPT in late 2022, indicating that academic interest in this domain is closely tied to real-world technological milestones rather than following an independent theoretical trajectory. Viewed through the lens of the TAM, the dominance of cluster 0 (ChatGPT, generative AI) suggests that communication scholars themselves may be exhibiting high perceived usefulness and ease of use toward these tools, which could partly explain the rapid scholarly uptake documented here. TAM's explanatory value extends beyond cluster 0: the persistence of cluster 1 (journalism automation) suggests that low perceived ease of use continues to slow adoption in editorial workflows, while cluster 3's focus on disinformation reflects a tension between perceived usefulness and eroding user trust. For cluster 4 and cluster 5, which center on cultural and ethical dimensions, TAM's adoption-focused framework offers limited explanatory power a limitation worth acknowledging, since these clusters raise concerns that extend beyond technology acceptance into broader societal impact.

The keywords in cluster 1 show that AI-supported digitalization has reshaped journalism practices through algorithmic processes in news production. A possible reason for this finding is that AI has impacted audience engagement by tailoring content to individual preferences and analyzing user behavior, preferences, and engagement metrics to suggest personalized news articles and topics. As a result, research has focused on studying the use of AI-supported digitalization in journalism practices and the resulting changes.

Cluster 2 shows that AI-based media automation has significant effects on social trust, ethical debates, and communication dynamics. Communication dynamics in AI-driven platforms have changed the traditional model of information dissemination, as communication increasingly involves algorithms. The lack of transparency in how these AI algorithms operate can result in skepticism toward social trust and ethical debates (Louis & Nah, 2023). The keywords in cluster 3 indicate that generative AI increases the risks of disinformation and fake news in communication processes, but these risks must be balanced with media literacy and verification practices. In this cluster, it was revealed that individuals must develop critical thinking skills to analyze the sources and contexts generated by AI systems to decrease the risks of disinformation and fake news. These risks also require enhancing media literacy to develop verification practices. This finding resonates with real-world developments such as the European Union's digital services act and platform-level fact-checking initiatives, suggesting that academic attention to disinformation has closely tracked regulatory

and industry responses rather than preceding them. This raises the question of whether communication scholarship is primarily reactive to policy shifts rather than anticipatory.

The keywords in cluster 4 suggest that generative AI has shaped media discourse, social perceptions, and cultural representations. This finding shows that research has focused on understanding the effects of AI on media discourse, social perceptions, and cultural representations. The keywords in cluster 5 reveal that AI is a phenomenon with aspects of ethical, authenticity, and representation issues. Scholars have likely sought to understand the ethical dilemmas that AI has led to and the importance of understanding the nature of interactions between humans and machines in terms of authenticity. In addition, representation is especially critical in communication research, as it shapes public discourse.

The results in this paper also present a detailed account of the three phases of AI and communication research. The first phase focused on news production processes through data analysis and automation, with research during this period examining the initial applications of AI in journalism. The second phase indicates that research on AI in 2020-2021 shifted from innovative potential to an operational framework focused on algorithms, automation, and deep learning-based applications. This shows that AI applications have been integrated into media structures and that their practical use in journalism is increasing. The third phase highlights a research period (2022-2025) focused particularly on LLMs (ChatGPT) and generative AI. This trend shows that AI is not limited to automation but is also changing the production of creative content and language-based communication processes.

This study has several limitations. First, researchers used data from publications indexed in the WoS database, which may have limited the interpretation of the results. Therefore, future studies should conduct comparative analyses using different databases or longitudinal studies with a longer time span. Second, researchers used visualization software in this study, including VOSviewer and CiteSpace. Thus, there is a need to use and incorporate different software to analyze additional details of the studies under review. These limitations should be considered when evaluating the results presented in this study.

CONCLUSION AND IMPLICATIONS

This study aimed to examine the state and development of AI and communication research, reporting on hot topics and the evolution of research frontiers in this area. Based on previous review studies, this study is among the first to map the knowledge structure of scholarly publications on AI in communication research over the past decade, complementing earlier, narrower reviews focused on specific platforms or subfields (e.g., Luo et al., 2025; Situmorang & Ritonga, 2025). The results show that AI research in communication is a thriving field that has experienced significant growth over the past decade. Its development has been accelerated by advances in AI technology and researchers' efforts to understand and study the impact of AI use in communication. The results also show that leading researchers, institutions, and countries have made significant contributions to knowledge development and have provided an essential knowledge base for future studies. Consistent with the country-level findings reported in [Table 4](#), researchers from the USA, Spain, the UK, Germany, and the Netherlands were the most active contributors, with additional participation from Australia, China, Switzerland, Singapore, and South Korea.

Furthermore, the results show that the highly influential literature mainly comprises two research directions: the roles of algorithms in the interaction between AI and humans, and the impact of new AI technologies such as ChatGPT. The results indicate that researchers in this area have covered a wide range of topics, with six themes in particular focus: the use of AI and big data in communication, algorithms and automation in journalism, the dissemination of information in social media, the risks of disinformation, the social and cultural impact of generative AI in communication, and the ethical dimensions of synthetic texts.

This study divides the dissemination of AI research in communication into three phases. The first phase focused on the applications of AI in journalism, including operational frameworks for algorithms, automation, and deep learning-based applications. The third phase included a special focus on large-scale language models (ChatGPT) and generative AI in creative content production and language-based communication. The trends in publications and citations based on the data were examined suggest that research interest in AI in communication is increasing and will continue to grow. By analyzing hot topics and the evolution of research frontiers, this study provides insights into three aspects. First, recent research in the communication field has

focused on large-scale language models (ChatGPT) and generative AI in creative content production and language-based communication. Therefore, further studies are needed to examine the combination of technological advancement, changes in communication strategies, and the increasing complexity of human interaction dynamics. In parallel, there is a continuing need to examine the integration of these AI technologies in how people produce and engage with content in the digital age.

Second, the results reveal that generative AI increases the risks of disinformation and fake news in communication processes, but these risks must be balanced with media literacy and verification practices. In light of this, it can be suggested that researchers develop empirical studies to evaluate the effectiveness of verification mechanisms by examining the role of generative AI in the production of disinformation and fake news. Additionally, research on media literacy can contribute to the design of educational programs by examining how different user groups perceive AI-generated content. Future studies can focus on the development of AI-powered verification tools and their integration into the communication ecosystem.

The findings indicate that generative AI has been influenced by media discourse, social perceptions, and cultural representations. In light of this, future research should involve interdisciplinary studies that address both the technical dimensions of generative AI and its portrayal in media discourse and social perception. Examining how cultural representations shape expectations, fears, and stereotypes about AI will provide important insights into the technology's social impact in the communication field. Finally, future research should further explore the developmental steps of public opinion about AI and its reflection in communication processes using methods such as discourse analysis and media content analysis.

Beyond mapping thematic trends, this analysis surfaces several pressing issues facing the field, including the risks of AI-driven disinformation, persistent regulatory gaps around generative AI use in media production, and the geographic concentration of research output in North America and Europe. Addressing these issues calls for coordinated strategies at both the institutional and policy level, including AI governance frameworks for newsrooms, media literacy initiatives targeting AI-generated content, and clearer ethical guidelines for journalists and communication professionals working with generative tools. For researchers, this study offers a structured map of emerging subfields to guide future inquiry; for editors and media organizations, it highlights where adoption is outpacing regulation; and for policymakers, it identifies the specific thematic areas disinformation, algorithmic transparency, and AI ethics most in need of governance attention.

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