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The Role of Social Media in Fostering Inclusive Digital Communication: A Bibliometric Analysis Using Scopus

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Abstract: This study analyzes global publication trends and key themes concerning the role of social media in fostering inclusive digital communication using a bibliometric approach. A total of 102 articles from the Scopus database were analyzed with VOSviewer. The findings show that research on this topic experienced fluctuating growth from 2008 to 2024, with the United States as the leading contributor. RWTH Aachen University in Germany was identified as the most influential institution. The analysis revealed four main themes: (1) AI and machine learning enhance accessibility, safety, and trust in social media by addressing cyberbullying, hate speech, misinformation, and professional communication; (2) social media serves as a global hub for crisis communication, identity, and (mis)information shaped by trust, inclusivity, and culture; (3) it influences brand communication, political legitimacy, citizen engagement, accessibility, youth behavior, and opinion formation while fostering new analytical approaches to content and sentiment; and (4) social media and digital platforms shape professional practices, civic values, and tourism experiences while raising concerns about ethics, sustainability, and adaptation to emerging technologies. These findings provide insights to guide future academic research and policy development promoting a more inclusive digital environment.

INTRODUCTION

Social media has become an integral part of everyday life, transforming the ways individuals and communities interact and communicate. Its role in fostering inclusive digital communication is particularly crucial in the current digital era (GS & Ab Karim, 2024; Walton, 2019). This importance is underscored by the broad impact of social media on multiple aspects of society. Digital inclusivity encompasses several dimensions, ranging from technological accessibility to diversity representation, while also addressing risks such as disinformation and hate speech (Sleep & Harris, 2021; Vojinović & Davidov, 2022). Moreover, the growing reliance on digital platforms for communication, identity formation, and

information dissemination makes the discussion of inclusivity in the digital realm increasingly compelling, given its significant societal implications (Alhassan & Adam, 2021; Surjatmodjo et al., 2024).

Several previous studies have examined various aspects of inclusive digital communication through social media. Some studies have focused on the use of artificial intelligence (AI) and machine learning to improve accessibility, security, and trustworthiness on social media. For example, research has discussed the potential of AI to improve accessibility for visually impaired users through automatic captioning of images (Wibowo et al., 2024). Studies have also been conducted on cyberbullying detection efforts using multimodal deep learning techniques (Musyoka et al., 2023; Yan et al., 2024) and comparing generative and discriminative models (Jain et al., 2023). Other studies have also addressed hate speech detection, further enhanced by a model fusion approach (Sharif et al., 2024) and the detection of deepfake audio misinformation (Alshehri et al., 2024). Furthermore, studies have examined the role of platforms like Facebook in professional discourse (Power, 2015).

Another widely researched aspect is the role of social media as a hub for crisis communication, identity formation, and the spread of (mis)information. Studies have highlighted how institutions like Seattle food banks used social media during COVID-19 (Immel et al., 2021) and how health authorities communicated risks (Berg et al., 2021). Other studies have highlighted how social media has also been shown to reshape cultural and identity boundaries (Ngwainmbi, 2022) and serve as a channel for the spread of culturally diverse, transnational disinformation (Hughes et al., 2021).

Furthermore, research has examined the contribution of social media to brand communication, political legitimacy, citizen engagement, accessibility, and youth behavior. Examples include studies on luxury fashion brands on Twitter (Mazzoli et al., 2019) and the evolution of the European Commission's political communication on Twitter (Rocca et al., 2024). Scholars have also investigated how social media facilitates crowdsourcing for local governance (Alizadeh et al., 2019) and the formation of echo chambers in political discourse (Steinfeld & Lev-

On, 2024). In terms of accessibility, studies have explored voice-based platforms for older people (Brewer, 2016) and knowledge-sharing models (Hiyama et al., 2013). Research has likewise analyzed Generation Z's text messaging behavior (Vondra, 2020) and the influence of social media on opinion formation (Asher et al., 2018).

Other studies have highlighted how social media and digital platforms also shape professional practices, civic values, and tourism experiences, while raising ethical and sustainability issues. These include physicians' use of social media (Giuffrida et al., 2024), the promotion of social values and civic engagement among university students through Twitter and Instagram (Almajali et al., 2024), and digital marketing strategies in the tourism sector (Zarrouk & El Aidouni, 2023).

Although numerous studies have explored different aspects of social media's role in inclusive digital communication, there has yet to be a comprehensive and systematic review of the overall literature landscape in this area. The fluctuating yet significantly increasing publication trends in recent years indicate that this field is still rapidly evolving, thereby necessitating structured mapping. Understanding publication trends, research areas, sources, contributing countries, and influential organizations—along with identifying key themes across publications—remains a significant research gap.

A bibliometric analysis approach is crucial to filling this gap, as it enables the quantitative and systematic tracking of literature development. This method allows for the examination of publication output trends, research areas, publication sources, contributing countries, influential organizations, and keyword co-occurrence that shape thematic directions. Using this approach, the primary aim of this study is to provide a comprehensive and objective overview of the intellectual structure and future research directions on the role of social media in fostering inclusive digital communication.

In addition, this study has several specific objectives: (1) to analyze annual publication output trends over time; (2) to identify the most frequently discussed research subject categories; (3) to determine the most influential publication sources (journals) based on citation counts and CiteScores; (4) to identify the most

influential countries and their collaboration patterns (co-authorship); (5) to highlight the most influential organizations or institutions contributing to the field; and (6) to identify and visualize the key themes emerging from keyword co-occurrence analysis in scientific publications.

METHODS

This research employs a bibliometric analysis to explore and examine the development of literature on the role of social media in fostering inclusive digital communication. The study focuses on publication trends, research areas, sources, and countries of the scientific publications, influential organizations, and the co-occurrence of keywords that shape the research theme. The primary tool used in this study is VOSviewer, which functions to construct and visualize bibliometric maps, identify clusters, and reveal networks among documents.

The validity of research results in bibliometric analysis depends on the extent to which the research subject is represented in the database used (Mongeon & Paul-Hus, 2016). Various databases can be utilized for research purposes, including Scopus, Web of Science (WoS), Google Scholar, and others. However, it is recommended to select a single database. Using multiple databases will only increase complexity, but will not significantly improve research results (Deyanova et al., 2022). Therefore, database selection is a crucial step in conducting bibliometric analysis.

This study selected Scopus as the primary database for data collection. Scopus was chosen for several reasons, particularly its widespread use in bibliometric research and its notable advantages. First, Scopus covers a broader range of topics than WoS (Zhu & Liu, 2020) and is more frequently cited by researchers and academics (Martín-Martín et al., 2021). Second, Scopus generates more citations than WoS despite having a shorter historical coverage (Pranckutė, 2021). Third, since its launch by Elsevier in 2004, Scopus has become the most extensive abstract and citation database provider (Burnham, 2006; Guz & Rushchitsky, 2009).

The data collection phase of the initial research was divided into six stages. First, scientific articles were identified as research data to be processed. This identification was carried out through a database search using several keywords: *Social Media OR Online Platforms OR Social Networking* AND *Digital Communication OR Online Communication* AND *Inclusive Communication OR Digital Inclusion OR Accessibility OR Diversity*. Second, the data selection phase involved further filtering by limiting certain categories. This included excluding 2025 as a publication year. The third stage consisted of limiting the document type category, while the fourth stage restricted the language to English only. The fifth stage involved manually selecting documents relevant to the research topic. Finally, in the sixth stage, the documents to be analyzed were determined, resulting in a total of 102 documents. For a more detailed overview of the data collection stages, see Table 1.

Table 1. Data collection stage

Num.	**Stage**	**Description**
1.	Identification	• Search keywords: (TITLE-ABS-KEY ("social media" OR "online platforms" OR "social networking") AND TITLE-ABS-KEY ("digital communication" OR "online communication") AND TITLE-ABS-KEY ("inclusive communication" OR "digital inclusion" OR "accessibility" OR "diversity")) Results: 138 documents
2.	Data Selection 1	• Document Year Exclude: 2025 (TITLE-ABS-KEY ("social media" OR "online platforms" OR "social networking") AND TITLE-ABS-KEY ("digital communication" OR "online communication") AND TITLE-ABS-KEY ("inclusive communication" OR "digital inclusion" OR "accessibility" OR "diversity")) AND (EXCLUDE (PUBYEAR , 2025)) Result: 122 documents
3.	Data Selection 2	• Document type: Article, Book, Book Chapter, Conference Paper (TITLE-ABS-KEY ("social media" OR "online platforms" OR "social networking") AND TITLE-ABS-KEY (

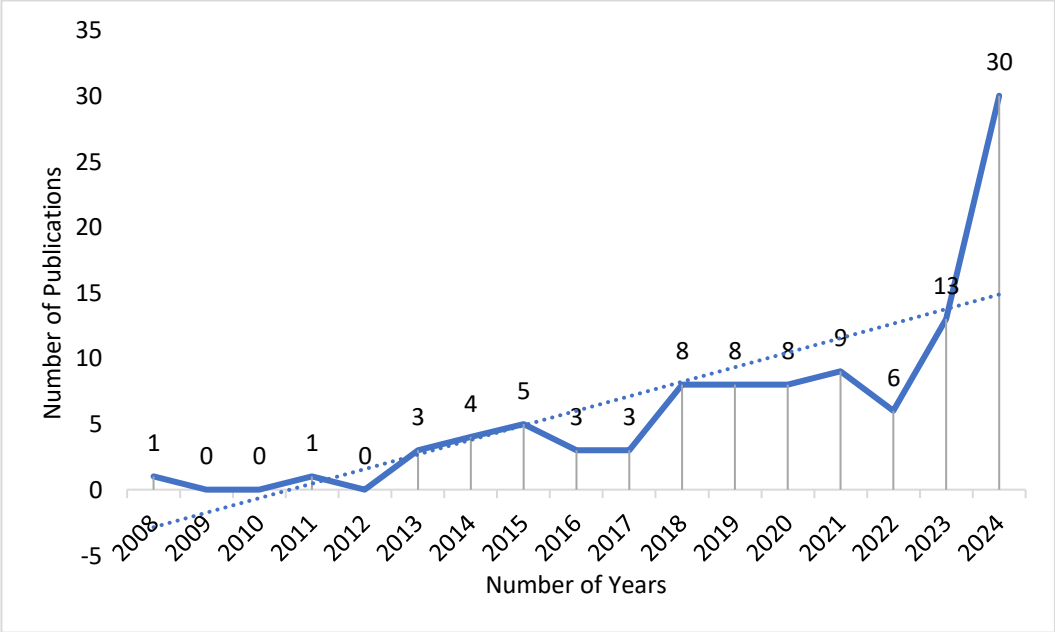
Num.	Stage	Description
		"digital communication" OR "online communication") AND TITLE-ABS-KEY ("inclusive communication" OR "digital inclusion" OR "accessibility" OR "diversity")) AND (EXCLUDE (PUBYEAR , 2025)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "bk")) • Results: 119 documents
4.	Data Selection 3	• Language: English (TITLE-ABS-KEY ("social media" OR "online platforms" OR "social networking") AND TITLE-ABS-KEY ("digital communication" OR "online communication") AND TITLE-ABS-KEY ("inclusive communication" OR "digital inclusion" OR "accessibility" OR "diversity")) AND (EXCLUDE (PUBYEAR , 2025)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "bk")) AND (LIMIT-TO (LANGUAGE , "English")) Result: 109 documents
5.	Relevant Document Filter	• Filtering is done by examining each selected data document individually. • Results: 102 documents
6.	Documents Analyzed Data	102 documents

Source: Author's elaboration

RESULTS AND DISCUSSION

Annual Output Trends and Research Area Categories

This research dataset shows that publications discussing the role of social media in building inclusive digital communication first appeared in 2008. Graph 1 depicts the annual output trend of 102 publications related to the role of social media in building inclusive digital communication. The trend in the number of publications is categorized as increasing, as seen by the blue dotted line in Graph 1. Single-digit publications occurred from 2008 to 2022. In the period from 2008 to 2012, the number of publications was low because there was only one publication, and even in 2009, 2010, and 2012, there were no publications at all (zero publications). Meanwhile, the number of publications moved up significantly to double digits from 2023 to 2024. The peak number of publications occurred in 2024 with 30 documents.



Graph 1. Yearly Growth Output of Publications

Source: elaboration of primary data from Scopus

Table 2 presents 11 subject-area categories from publications on the role of social media in building inclusive digital communication. Together, these

categories represent 91% of the total documents, while the remaining 9% fall under other research areas. The dataset analysis shows that two subject areas dominate: Computer Science (48 documents) and Social Sciences (44 documents). The complete list of the third to eleventh subject areas is provided in Table 2.

Table 2. Top 11 Subject Area Categories of Publications

Num. #	**Subject Area**	**Total Publications**
1	Computer Science	48
2	Social Sciences	44
3	Engineering	16
4	Medicine	14
5	Arts and Humanities	12
6	Mathematics	12
7	Business, Management and Accounting	10
8	Environmental Science	5
9	Psychology	5
10	Decision Sciences	4
11	Earth and Planetary Sciences	4

Source: elaboration of primary data from Scopus

Most Influential Sources of Publication

The analysis of this research dataset revealed 97 publication sources related to the role of social media in building inclusive digital communication. Of these publication sources, the top 10 publication sources in terms of citations are shown in Table 3.

Table 3. Top 10 Influential Journals from 102 Publications

Num. #	**Source**	**Total Publications**	**Citations**	**CiteScore**
1	EPJ Data Science	1	**118**	6.2
2	International Journal of Social Research Methodology	1	106	10.9
3	Gerontologist	1	95	9.9
4	BMC Public Health	1	87	6.0

Num. #	Source	Total Publications	Citations	CiteScore
5	Annals of the American Academy of Political and Social Science	1	78	5.5
6	Journal of Interactive Marketing	1	74	**16.9**
7	Disability and Society	1	44	5.7
8	Online Social Networks and Media	1	44	14.0
9	Cities	1	42	10.9
10	Complexity	1	32	7.0

Source: elaboration of primary data through Scopus and VOSviewer

The two most influential publication sources in terms of citations are *EPJ Data Science* and the *International Journal of Social Research Methodology*, with 118 and 106 citations, respectively. The third to sixth-ranked sources each have more than 70 citations: *Gerontologist* (95), *BMC Public Health* (87), *Annals of the American Academy of Political and Social Science* (78), and *Journal of Interactive Marketing* (74). Meanwhile, the seventh to tenth-ranked sources are *Disability and Society* (44), *Online Social Networks and Media* (44), *Cities* (42), and *Complexity* (32).

In addition to examining the number of citations, the findings of the data analysis also examine the number of citescores, which are related to the impact of scientific publications on the scientific world. The journal with the highest number of citescores is the *Journal of Interactive Marketing* (citescore: 16.9). Second place is occupied by the journal *Online Social Networks and Media* with a citescore of 14.0. Third and fourth place have some citescores of 10.9 held by the *International Journal of Social Research Methodology and Cities*, respectively. Meanwhile, the fifth to tenth places are occupied by the journals *Gerontologist* (citescore: 9.9), *Complexity* (citescore: 7.0), *EPJ Data Science* (citescore: 6.2), *BMC Public Health* (citescore: 6.0), *Disability and Society* (citescore: 5.7), and *Annals of the American Academy of Political and Social Science* (citescore: 5.5).

Distribution of Publications Across the Most Influential Countries

This subsection analyzes countries that are influential in scholarly publications on the role of social media in building inclusive digital communication. This analysis measures collaborations utilizing co-authorship data (co-authors) through co-author links (Zupic & Čater, 2015). In addition to co-author links, Table 4 also displays a total publications column, which measures the number of publications each country has related to the role of social media in building inclusive digital communication. Furthermore, Table 4 also presents a citations column to demonstrate the measure of influence, as when an article is highly cited, it gains significant attention in the global publication arena.

The results of this research dataset analysis showed that publications on the role of social media in building inclusive digital communication were distributed across 51 countries. VOSviewer was the primary tool for analyzing the dataset through the "co-authorship" analysis type with the same analysis unit, "countries." Then, another type of analysis was "citation" with the analysis unit "countries." Both types of analysis selected the number of documents per country as 1 (one) and the minimum number of citations as 0 (zero) to describe the entire country. The analysis of "co-authorship" and "citation" was carried out separately. After the dataset analysis through VOSviewer was completed, the results showed that 51 countries had publications relevant to this research topic. Of the 51 countries, the top 13 countries were selected with a total of at least 4 (four) documents (see Table 4).

Table 4. The Most Influential Countries in 102 Publications

Num.	Country	Total Publications	Citations	Co-authorship Links
1	United States	23	232	4
2	United Kingdom	10	375	4
3	Australia	8	227	0
4	India	8	44	2
5	China	6	22	2
6	Germany	5	97	3

Num.	Country	Total Publications	Citations	Co-authorship Links
7	Indonesia	5	4	1
8	Italy	4	145	2
9	Malaysia	4	6	0
10	Netherlands	4	115	1
11	Spain	4	138	3
12	Sweden	4	35	2
13	Turkey	4	13	0

Source: elaboration of primary data through VOSviewer

The United States (US) is the most dominant country in publications on the role of social media in building inclusive digital communication. This country has a total of 23 published documents with 232 citations. The number of citations indicates that publications from the US receive significant attention from other countries due to their frequent citations. Meanwhile, the US has a co-authorship link value of 4 (four). This value indicates that authors from the US collaborate with at least four of the 51 countries to research the role of social media in fostering inclusive digital communication. Although the US ranks first in total publications, the United Kingdom (UK) ranks second, with a total of 10 publications, and has the highest number of citations among other countries. The UK has 375 citations, with the same number of co-authorship links as the US.

Beyond the US and UK in first and second place, the third to seventh positions are occupied by Australia (8 publications, 227 citations), India (8 publications, 44 citations), China (6 publications, 22 citations), Germany (5 publications, 97 citations), and Indonesia (5 publications, 4 citations). The eighth to thirteenth positions are held by Italy (4 publications, 145 citations), Malaysia (4 publications, 6 citations), the Netherlands (4 publications, 115 citations), Spain (4 publications, 138 citations), Sweden (4 publications, 35 citations), and Turkey (4 publications, 13 citations). Although these countries produced fewer than 10 publications each, several—such as Australia, Italy, the Netherlands, and Spain—achieved citation counts in the three-digit range, indicating notable scholarly impact despite relatively low publication volume.

Publications Across the Most Influential Organizations

The results of the analysis of this research dataset show that 209 organizations participated in research on the role of social media in building inclusive digital communication. Data processing was carried out using VOSviewer by selecting the "co-authorship" and "citation" items. This selection was carried out one by one with the "organizations" analysis unit. The next step was to select the number of documents per organization as 1 (one) with a minimum number of citations of 0 (zero). The purpose of this selection was to show an overall picture of the organization before selecting the top-most influential organizations. Table 5 shows the results of selecting the top seven most influential organizations in publications on the role of social media in building inclusive digital communication.

Table 5. The Most Influential Organizations in 102 Publications

Num.	Organizations	Total Publications	Citations	Co-authorship Links	Citation-Links
1	RWTH Aachen University, Germany	2	76	0	0
2	Macquarie University, Australia	2	21	0	0
3	University of Jyväskylä, Finland	2	16	0	0
4	Sun Yat-Sen University, China	2	12	1	0
5	University of California, United States	2	10	1	0
6	Stockholm University, Sweden	2	6	0	0
7	Bina Nusantara University, Indonesia	2	0	0	0

Source: elaboration of primary data through VOSviewer

The most influential organization, based on Table 5, is RWTH Aachen University, Germany, with two publications, 76 citations, and zero co-authorship links. This organization has a strong influence in terms of publication citations, due to its high number of citations, which demonstrates that its publications receive significant international attention. Unfortunately, the co-authorship links score remains zero. This suggests that the university has not collaborated with other universities to publish research on the role of social media in fostering inclusive digital communication.

The second to fifth most influential organizations are Macquarie University, Australia (2 publications, 21 citations, 0 co-authorship links), University of Jyväskylä, Finland (2 publications, 16 citations, 0 co-authorship links), Sun Yat-Sen University, China (2 publications, 12 citations, 1 co-authorship link), and University of California, United States (2 publications, 10 citations, 1 co-authorship link). These organizations are characterized by double-digit citation counts, despite their limited publication numbers. Meanwhile, the sixth and seventh organizations—Stockholm University, Sweden (2 publications, 6 citations, 0 co-authorship links) and Bina Nusantara University, Indonesia (2 publications, 0 citations, 0 co-authorship links)—have fewer citations, indicating comparatively lower influence.

Table 5 also shows that the citation-links column has a value of zero for all seven organizations. This indicates that, within the 102 documents in this dataset, none of the organizations cite each other. While citations are present in the individual articles, the cited documents fall outside the scope of this dataset because they do not align with the specific research topic.

Co-Occurrence Analysis of Keywords in Publications

Keyword co-occurrence analysis is one of the primary objectives of this study, specifically examining the research dataset. This analysis focuses on keywords contained in the titles, keywords, and abstracts of the 102 research datasets. Keyword co-occurrence data processing was performed using VOSviewer by selecting the analysis type "co-occurrence" and the analysis unit as "author

keywords." The next step was to set the number of occurrences of a keyword to 1 (one). The first data processing resulted in 419 keywords. These data processing results needed to be checked individually to eliminate redundant keywords by creating a thesaurus. Next, a second data processing step was performed by entering the thesaurus (which had been made) into VOSviewer. This second data processing step resulted in 405 keywords, still selecting the number of occurrences of a keyword as 1 (one).

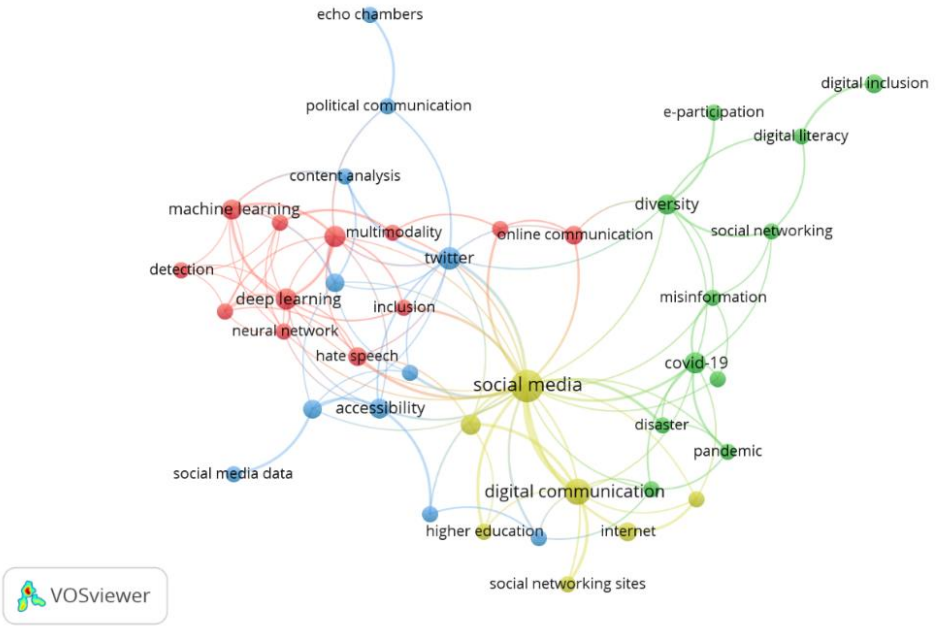


Figure 2: Main Keywords in 102 Publications

Source: elaboration of primary data through VOSviewer

The second round of processing still produced a relatively large number of keywords. To improve the effectiveness of the analysis, a third round was conducted by raising the minimum occurrence threshold to 2. This step yielded 41 keywords, which were subsequently visualized in a keyword network map (Figure 2) and grouped into four main clusters (Table 6).

Table 6. Key Themes Examined in 102 Publications

Name of Cluster	**Theme**	**Author Keywords**	**Previous Research Examples**
1-Red Cluster	AI and machine learning enhance accessibility, safety, and trust in social media by addressing cyberbullying, hate speech, misinformation, and professional communication	cnn, cyberbullying, deep learning, detection, facebook, hate speech, inclusion, machine learning, multimodality, natural language processing, neural network, online communication	Wibowo et al. (2024); Musyoka et al. (2023); Power (2015); Alshehri et al. (2024); Sharif et al. (2024); Jain et al. (2023); Yan et al. (2024)
2-Green Cluster	Social media functions as a global hub for crisis communication, identity, and (mis)information, shaped by trust, inclusivity, and culture	covid-19, digital inclusion, digital literacy, disaster, disinformation, diversity, e-participation, health communication, misinformation, pandemic, social networking	Immel et al. (2021); Ngwainmbi (2022); Berg et al. (2021); Hughes et al. (2021)
3-Blue Cluster	Social media shapes brand communication, political legitimacy, citizen engagement, accessibility, youth behavior, and opinion formation, while fostering new analytical approaches to content and sentiment in digital contexts	accessibility, behavioral change, cluster analysis, communication, content analysis, crowdsourcing, echo chambers, political communication, sentiment analysis, social media data, twitter	Mazzoli et al. (2019); González-Bailõn & Paltoglou (2015); Rocca et al. (2024); Alizadeh et al. (2019); Steinfeld & Lev-On (2024); Brewer (2016); Iranmanesh & Atun (2018); Vondra (2020); Asher et al. (2018); Hiyama et al. (2013)

4-Yellow Cluster	Social media and digital platforms shape professional practices, civic values, and tourism experiences, while also raising concerns about ethics, sustainability, and adaptation to emerging technologies	digital communication, e-tourism, higher education, internet, social media, social network, social networking sites	Giuffrida et al. (2024); Almajali et al. (2024); Zarrouk & El Aidouni (2023)

Source: elaboration of primary data through VOSviewer

The results of the VOSviewer keyword co-occurrence analysis are presented in Table 6. From the grouping of 41 keywords, four main clusters were identified, each of which can be described as follows:

Cluster 1 (red) contains 12 keywords, including CNN, cyberbullying, deep learning, detection, Facebook, hate speech, inclusion, machine learning, multimodality, natural language processing, neural networks, and online communication. The main theme emerging from these 12 keywords is that artificial intelligence (AI) and machine learning enhance accessibility, security, and trust in social media by addressing issues such as cyberbullying, hate speech, misinformation, and professional communication. This condition aligns with the articles reviewed in Cluster 1, which highlight the dual role of social media as both a driver of digital communication and a platform for the emergence of new challenges. Academics have focused on accessibility, misinformation, professionalism, hate speech, and cyberbullying. AI shows potential in improving accessibility for visually impaired users through automatic captioning of images, which ensures inclusivity in digital interactions (Wibowo et al., 2024). At the same time, concerns about online harms have been widely addressed in recent research, such as multimodal deep learning techniques that have been reviewed for detecting cyberbullying (Musyoka et al., 2023) and robust cyberbullying detection in various textual noises (Yan et al., 2024).

Another study compared generative and discriminative models for detecting cyberbullying in memes, reflecting the complexity of multimodal online harassment (Jain et al., 2023), and introduced a model fusion approach that leverages CNN and BiLSTM to improve hate speech detection across multiple datasets (Sharif et al., 2024). In line with text-based harms, deepfake audio misinformation has also attracted attention, with Sonic Sleuth, a deep learning model, achieving high accuracy in detecting fake audio content and protecting digital integrity (Alshehri et al., 2024). In a different realm, Facebook's role in professional discourse raises questions about the appropriateness of social media platforms in maintaining boundaries between personal and professional communication (Power, 2015). Collectively, these works illustrate the increasing sophistication of AI-based approaches to mitigate risks while emphasizing the importance of ethical, inclusive, and context-aware digital communication.

Cluster 2 (green) contains 11 keywords: COVID-19, digital inclusion, digital literacy, disaster, disinformation, diversity, e-participation, health communication, misinformation, pandemic, and social networking. Together, these keywords highlight social media functions as a global hub for crisis communication, identity, and (mis)information, shaped by trust, inclusivity, and culture. During the COVID-19 pandemic, digital platforms became central to information flows and crisis communication, particularly in relation to the spread of misinformation and disinformation. For instance, food banks in Seattle relied heavily on websites and social media to communicate food availability and accessibility, but paid less attention to food receipt, underscoring the need for more inclusive communication in disaster contexts (Immel et al., 2021).

More broadly, social media has been shown to dissolve and reshape cultural boundaries, enabling connected communities to form new senses of belonging that transcend ethnic and national identities (Ngwainmbi, 2022). In the context of health risk communication, studies indicate that authorities primarily focus on communication channels, source credibility, and message framing during the pandemic, while research on the effectiveness of creative and visual strategies in shaping protective behaviors remains limited (Berg et al., 2021).

Meanwhile, disinformation has proven to be a transnational and culturally diverse phenomenon. For example, French-language COVID-19 disinformation spread widely across borders, yet its reception varied significantly depending on cultural context and local identity. This underscores the challenges of countering misinformation in linguistically connected but culturally diverse communities (Hughes et al., 2021). Overall, the studies in Cluster 2 highlight both the opportunities and the limitations of digital communication in managing crises and shaping public perceptions across different cultural and institutional settings.

Cluster 3 (blue) explores the key themes of how social media shapes brand communication, political legitimacy, citizen engagement, accessibility, youth behavior, and opinion formation, while fostering new analytical approaches to content and sentiment in digital contexts. This theme is built from 11 keywords, including accessibility, behavioral change, cluster analysis, communication, content analysis, crowdsourcing, echo chambers, political communication, sentiment analysis, social media data, and Twitter. The studies reviewed in cluster 3 demonstrate the multifaceted role of social media and online communication in shaping brand perceptions, political discourse, civic engagement, accessibility, and generational behavior. In the commercial realm, luxury fashion brands on Twitter are highly aligned with bloggers' content, reinforcing brand identity and consumer perception through shared symbolic and aesthetic values (Mazzoli et al., 2019).

Meanwhile, from a methodological perspective, automated content analysis and sentiment classifiers vary in reliability, depending on the formality and diversity of the text, with machine learning proving more accurate across various domains (González-Bailõn & Paltoglou, 2015). Political institutions are also adapting their communication styles, as demonstrated by the European Commission's Twitter evolution toward more accessible, positive, and socially relevant messages to foster legitimacy and engagement (Rocca et al., 2024). At the local governance level, Twitter has enabled crowdsourcing of information on various citizen issues, offering new opportunities for participatory decision-making (Alizadeh et al., 2019).

Political discourse studies have further enriched debates on echo chambers, showing that digital platforms can foster both homogeneous and heterogeneous exposure depending on their affordances (Steinfeld & Lev-On, 2024). Social media also plays a role in accessibility and inclusion. For instance, initiatives such as a voice-based platform for visually impaired older adults (Brewer, 2016) and the "Question First" model for older adults' knowledge sharing (Hiyama et al., 2013) demonstrate the potential of digital tools to reduce barriers. In urban studies, geo-tagged Twitter data has been validated as a means of mapping socio-spatial interactions and accessibility patterns (Iranmanesh & Atun, 2018).

Generational shifts are also evident, with Generation Z showing a preference for short-term, dopamine-driven messages that are reshaping communication and campaign strategies (Vondra, 2020). Moreover, research on opinion formation demonstrates that context, source, and media type significantly influence belief thresholds, with social media engagement amplifying these effects (Asher et al., 2018). Overall, the studies in Cluster 3 highlight how digital communication simultaneously functions as a platform for brand image, governance, accessibility, and behavioral transformation.

Cluster 4 (yellow) highlights an emerging theme: social media and digital platforms are shaping professional practices, civic values, and tourism experiences, while also raising concerns about ethics, sustainability, and adapting to emerging technologies. This theme is built from seven keywords: digital communication, e-tourism, higher education, internet, social media, social networks, and social networking sites.

The studies reviewed in cluster 4 highlight the expanding role of digital communication in healthcare, education, and tourism. In the healthcare sector, physicians' use of social media significantly influences the perceptions of patients and colleagues, necessitating a balance between educational value and legal and ethical considerations (Giuffrida et al., 2024). In higher education, platforms like Twitter and Instagram encourage social interaction and civic engagement among Arab students, promoting civic values such as respect for diversity, tolerance, and active community engagement (Almajali et al., 2024). Meanwhile, in the tourism

industry, Morocco's implementation of digital marketing strategies—including social media, blogs, and booking platforms—has increased its global visibility while emphasizing the need for responsible tourism and sustainable practices, with future opportunities identified in virtual tourism and the Metaverse (Zarrouk & El Aidouni, 2023). The studies in cluster 4 essentially underscore how social media and digital platforms serve as essential tools not only for communication and engagement but also for shaping values, professional standards, and sustainable development.

CONCLUSIONS

This study analyzed 102 documents from the Scopus database on the role of social media in building inclusive digital communication. The dataset analysis revealed diverse findings, ranging from trends in publication to key emerging themes. Globally, publications on this topic show a positive upward trend. A notable increase occurred between 2023 (13 documents) and 2024 (30 documents), with publications reaching double digits annually, compared to single-digit outputs from the early years up to 2022.

Another key finding from the dataset analysis is that the United States is the leading contributor in terms of publication output. At the institutional level, RWTH Aachen University in Germany stands out as the most influential organization in publishing research on the role of social media in fostering inclusive digital communication. Meanwhile, the two most influential publication sources are *EPJ Data Science* and the *International Journal of Social Research Methodology*, each with triple-digit citation counts—118 and 106 citations, respectively.

Meanwhile, the main findings of this study relate to the identification of four key themes derived from keyword co-occurrence analysis. The first theme highlights how AI and machine learning enhance accessibility, security, and trust in social media by addressing issues such as cyberbullying, hate speech, misinformation, and professional communication. The second theme positions social media as a global hub for crisis communication, identity formation, and (mis)information, shaped by trust, inclusivity, and culture. The third theme

emphasizes the role of social media in shaping brand communication, political legitimacy, citizen engagement, accessibility, youth behavior, and opinion formation, while also advancing methods for content and sentiment analysis in digital contexts. Finally, the fourth theme examines how social media and digital platforms impact professional practices, civic values, and tourism experiences, while also raising concerns about ethics, sustainability, and adapting to emerging technologies.

In terms of research implications, the findings of this study provide a comprehensive foundation for future directions, particularly across the four main themes identified. This bibliometric analysis also serves as a baseline for scholars aiming to advance both theoretical understanding and empirical research in these areas. On the practical side, the study provides valuable insights for practitioners and policymakers on how to effectively leverage and regulate social media in fostering inclusive digital communication. Recognizing these implications necessitates the development of sophisticated digital accessibility policies—particularly through the use of AI—along with robust strategies to detect and counter cyberbullying, hate speech, and disinformation.

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