



IMPACT OF SOCIAL MEDIA ON EDUCATIONAL INCLUSION: Scientific Perspectives

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ABSTRACT

The present bibliometric study explores the scientific production on the impact of social networks on the perception of support of families of students with special educational needs (SEN). The analysis encompasses 53 papers published between 2013 and 2024, as indexed in Web of Science, with a salient finding being an annual growth rate of 6.5%. The United States has the lead in publications, while the United Kingdom has the lead in citations. The utilisation of analytical tools such as VOSviewer and R has facilitated the identification of collaborative networks and thematic trends. These tools have been instrumental in accentuating inclusiveness, social participation, and network analysis. The findings indicate potential avenues for social networks to enhance family-school collaboration, notwithstanding the ongoing presence of barriers such as technological inequality.

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1. Introduction

The fundamental principle of inclusive education is to ensure that all learners, including those with special educational needs (SEN), have access to an environment that values diversity and is responsive to their specific needs. The approach adopted is twofold in nature, seeking to remove barriers to learning and to build an educational community that fosters the equal participation of all its members. Families, as key actors in the holistic development of students with SEN, play a fundamental role in this process. In addition to the challenges encountered in ensuring the quality of education, it is imperative to promote the necessary acceptance and support for children within the educational community, thereby ensuring that inclusion is effective and sustainable (Bossaert et al., 2015; Duque et al., 2021).

In this context, social networks have emerged as instruments that facilitate communication and access to resources, thereby acting as conduits between families and the education system, thus engendering a collaborative and mutually supportive environment. In the context of educational institutions, these platforms have demonstrated efficacy in enhancing social cohesion, fostering the development of social networks, and fostering the emotional well-being of students with special educational needs (Grütter & Meyer, 2014; Schwab et al., 2021). Furthermore, these tools have been demonstrated to enhance the bonds between families and educational institutions, thereby fostering a more unified community (Bossaert et al., 2015).

The involvement of families has been identified as a central theme in recent studies. The advent of social networks has facilitated the sharing of experiences, the establishment of connections with other families, and the active participation in their children's educational process. This is of particular relevance to those encountering challenges in providing support to students with special educational needs (SEN), as these platforms offer a space where they can feel heard and understood (Wright et al., 2014). Research conducted by Mamas et al. (2020) and Cerda et al. (2018) has demonstrated the efficacy of these platforms in enhancing the bonds between families and schools, thereby facilitating more effective communication and collaborative strategies.

During the course of the pandemic, social networks have gained significant relevance as a tool for the provision of emotional support, access to educational resources and connection to school institutions. While these measures have undoubtedly engendered a number of key benefits, including the continuity of learning and the strengthening of virtual communities, challenges such as family stress, technological inequality and the management of digital interactions have also emerged (McDonald et al., 2023; Morgül et al., 2022). In a similar vein, the facilitation of communication between families, educational institutions and digital solutions has underscored the pivotal role these entities play during this period of transition.

Notwithstanding the observed advantages, obstacles endure that impede the efficacious utilisation of social networks within the educational milieu. Research has identified a number of factors hindering the implementation of technology in educational settings. These include unequal access to technology, a lack of digital skills in both families and teachers, and the risk of cyberbullying (Pantić et al., 2022; Schuster et al., 2021). Furthermore, the judicious management of these spaces is imperative to ensure the cultivation of environments that foster positive interactions. This underscores the necessity for comprehensive training programmes to be implemented within educational institutions.

This article will explore this issue from a bibliometric perspective, highlighting how social networks have been used as tools to improve the perception of emotional and practical support by families of students with SEN, identify barriers associated with their implementation, and explore opportunities to optimise their use in inclusive educational contexts (McDonald et al., 2023; Schuster et al., 2021).

2. Materials and Method

2.1. Data Collection

This study is based on a descriptive bibliometric analysis exploring scientific production on the use of social media by families with children with special educational needs and how these interactions influence their satisfaction with the education system. The data were collected from the Web of Science (WoS) Core Collection, a reliable database integrating bibliometric indicators and various thematic indices (Pranckutė, 2021). This approach facilitates the organization and selection of relevant

publications, as well as the establishment of categories for qualitative and quantitative analysis (Gallegos et al., 2014).

Data collection was conducted in January 2025, covering an eleven-year period (2013–2024), following the PRISMA 2020 guidelines to ensure the relevance and systematization of the information (Page et al., 2021). The advanced search examined titles, abstracts, and keywords using the following thematic search string:

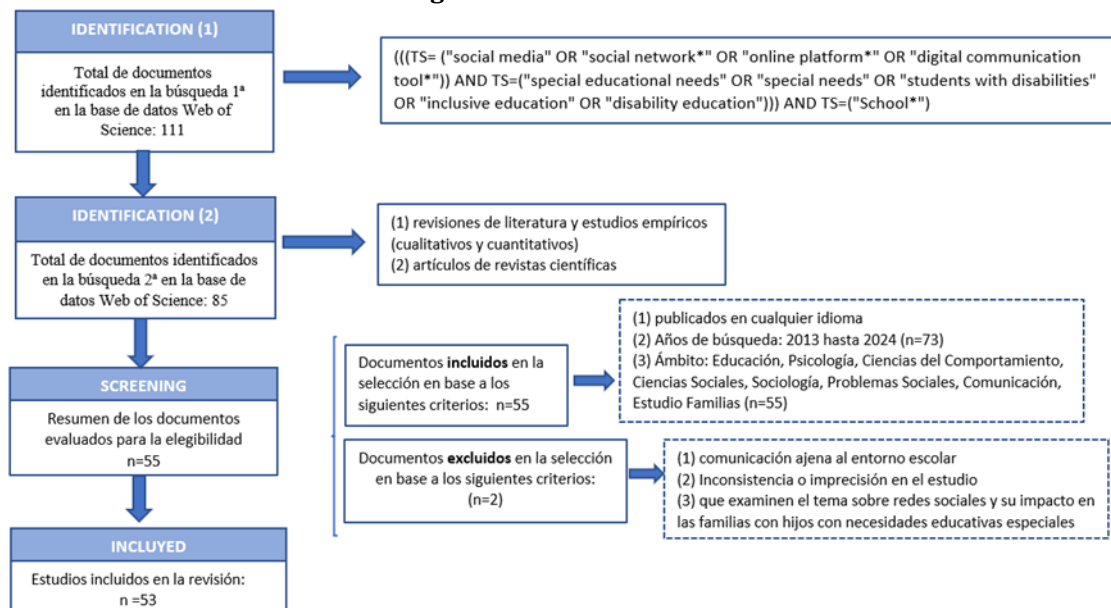
((TS= ("social media" OR "social network*" OR "online platform*" OR "digital communication tool*")) AND TS= ("special educational needs" OR "special needs" OR "students with disabilities" OR "inclusive education" OR "disability education")) AND TS= ("School*")

A total of 111 records were identified, from which literature reviews and empirical studies (qualitative and quantitative) were selected, reducing the sample to 85 (n=85). Subsequently, publications from 2013 to 2024 (n=73) and those in fields such as Education, Psychology, and Social Sciences were included, resulting in 55 (n=55). Finally, the following were excluded: (1) studies unrelated to the school context; (2) those with methodological inconsistencies; and (3) analyses not focused on the impact on families with special educational needs. This process yielded a final selection of 53 articles.

The inclusion criteria encompassed empirical studies and literature reviews published in scientific journals over the last five years, in any language, and focused on the impact of social media on family-education system interactions. After applying filters and excluding irrelevant studies, the final set was refined to 53 articles.

Figure 1 presents the PRISMA flow diagram, adapted from Thananusak (2019) and Page et al. (2021), which details the stages of identification, selection, and exclusion of sources, ensuring a rigorous literature analysis.

Figure 1. PRISMA Flowchart



Source: Adapted from Page et. al., (2021) and Thananusak (2019)

2.2. Bibliometric Analysis

This study employed three statistical tools selected for their suitability and adaptability to the research objectives, supported by a thorough review of their capabilities in the context of bibliometric analysis.

Firstly, the software HistCite (version 2010.12.6; HistCite Software LLC, New York, NY, USA) was used, widely recognized for its ability to calculate key indices such as the number of publications per year, author, country, institution, and journal (Padrón & Pirela, 2017). This tool stands out for quality metrics such as the Total Global Citation Score (TGCS), which measures the total citations received, and the Total Local Citation Score (TLCS), which analyses citations specific to the WoS database. Additionally, HistCite facilitates the historical analysis of citations, collaboration networks, and citation

patterns, establishing itself as a robust and versatile solution for bibliometric research (Wulff-Barreiro, 2007). Secondly, VOSviewer was employed, a software specifically designed to analyse bibliographic and thematic links, with its ability to identify networks and cluster articles based on shared references proving particularly useful in systematic reviews (van Eck & Waltman, 2017). This program enables the generation of dynamic visualizations that explore data in real time, revealing emerging patterns and trends in the scientific literature (Viner et al., 2020). Finally, the bibliometric analysis included the use of the R programming environment with the bibliometrix package, a versatile tool that enabled the examination of co-authorships, international collaborations, and predominant keywords (Aria & Cuccurullo, 2017; Derviş, 2019). This software is notable for its flexibility in generating visual graphics such as networks, word clouds, and thematic maps, providing clear and effective representations of the results obtained (Moral-Muñoz et al., 2020). The selection of these programs is grounded in their technical characteristics and their capacity to offer a comprehensive and detailed analysis, fully adapting to the specific needs of this research.

3. Results

The study spans the period from 2013 to 2024, collecting data from 45 sources (journals, books, etc.), resulting in 53 published papers, with an annual growth rate of 6.5%. The average age of the documents is 5.62 years, with an average of 15.36 citations per document and a total of 2,512 references.

A total of 165 Keywords Plus and 196 author keywords were identified. There were 161 authors involved, with 5 single-authored papers, an average of 3.34 co-authors per paper, and 30.19% international co-authorship. The majority of documents are articles (n=52), with some articles combined with book chapters (n=1). As shown in Table 1, the annual growth rate of 6.5% demonstrates sustained interest in social networking within inclusive educational contexts. This increase aligns with previous literature highlighting the transformative potential of these platforms to enhance family-school collaboration. This information is presented in Table 1 below.

Table 1. Key data information

MAIN DATA INFORMATION	
Period	2013:2024
Sources (Journals, Books, etc.)	45
Documents	53
Annual growth rate (%)	6.5
Average age of document	5.62
Average number of citations per document	15.36
References	2512
DOCUMENT CONTENTS	
Keywords Plus (ID)	165
Author Keywords (DE)	196
AUTHORS	
Authors	161
Authors of single author documents	5
AUTHORS COLLABORATION	
Single author papers	5
Co-authors per document	3.34
% international co-authorship	30.19
DOCUMENT TYPES	
Article	52
Article; book chapter	1

Source: Own elaboration, 2025

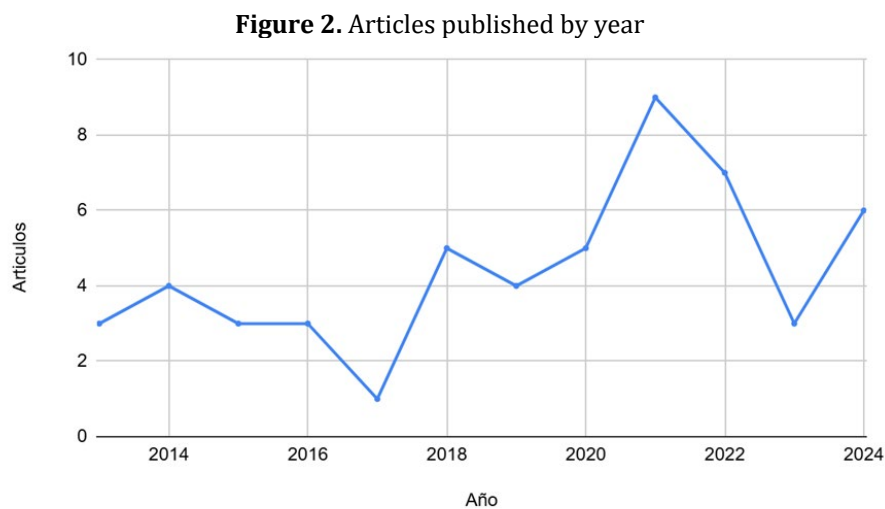
In summary, the data presented in Table 1 provide a clear overview of the annual growth of publications, international co-authorship, and the most frequent keywords. These results reinforce the notion that social media have gained increasing importance in inclusive education, becoming a priority topic for academic research.

3.1. Basic indicators

This first section of results presents fundamental indicators, providing details on articles and citations by year, number of articles and citations by author, institution, and country. Additionally, it lists the journals that published at least one article, along with the number of publications, citations, and impact factor. Finally, the authors' keywords are presented according to the year of publication.

3.1.1. Years

The number of published articles is 53, spanning from 2013 to 2024. The number of publications per year varies from 1 to 9, with a mean of 4.42 and a standard deviation of 2.1 ($n = 53$; range = 1–9; mean = 4.42; SD = 2.1). The first article was published in 2013, with 3 publications ($n = 3$). In subsequent years, the number of publications fluctuated, peaking in 2021 ($n = 9$), followed by a gradual decline until 2023, before a slight increase in 2024 ($n = 6$). Figure 2 illustrates the annual evolution of publications, highlighting the significant rise in 2021, a year marked by the impact of the COVID-19 pandemic. This pattern underscores the growing importance of the topic in the context of a global educational crisis.



Source: Own elaboration, 2025.

3.1.2. Authors

Allen KA, Gray DL, McInerney DM, Ryan T, and Waters L had the highest number of total citations, with 230 each, followed by Pijl SJ with 65, and finally Taylor S and Wright AC with 54 each, while Avramidis E accumulated 50, as shown in Table 2. These data confirm that the most cited authors have addressed key themes such as inclusive education and social media, establishing a robust theoretical framework that underpins this study.

Table 2. Authors with the highest number of global citations (≥ 50)

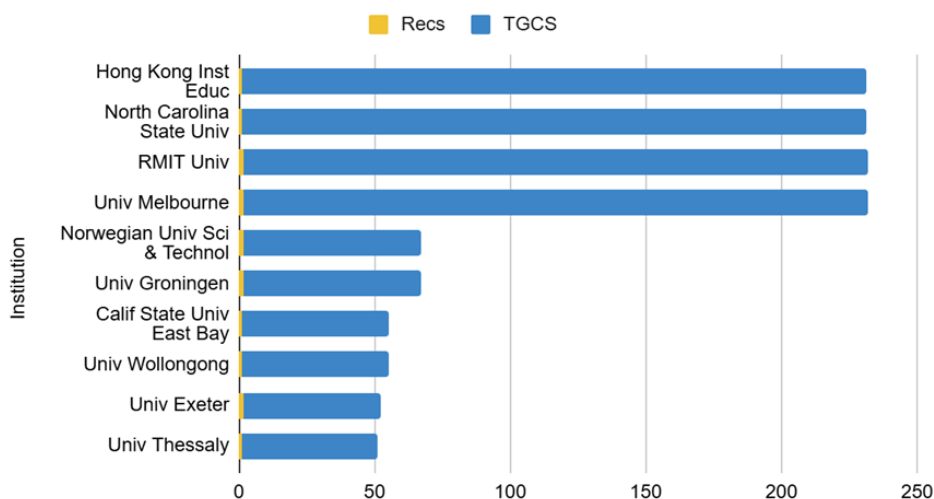
Author	Recs	TGCS
Allen KA	2	230
Gray DL	1	230
McInerney DM	1	230
Ryan T	1	230
Waters L	1	230
Pijl SJ	2	65
Taylor S	1	54
Wright AC	1	54
Avramidis E	1	50

Source: Own elaboration, 2025

These authors work in various research fields. The most common is "Education Educational Research" with 28 records (50.909%), followed by "Education Special" with 8 records (14.545%), and "Psychology Educational" with 7 records (12.727%). Other fields include "Social Sciences Interdisciplinary" with 4 records (7.273%), "Psychology Developmental" with 3 records (5.455%), and "Psychology Multidisciplinary" and "Psychology Social" with 2 records each (3.636%). Less represented fields include "Humanities Multidisciplinary", "Multidisciplinary Sciences", "Public Environmental Occupational Health", "Social Issues", and "Social Work", each with 1 record (1.818%).

3.1.3. Institutions

However, there is a total of 2,507 global citations (TGCS), ranging from 1 to 230. Setting 50 citations as the cut-off point (≥ 50), Hong Kong Institute of Education, North Carolina State University, RMIT University, and University of Melbourne have the highest global citations, with a total of 230 each, followed by Norwegian University of Science & Technology and University of Groningen with 65, while California State University East Bay and University of Wollongong have 54, and finally University of Exeter and University of Thessaly with 50, as shown in Figure 3.

Figure 3. Number of global citations per institution (≥ 50 global citations).

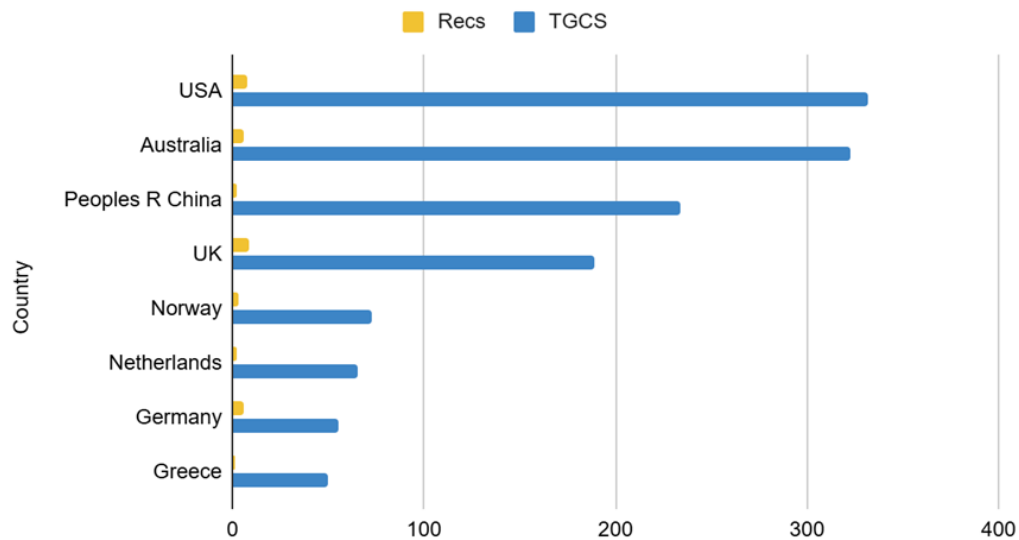
Source: Own elaboration, 2025.

3.1.4. Countries

Researchers from 31 countries have published at least one article on this research topic. The total number of articles is 53. The number of publications ranges from 1 to 9.

Regarding the total global citations, these vary from 0 to 332, with a mean of 53.71 and a standard deviation of 79.6 (range = 0–332; Mean = 53.71; SD = 79.6). The countries receiving the most citations, with a cut-off point of more than 50 ($n > 50$), are as follows: United States ($n = 332$), Australia ($n = 323$), China ($n = 234$), and United Kingdom ($n = 189$). Other countries with significant citations include Norway ($n = 73$), Netherlands ($n = 65$), Germany ($n = 55$), and Greece ($n = 50$), as shown in Figure 4. This figure presents a comparison of the countries with the highest number of publications related to social media and inclusive education, highlighting the dominant position of the United States, Australia, and China in interdisciplinary research on the topic.

Figure 4. Comparison of countries with the highest number of publications (≥ 1).



Source: Own elaboration, 2025.

3.1.5. Journals

A total of 45 journals have published at least one article on this topic. Setting the cut-off point at two or more publications ($n \geq 2$), the following information is obtained. The journals with the most articles published are *European Journal of Special Needs Education* with 5 publications, followed by *Frontiers in Education* with 4 publications (see Table 3). These data confirm that journals such as *European Journal of Special Needs Education* lead in terms of publications, standing out as a recurring source for research related to social media and inclusive education. This pattern consolidates the positioning of these publications as key references in the field.

Table 3. Journals with the highest number of publications ($n \geq 2$)

Journal	Recs	TGCS
EUROPEAN JOURNAL OF SPECIAL NEEDS EDUCATION	5	99
FRONTIERS IN EDUCATION	4	20
FRONTIERS IN PSYCHOLOGY	2	16

Source: Own elaboration, 2025.

The journals with the highest number of global citations (TGCS) are "Educational and Developmental Psychologist" ($n = 230$), "European Journal of Special Needs Education" ($n = 99$), "Journal of Social Service Research" ($n = 54$), "Research Papers in Education" ($n = 50$) and "Social Development" ($n = 47$).

Table 4 Journals with the highest number of citations overall (n≥47)

Journal	Recs	TGCS
EDUCATIONAL AND DEVELOPMENTAL PSYCHOLOGIST	1	230
EUROPEAN JOURNAL OF SPECIAL NEEDS EDUCATION	5	99
JOURNAL OF SOCIAL SERVICE RESEARCH	1	54
RESEARCH PAPERS IN EDUCATION	1	50
SOCIAL DEVELOPMENT	1	47

Source: Own elaboration, 2025.

As demonstrated in Table 4, the journals with the highest number of global citations are indicative of their relevance in the field of inclusive education. These publications are notable for their focus on high-impact research and their role as pivotal platforms for the dissemination of academic findings.

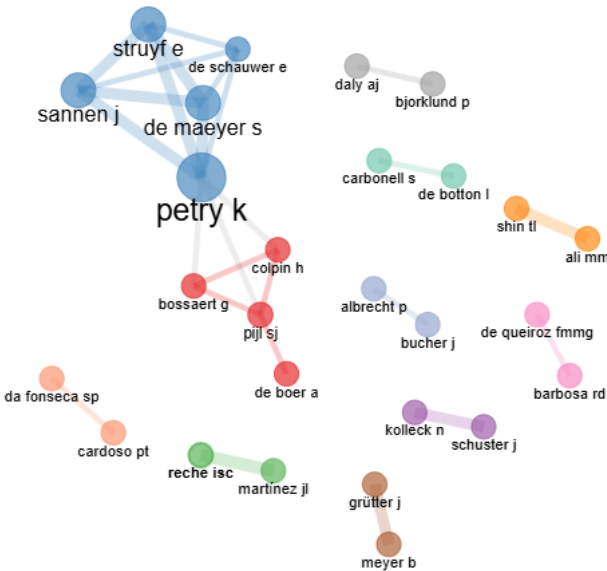
3.2. Co-Citations Analysis

The following section is devoted to the presentation of the analysis of co-citations. Initially, the co-authorship network is represented, followed by the cross-country collaboration networks, and finally the keyword networks are presented. The results of the study are presented below.

3.2.1. Co-Authorships

A total of 161 authors are represented in the database; however, it should be noted that the focus is exclusively on collaborations between individuals who have authored at least one article. A further 27 co-authorship networks involving 36 researchers have also been identified, and these networks have published a joint article on this topic. The network configuration is as follows: one network comprising five collaborators, two networks comprising four collaborators, three networks comprising three collaborators, and seven networks comprising two collaborators. As illustrated in Figure 5, the various networks demonstrate the interdisciplinary nature of the field, emphasising key groups that have contributed significantly to the development of inclusive strategies.

Figure 5. Co-authoring networks (n≥1).

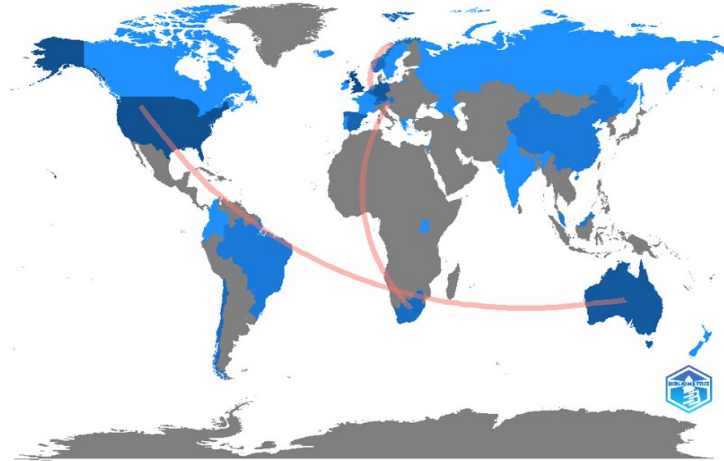


Source: Own elaboration, 2025.

3.2.2. Cross-Country Collaborations

The significance of international collaboration is evident when considering the establishment of robust research networks through collaborative efforts between different countries. As demonstrated in Figure 6, the primary connections among leading nations are highlighted, emphasising the pivotal role of the United States and Australia in the establishment of these alliances.

Figure 6. Collaborative networks between countries ($n \geq 1$)



Source: Own elaboration, 2025

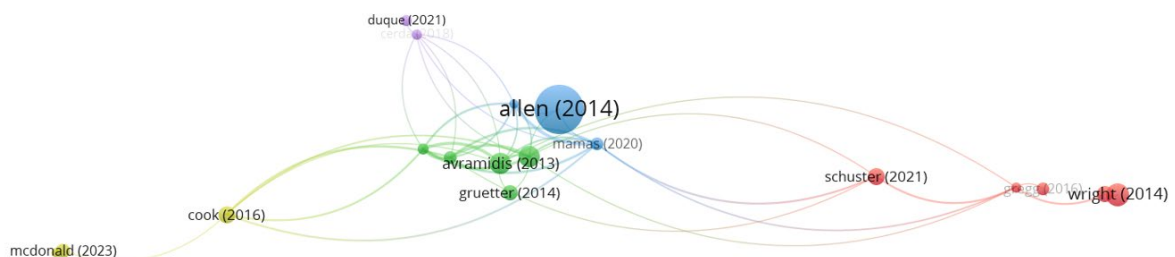
3.3. Thematic Analysis

Ultimately, this section is concerned with the presentation of the results of the thematic analysis. Firstly, the bibliographic linkage analyses by documents and words will be demonstrated, and secondly, a strategic diagram of the various themes will be presented.

3.3.1. Bibliometric Coupling by Documents and Keywords

The bibliographic coupling of documents is established with a cut-off point of at least 10 citations per document (≥ 10). Subsequently, the selection was made to include only those that were connected, which resulted in the final analysis comprising 18 documents, which were then distributed into five groups, with one colour assigned to each group. The font size is proportional to the number of citations and the frequency of connections between them. Figure 7 delineates five thematic groupings that reflect key areas of research, ranging from collaboration between families and teachers to educational resilience in crisis contexts. These groupings facilitate the identification of patterns of academic interest and inform the design of inclusive strategies. The following section presents a synopsis of the primary theme that is identified within each of the aforementioned clusters.

Figure 7. Bibliographic coupling analysis by article (≥ 10 citations)



Source: Own elaboration, 2025

Group 1 (Gregg et al., 2016; Pantić et al., 2022; Sannen et al., 2021; Schuster et al., 2021; Wright & Taylor, 2014) (146 citations, 5 articles): Collaboration, Social Networks and Family: Key Principles Underpinning Inclusive and Equitable Education.

The corpus of five articles has received a total of 146 citations. The common theme of this cluster is the promotion of educational inclusion through the utilisation of social media, advocacy by families, inclusive teacher training, educational collaboration and the formulation of public policies for equity.

It is notable that one of the most frequently cited articles (54 citations) is by Wright (2014). The present study explores how families, especially parents, defend the rights of their children with disabilities using settings such as schools, medical clinics, services, and social media. The latter are considered to be pivotal instruments for fostering connections with other parents, facilitating the exchange of experiences, and enhancing public awareness regarding the requirements of these children.

Parents employ various strategies to address these issues, including the pursuit of knowledge about their children's conditions, the promotion of awareness among professionals, and the proactive seeking of services and accommodations. This study underscores the pivotal role of families and social media in fostering inclusive environments and facilitating access to essential services. It further emphasizes the imperative of implementing policies that enhance their advocacy capacity.

The second most frequently cited article is by Schuster (2021), which has received 31 citations. The article analyses the manner in which the microblogging platform Twitter contributes to the global discourse on inclusive education for students with disabilities. The utilisation of social media analysis facilitates the identification of pivotal actors, including international organisations, disability groups and technology companies, who exert a significant influence on the dissemination of information and the political agenda.

It emphasises the function of these platforms in establishing connections between educational communities and encouraging collaboration concerning the rights of disabled individuals, thereby promoting their access to inclusive education. Furthermore, the text emphasises the significance of engaging families in these deliberations to guarantee effective inclusive practices.

The study concludes that social media amplifies the voices of advocates and acts as a strategic tool for the strengthening of inclusive education.

Thirdly, with 28 citations, the article by Pantić et al., (2022) examines how teachers, as promoters of educational transformation, utilise their social and epistemological networks to implement inclusive practices, particularly in supporting students with disabilities and their families.

A study conducted in two Swedish schools revealed that teachers with broader and more diverse networks have more straightforward access to resources and strategies to meet specific needs, thereby promoting both well-being and inclusive learning.

Furthermore, interaction with families is pivotal to the enhancement of these practices and the establishment of more equitable educational environments. The study emphasises the manner in which school policies and institutional conditions influence teachers' capacity to collaborate and overcome barriers, thereby underscoring the importance of strengthening networks and capacities to ensure inclusive and effective education.

In the following section, the article by Gregg et al. (2016) is examined. This article analyses how e-mentoring, supported by social networks and virtual environments, can improve the educational continuity of students with disabilities in science, technology, engineering and mathematics (STEM). The article has been cited 20 times. The findings indicate that these platforms have the capacity to facilitate learning, cultivate skills such as self-determination and self-advocacy, and enhance motivation in relation to mathematics and science.

The provision of emotional and academic support by e-mentoring also benefits families, whose role is identified as being key to the educational process. The integration of families and the utilisation of accessible technologies have been demonstrated to reinforce support and contribute to student success. The study emphasises the necessity for inclusive initiatives that integrate technology, mentorship and family participation to foster equitable engagement in STEM.

Finally, with 13 citations, Sannen's (2021) article analyses how teacher collaboration influences the inclusion of students with special educational needs (SEN) through an approach based on social interactions, including those observed through social network analysis. Greater frequency and intensity of mutual support among teachers has been demonstrated to promote positive attitudes toward

diversity and teaching that is more tailored to individual needs. In contrast, overly centralised networks have been shown to limit these inclusive practices.

Although external support is provided with a high frequency, its impact is limited in scope due to its orientation towards supporting students rather than enhancing the professional development of teachers. The importance of integrating the families of students with SEN into these dynamics is highlighted, fostering balanced collaboration between teachers, families and other educational actors to build inclusive and effective environments.

Group 2 (Avramidis, 2013; Banks et al., 2018; Bossaert et al., 2015; De Boer et al., 2002; Grutter & Meyer, 2014) (157 citations across 5 articles): Social Dynamics in the Classroom: Friendships, Inclusion, and the Role of Teachers and Families.

This group comprises five studies that have accumulated a total of 157 citations. The central theme is the exploration of social dynamics in inclusive classrooms, with a focus on the factors that promote or hinder positive interactions between students with and without special educational needs (SEN). One of the most cited articles (Avramidis et al., 2013; 50 citations) challenges the traditional view of SEN students as socially isolated. The study reveals that, while these students are less popular and have fewer friends, they have a positive self-concept in areas such as academic performance and social acceptance. The findings suggest that SEN does not determine social isolation and emphasise the importance of enhancing self-perception and preventing the exclusion of all students through inclusive strategies.

The second most-cited article (47 citations) is by De Boer et al. (2002) and analyses the acceptance and friendships of students with disabilities in inclusive primary education. The study identifies positive peer attitudes as essential for integration but also notes that the presence of teaching assistants can reduce social interactions among these students. Additionally, it emphasises the indirect role of families in fostering inclusive attitudes, highlighting the need for interventions to improve social relationships in school settings.

Thirdly, the article by Grütter et al. (2014), which has received 27 citations, examines how teachers' beliefs about diversity impact social inclusion. The results show that teachers who promote a positive view of individual differences facilitate friendships between students with and without SEN, thereby reducing social exclusion. The article also highlights the role of families and social networks in creating an inclusive and collaborative environment.

Next, the article by Bossaert et al. (2015), with 18 citations, focuses on the quality of reciprocal friendships among SEN students at the beginning of secondary school. Despite receiving similar support to their neurotypical peers, students with autism spectrum disorders (ASD) report less intimacy in their relationships. The importance of social and family networks in fostering friendships that act as buffers against negative experiences, such as bullying, is emphasised.

Finally, the article by Banks et al. (2018), which has received 15 citations, analyses data from a longitudinal study on peer relationships among students with SEN. The results suggest that these students, particularly those with emotional and behavioural difficulties, face greater challenges in their social relationships. The study therefore suggests implementing specific interventions to improve social inclusion and reduce exclusion in educational settings.

Taken together, these studies emphasise the importance of positive social interactions in the development of students with SEN. An inclusive approach involving families, teachers, and peers can help create more equitable and collaborative educational environments, ensuring learning opportunities and well-being for all students.

Group 3 (Allen et al., 2014; Mamas et al., 2020; Schwab et al., 2021) (259 citations, 3 articles): Friendship Networks and Social Participation: Perceptions and Strategies for the Inclusion of Students with SEN

This grouping of three articles has accumulated a total of 259 citations, focusing its analysis on friendship networks and the social perception of students with special educational needs (SEN) in inclusive settings. The overarching theme of these studies pertains to the manner in which social interaction dynamics are influenced by the perceptions of teachers, students, and the role of families. In contradistinction to other topics, this approach focuses on the quality, stability and construction of reciprocal friendships, highlighting the importance of specific strategies to strengthen social participation.

The article that has been cited most frequently, with 230 citations, is that of Allen et al. (2014). This article analyses the impact of social media use on adolescents, considering both the advantages and the challenges associated with its use. The findings underscore the role of these platforms in fostering the establishment of communities and connections, thereby engendering a sense of belonging and promoting psychosocial well-being. Nevertheless, they also identify detrimental effects, such as alienation and social exclusion, thereby highlighting the dual impact of digital tools on social connectivity. This study underscores the significance of social media as a milieu for adolescent development and proffers recommendations for professionals and researchers in the domains of educational and developmental psychology.

The second most frequently cited article, with 18 citations, is the article by Mamas et al. (2020). This article explores the social participation of students with disabilities in inclusive secondary schools using social network analysis models. The findings indicate that students with SEND are more likely to establish supportive bonds with their peers, yet less likely to form reciprocal friendships with students without disabilities. The text goes on to highlight the crucial role of families in the integration of students, and the importance of digital and school social networks in promoting meaningful interactions. This work emphasises the necessity for educators to develop a more profound comprehension of classroom social structures, thereby facilitating the implementation of strategies that enhance inclusivity and cultivate quality relationships.

Finally, with 11 citations, the article by Schwab et al. (2021) analyses friendship networks in inclusive classrooms from the perspectives of students and teachers. Utilising a mixed-methods approach, the study ascertains that students with SEN exhibit a lower prevalence of reciprocal friendships in comparison to their peers without SEN. Furthermore, the study identifies a discrepancy in the accuracy of teachers' and students' perceptions of each other's social networks, with the former tending to be less accurate than the latter. The study emphasises the significance of mutual support, shared time, and common interests in the formation of friendships, underscoring the pivotal role of families in fostering inclusive social environments. Furthermore, it underscores the capacity of social media to cultivate favourable relationships and underscores the significance of pedagogical approaches that facilitate effective social integration.

The articles under consideration collectively underscore the pivotal role of social media, family, and pedagogical approaches in enhancing social inclusion for students with special educational needs (SEN). The research offers key insights for the development of policies and practices that foster meaningful relationships, with the aim of promoting more inclusive and collaborative educational environments.

Group 4 (Cook & Winstone, 2016; McDonald et al., 2023; Morgül et al., 2022) (67 citations, 3 articles): Global Crises, Social Media, and Inclusive Education: Challenges and Adaptations for the Well-being of Students with Special Educational Needs and Their Families

This grouping of three articles has accumulated a total of 67 citations and explores how global crises, such as the pandemic caused by the SARS-CoV-2 virus, affect the social-emotional well-being, daily habits, and social participation of students with special educational needs (SEN). In contrast to previous clusters, this approach emphasises disruptions to routines, lack of access to services, and the role of social media. This underscores the importance of adaptive strategies and comprehensive support during emergency situations.

The most frequently cited article, with 31 citations, is Cook et al. (2016), which analyses the learning experiences, friendships and bullying of children with autism spectrum disorders (ASD) in inclusive and specialised settings. The findings indicate that students in inclusive settings are subject to a heightened risk of bullying, stemming from internal difficulties, such as social interaction problems, and external factors, such as a paucity of resources and understanding in the school environment. Despite the challenges faced, reciprocal friendships, albeit limited in scope, have been identified as a significant protective factor against bullying. The study emphasises the pivotal function of families, who frequently intervene to nurture friendships and advocate for their children. Furthermore, the capacity of social networks, both within the classroom and in digital spaces, to raise awareness and promote social inclusion is emphasised, underscoring the necessity for teacher training and comprehensive strategies to enhance the well-being of students with ASD.

Secondly, the article by Macdonald et al. (2023) is noteworthy, having received 25 citations. This article investigates problems with school attendance (SAP) in the context of the pandemic caused by the severe acute respiratory syndrome (SARS-CoV-2), particularly in children with special educational

needs (SEN). The study identifies factors such as anxiety related to the pandemic, abrupt changes in school routines, and academic pressure as the primary causes of SAP. Furthermore, it is emphasised that the disruption of support services and the absence of effective communication between families and schools have compounded the issue. The importance of effective collaboration between families and schools is emphasised, with the observation that positive relationships and the use of social media can facilitate communication and access to resources. Furthermore, it emphasises the necessity for early intervention and emotional support for both children and their families, employing strategies that actively engage the entire educational community.

Finally, with 11 citations, the article by Morgül et al. (2022) examines the impact of the lockdown measures implemented in response to the pandemic on the social and emotional well-being and daily habits of children with special educational needs (SEN) in the United Kingdom, as perceived by their carers. The findings indicate that these children encounter elevated levels of emotional and behavioural difficulties in comparison to their peers without SEN, which include an augmentation in screen time and a diminution in physical activity and sleep. Furthermore, elevated levels of stress were reported within the family unit, attributable to the disruption of habitual routines and the absence of access to support services. The article under scrutiny highlights the role of social media as a tool for maintaining social and emotional connections during lockdown. However, it also points to the potential negative effects of excessive screen use. The report emphasises the necessity for inclusive policies and specific support to enhance the well-being of both children and their carers. It also proposes adaptive strategies for crisis situations.

The findings of this research highlight the significance of effective collaboration between families, teachers and communities in mitigating the adverse effects of global crises on students with SEN. The findings offer practical recommendations for developing inclusive policies and strategies that promote the social-emotional well-being and social participation of students and their families.

Group 5 (Cerde et al., 2018; Duque et al., 2021) (26 citations, 2 articles): School Climate and Academic Performance: Strategies for Inclusion and Conflict Resolution in Students with SEN

This grouping, consisting of two articles with a total of 26 citations, analyses how school climate and coexistence affect the academic performance and well-being of students with special educational needs (SEN). The overarching theme of the study focuses on the influence of school relationships, conflict prevention strategies, and the role of families and social networks in inclusive educational contexts.

The most frequently cited article, with 14 citations, is by Duque et al. (2021), which addresses the implementation of the Dialogic Model of Conflict Prevention and Resolution (MDPRC) in special education contexts. The findings demonstrate the efficacy of the model in reducing violence, establishing support networks, and empowering students with disabilities. Active student participation in decision-making has been demonstrated to foster a more inclusive school climate and more equitable relationships, while developing skills to prevent violent behaviour. Furthermore, the family unit plays a pivotal role in reinforcing the values of the model within the domestic environment. Additionally, the impact of the model is expanded through community social networks, thereby engendering safer and more supportive environments for the well-being of students with special educational needs (SEN).

Secondly, the article by Cerde et al. (2018) is noteworthy, having received 12 citations. This article offers an analysis of the manner in which school coexistence influences the academic performance of students with typical development and SEN in highly socially vulnerable contexts. The findings of the study suggest that students with SEN encounter elevated levels of victimisation and aggression, which has a detrimental effect on their academic performance. Conversely, a paucity of discipline on the part of the pupils, compounded by a lack of commitment on the part of the teaching staff, serves only to exacerbate the aforementioned difficulties. The study emphasises the significance of the family unit in fostering school coexistence and underscores the potential of social networks as instruments to promote integration and mutual support among students. The findings emphasise the necessity of implementing strategies that foster a positive school environment, with a focus on collaborative interaction between students, teachers and families.

Collectively, these articles underscore the pivotal role of an inclusive school environment and conflict prevention in enhancing the academic performance and well-being of students with SEN. The findings of both studies offer valuable insights for the development of practices and policies that foster more equitable, safe, and collaborative educational environments.

In relation to keyword clusters, the analysis yielded three primary classifications.

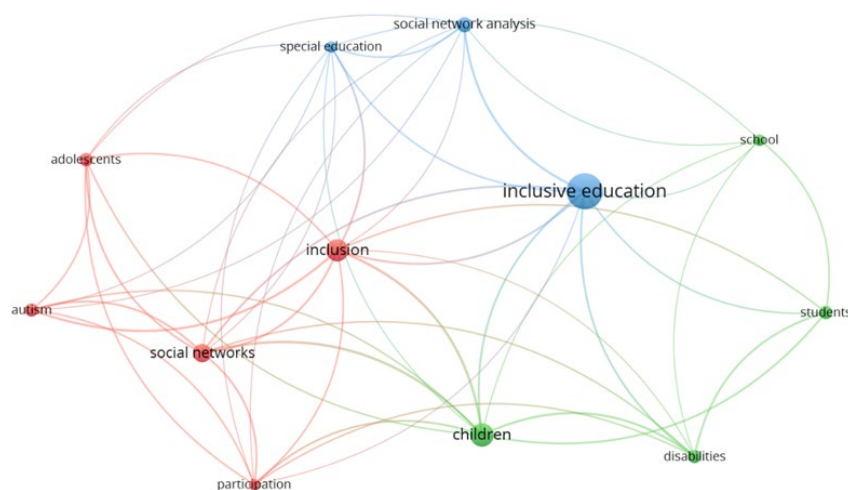
The initial cluster, comprising five elements, encompasses terms such as 'adolescents,' 'autism,' 'inclusion,' 'participation,' and 'social networks.' This cluster pertains to issues associated with the inclusion and participation of adolescents, particularly within the context of social networks and autism.

The second cluster, comprising four elements, includes words such as 'children,' 'disabilities,' 'school,' and 'students.' The focus of this study is children with disabilities and their participation in school settings.

The third cluster, consisting of three elements, includes such words as 'inclusive education,' 'social network analysis,' and 'special education.' The present cluster focuses on inclusive and special education, in addition to the utilisation of social network analysis within this particular context.

The keyword network analysis presented in Figure 8 illuminates pivotal concepts such as inclusion, participation, and social networks. These terms reflect not only the predominant focus in current research, but also critical areas to address in future studies.

Figure 8. bibliometric coupling analysis by word networks (≥ 5 words).



Source: Own elaboration, 2025

3.3.2. Strategic Thematic Diagram

The analysis of the impact of social media on the satisfaction of families with children with special educational needs can be approached from a strategic perspective, using the thematic diagram presented (see Figure 10). The diagram provides a comprehensive overview of the relevance and development of related topics, allowing priority areas to be identified for further exploration.

The themes located in the upper right quadrant, which are termed 'driving themes,' reflect concepts such as attitudes towards school, beliefs, and academic achievement. These aspects are essential to understanding how families perceive the quality of inclusive education and the role that social media plays in shaping these attitudes. Digital platforms have the capacity to function as catalysts, thereby either strengthening or weakening families' trust in educational institutions, either through the provision of access to information or by the reinforcement of support communities.

Conversely, in the upper left quadrant, where 'niche issues' are identified, concepts pertaining to adolescents, social media, participation and adjustment emerge. Although less central, these themes provide a meaningful framework for exploring the impact of social media on the lives of students with special educational needs. The role of social media in facilitating social and school integration, promoting positive adjustment, or creating additional barriers, is a subject of much debate. It is

imperative to analyse how these tools influence students' emotional and social well-being, as well as their perception of educational inclusion.

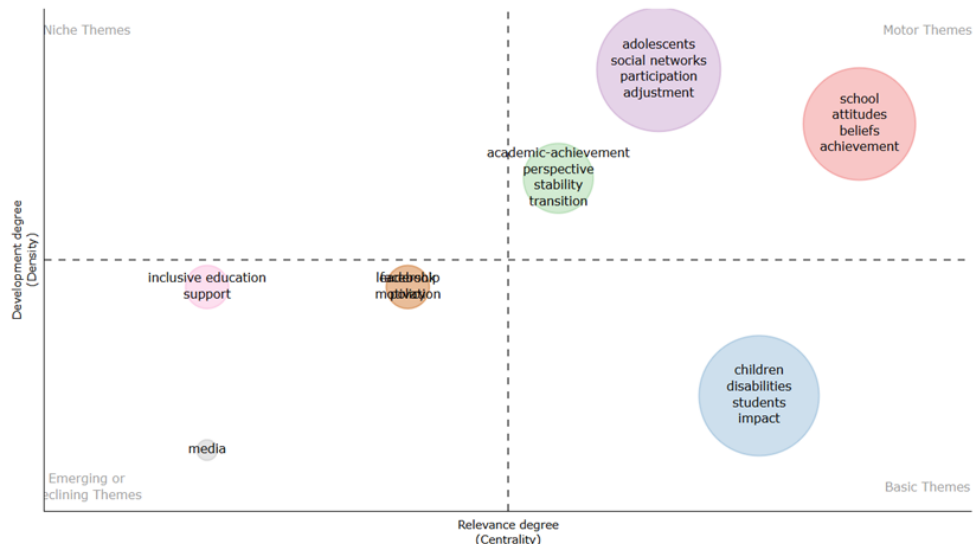
In the lower right quadrant, which groups together 'basic issues,' there is a clear emphasis on children, disabilities, students, and impact. These issues are critical for establishing the overall context of the article and connecting the impact of social media with the everyday experiences of families. Digital platforms have the capacity to facilitate access to educational resources, promote the exchange of experiences between parents, and create a space for emotional support. It is imperative to comprehend the manner in which families perceive the aforementioned benefits and challenges, as this will facilitate the development of more efficacious intervention strategies.

Finally, in the lower left quadrant, which includes 'emerging or declining issues,' are concepts such as inclusive education, support, and media. These issues, though less developed, have considerable potential for exploring innovative trends, such as the use of social media to promote educational inclusion. It is imperative to emphasise the potential of these platforms to function as pivotal instruments in the dissemination of information, the promotion of collaboration between families and professionals, and the assurance of the educational rights of students with special needs.

It is suggested by strategic analysis that social media has the capacity to play a central role in improving family satisfaction within the framework of inclusive education. Addressing these issues from multiple perspectives will allow for the identification of both opportunities and challenges, promoting the development of more equitable and resilient educational environments. This inclusive approach is expected to contribute to the enhancement of educational quality, as well as to the strengthening of family and community well-being in the context of special educational needs.

The visual representation of the aforementioned themes can be observed in Figure 9, which methodically organizes them into four strategic quadrants. This facilitates the interpretation of their relevance and development within the field of study.

Figure 9. Strategic thematic diagram



Source: Own elaboration, 2025

4. Discussion

The results of this bibliometric study demonstrate a growing interest in the utilisation of social media as a tool for the enhancement of educational inclusion, which is in accordance with previous literature that highlights their transformative potential in school contexts (Grütter & Meyer, 2014; Schwab et al., 2021). It is evident that the 6.5% annual growth in publications on this topic during the 2013–2024 period is indicative of a sustained trend in research. This coincides with theoretical projections on digitalisation as a catalyst for collaboration and support in inclusive educational settings (Bossaert et al., 2015; Wright et al., 2022).

A salient finding was the pivotal role of social media in fortifying the bonds between families and schools. This finding aligns with the findings of previous research emphasising the significance of collaboration among educational stakeholders in fostering the involvement and well-being of students with SEN (Mamas et al., 2020; Cerda et al., 2018). Nevertheless, this study also identifies significant challenges, such as technological inequality and a lack of digital skills, which hinder the effective implementation of these tools. This finding underscores a lacuna in the extant literature that should be addressed in future research, especially in terms of specific strategies to overcome these barriers (Pantić et al., 2022).

In relation to the theoretical framework, the results underscore how social media can act as inclusive spaces that facilitate the formation of supportive communities and promote inclusive values. This is especially pertinent in pandemic contexts, where these platforms have been shown to play a crucial role in maintaining educational continuity and strengthening family relationships in the face of the challenges of remote learning (McDonald et al., 2023; Morgül et al., 2022). The data also suggests that the impact of these platforms is not limited to social interactions, but encompasses emotional and practical dimensions, consolidating their value as multifunctional tools in inclusive education.

However, the analysis revealed several unanticipated findings. For instance, although social media has been demonstrated to be a valuable resource, its full potential remains limited by factors such as cyberbullying and perceptions of online insecurity. These findings contradict the theoretical predictions that digitalisation would entirely eliminate social barriers (Schuster et al., 2021). This observation underscores the necessity for a more comprehensive approach, integrating digital training with online safety policies, to optimise the benefits of these tools.

This study is of significant practical importance. On the one hand, it underscores the necessity to equip families and educators with the knowledge and skills to utilise social media in an effective and secure manner. Conversely, it emphasises the significance of ensuring equitable access to technology, particularly in communities with limited resources. It is vital to acknowledge the significance of both of these aspects in order to establish social media as a strategic ally in the pursuit of inclusive education.

In summary, the results of this analysis confirm the relevance of social media as a mediator in inclusive education and broaden the theoretical framework by identifying specific opportunities and challenges. These findings provide a solid basis for the design of educational interventions and public policies aimed at strengthening the bonds between families and schools, promoting more inclusive and sustainable educational environments.

5. Conclusion

This bibliometric study underscores the mounting influence of social media on inclusive education, underscoring its function as a pivotal instrument for fostering communication, facilitating access to resources, and fostering collaboration between families and schools. The findings indicate that these platforms not only enhance the perception of support among families of students with special educational needs (SEN) but also foster more cohesive and equitable educational communities. Nevertheless, there are critical challenges that must be addressed if their potential is to be maximised.

From a research perspective, it is essential to deepen the analysis of specific contexts, especially in communities with less access to technology, in order to understand how these tools can be adapted to situations of technological inequality. In addition, it would be beneficial to undertake longitudinal evaluations to ascertain the long-term implications of social media utilisation on perceptions of family support and the educational outcomes of students with special educational needs (SEN). In addition, it would be pertinent to undertake a comparative analysis of the impact of various platforms on educational inclusion dynamics. This would facilitate the identification of those platforms that demonstrate the greatest effectiveness. Finally, the development of specific metrics to measure the emotional, social and practical impact of the use of these tools in inclusive educational contexts could provide useful tools for both researchers and educational leaders.

In practical terms, social media offers significant opportunities, provided that appropriate interventions are in place. The development of digital skills training programmes for teachers, families and students is a priority, with the objective of promoting the effective and safe use of these tools, and with a clear focus on building inclusive interactions. Furthermore, it is imperative to ensure equitable access to devices and connectivity, particularly in disadvantaged areas, as a prerequisite for the effective implementation of these tools. The implementation of clear cybersecurity policies is equally crucial to

prevent and manage risks such as cyberbullying, and to establish safe and reliable digital environments. Furthermore, it is recommended that the utilisation of social media platforms be encouraged for the development of collaborative strategies between families and schools. Such strategies may include the establishment of virtual support groups and forums for the sharing of experiences. The integration of these tools into teaching strategies has the potential to foster inclusive values and enhance student participation, thus contributing to the development of a more equitable education system.

The findings of this investigation serve to reinforce the importance of social media in the establishment of an inclusive and equitable education system. However, achieving this objective necessitates a comprehensive approach to the prevailing barriers, encompassing technological lacunae and a paucity of digital competencies. The proposals presented here can serve as a roadmap for both future research and the implementation of effective educational practices. It is only through a collective and coordinated effort that the transformative potential of social media in inclusive education can be fully harnessed.

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