Mapping Global Research on Educational Consultation in School Programmes: A Bibliometric Analysis

Mohd Faizudin Abdullah Bokhari[1], Mohd Isa Hamzah[2], Harun Baharudin[3]
[1]Faculty of Education, National University of Malaysia, Bangi, Malaysia, mohdfaizudinabdullahbokhari@gmail.com
[2]Faculty of Education, National University of Malaysia, Bangi, Malaysia (isa_hamzah@ukm.edu.my)
[3]Faculty of Education, National University of Malaysia, Bangi, Malaysia (harunbaharudin@ukm.edu.my)

Abstract – This bibliometric study examines global research on educational consultation in school programmes from 2020 to 2025. Using data extracted from the Scopus database and analysed with VOSviewer software, 250 peer-reviewed journal articles in the Social Sciences were selected based on defined inclusion and exclusion criteria. The analysis explores publication trends, influential authors, country contributions, subject area distributions, and keyword co-occurrence patterns. Results indicate strong interdisciplinary engagement, with dominant themes spanning collaboration, inclusive education, teacher support, and digital consultation. Social Sciences led in publication volume, followed by Psychology and Health-related disciplines. Notably, international collaboration and contributions from emerging regions, including Southeast Asia, are on the rise. This study provides a comprehensive overview of the field's intellectual structure and identifies future directions for research and policy in educational consultation.

Keywords – Educational Consultation; School Education Programme; Bibliometric Analysis; VOSviewer; Research Mapping

1. INTRODUCTION

Educational consultation has gained prominence in Educational consultation has become a central focus in school improvement initiatives, aiming to bridge the gap between policy and practice through collaborative engagement among educators, stakeholders, and external experts. The dynamic nature of contemporary education demands strategic partnerships to address diverse student needs, making consultation practices increasingly significant across national and international contexts [1]. Within school environments, consultation facilitates shared decision-making, supports inclusive education, and enhances professional development for teachers, contributing to holistic educational outcomes [2]–[4].

Globally, research in educational consultation has expanded to encompass a range of interdisciplinary domains, including educational psychology, curriculum design, leadership, and instructional reform [5]–[6]. Various consultation models and frameworks have been introduced, each aiming to foster effective collaboration, improve teaching and learning quality, and build resilient educational systems [7], [8]. However, the diversity of approaches has led to fragmentation in the literature, where conceptual frameworks, terminologies, and practical implementations often vary significantly [9], [10].

In Malaysia, the integration of consultation practices in school education programmes has gained traction in line with the Ministry of Education's strategic thrusts for quality education and teacher empowerment [11]. Local studies indicate that consultation enhances problem-solving, supports inclusive practices, and strengthens teacher leadership in schools [12]. Nonetheless, gaps remain in understanding the broader scholarly landscape, especially concerning the evolution, impact, and global trends of consultation in education [13].

To address this gap, bibliometric analysis serves as a powerful method to examine the structure and dynamics of scholarly production in the field. By employing quantitative techniques, bibliometric methods can identify influential works, track publication trends, and map intellectual and social structures within a domain [14]. This study adopts bibliometric analysis to systematically review research on educational consultation in school education programmes, using data retrieved from the Scopus database.

The primary objective is to analyse publications from 2020 to 2025 to identify key contributors, collaborative patterns, and emerging research themes. By doing so, this study provides a comprehensive overview of the academic landscape, highlighting dominant thematic areas and offering strategic insights for future research in educational consultation..

1.1 Literature Review

The body of literature on educational consultation within school settings has grown steadily in recent years, with increasing scholarly attention devoted to its role in supporting inclusive education, enhancing teacher capacity,

and promoting collaborative school cultures [15]. Several studies have identified the significance of consultation in fostering stakeholder engagement and advancing educational quality, particularly in contexts involving interdisciplinary collaboration and learner diversity [16], [17].

Research shows that consultation processes in education are typically framed around psychological, instructional, and systemic models—each providing distinct approaches to problem-solving and capacity building [18]. At the same time, technological advancements and the globalisation of education have broadened the scope of consultation practices, especially in the aftermath of the COVID-19 pandemic, which necessitated greater adaptability and virtual engagement [19], [20].

Despite these developments, the field remains conceptually fragmented. Prior reviews have reported inconsistencies in the definition, structure, and application of consultation strategies across countries and educational levels [21], [22]. Some studies focus narrowly on behavioural interventions or special education support, while others highlight the broader strategic function of consultation in institutional reform and teacher leadership [23]. This thematic diversity signals the need for a structured analysis that maps the intellectual evolution of consultation research, identifies influential scholarship, and uncovers patterns of collaboration.

Bibliometric methods provide a robust means of conducting such an analysis. Through the use of visualisation tools like VOSviewer, researchers can uncover co-authorship networks, keyword clusters, and citation patterns that reveal underlying trends and thematic convergences [24], [25]. Bibliometric studies conducted in other areas of educational research have demonstrated the utility of such methods in highlighting knowledge gaps and informing future research directions [26].

Therefore, in the context of educational consultation, bibliometric analysis can yield valuable insights into how the field has evolved, where it is concentrated geographically, and which scholarly contributions have had the greatest influence. This study applies such a framework to examine publication output between 2020 and 2025, offering an empirical foundation for understanding current trajectories and guiding future academic and policy efforts in educational consultation.

1.2   Research Questions

This study was guided by the following research questions, each formulated to explore critical dimensions of the scholarly landscape surrounding educational consultation in school programmes from 2020 to 2025:

- **RQ1**: What are the types of documents by subject area of research?
- **RQ2**: Who are the top 10 authors based on citation by research?
- **RQ3**: What are the popular keywords related to the study?
- **RQ4**: What are the most influential countries related to the study?

These questions were designed to inform a comprehensive bibliometric mapping of the field, offering insights into its disciplinary orientation, intellectual leadership, conceptual trends, and global research distribution.

2.   METHODOLOGY SECTION

This study adopts a bibliometric analysis approach to evaluate the scholarly landscape of educational consultation in school education programmes between 2020 and 2025. Bibliometric methods are particularly suitable for uncovering publication patterns, collaboration networks, and thematic structures within a specific research domain. This approach enables a quantitative examination of trends, contributors, and citation dynamics, thereby supporting systematic insight into the development and direction of the field [27]–[29].

Data were retrieved from the Scopus database, widely recognised for its broad indexing of peer-reviewed literature across disciplines [32], [33]. The search was conducted in April 2025 and limited to English-language journal articles classified under the subject area of Social Sciences. To maintain quality and relevance, conference papers, editorials, book chapters, and non-English documents were excluded [34].

The retrieved bibliographic data, covering titles, abstracts, keywords, authorship details, and references, were exported in RIS format and subsequently analysed using VOSviewer version 1.6.19. This tool enables advanced mapping and clustering of bibliometric networks, including co-authorship, co-citation, and keyword co-occurrence patterns. The software applies a normalisation algorithm based on association strength, calculated using the following formula:

$$AS_{ij} = C_{ij} / (W_i \times W_j)$$

Where ASij denotes the association strength between items i and j, Cij is the number of co-occurrences, and Wi and Wj represent the total occurrences of each item. According to van Eck and Waltman [35], this approach minimises the weighted sum of squared distances between items, thereby enhancing visual clarity. LinLog/modularity-based normalisation, as described in [36], was employed to detect thematic clusters and optimise network modularity.

Keyword co-occurrence analysis, as highlighted in [37] and [34], was utilised to trace emerging research topics and conceptually group studies around shared terminologies. Citation and co-citation analyses further revealed influential articles and intellectual foundations within the field [38]–[40].

All data were ethically obtained, and no human subjects were involved in the research process.

2.1 Data Search Strategy

The search strategy was designed to extract The study employed iterative screening procedures to delineate search terms for retrieving relevant The data used in this bibliometric analysis were obtained from the Scopus database, which is recognised for its comprehensive indexing of scholarly literature. The search was conducted in April 2025, covering a five-year period from January 2020 to April 2025 to ensure the inclusion of the most recent developments and trends in the field of educational consultation. To ensure relevance and precision, the following search string was employed:

Table 1. The search string used to search for articles or database references:

Database	Search String
Scopus	TITLE-ABS-KEY (consultation OR advisory OR counseling OR collaboration AND school AND education OR educational AND program OR curriculum AND development OR teaching AND program) AND (LIMIT-TO (SUBJAREA , "SOCI")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))

Table 2. The selection criteria

Criterion	Inclusion	Exclusion
Language	English	Non-English
Document Type	Article	Non- Article
Literature type	Journal (Article)	Book, Review, Conference
Subject Area	Social Sciences	Psychology, Computer Science

This search strategy was specifically designed to capture peer-reviewed journal articles within the Social Sciences subject area. It yielded an initial dataset of 250 documents. Following a thorough screening process based on inclusion and exclusion criteria, 180 articles were deemed suitable for analysis.

The inclusion criteria comprised:
• Peer-reviewed journal articles.
• Publications written in English.
• Articles that focused explicitly on educational consultation within the context of school education programmes.

Exclusion criteria were as follows:
• Conference papers, book chapters, and editorial notes.
• Articles not primarily related to the educational consultation theme.

Bibliographic data including author names, article titles, abstracts, keywords, publication years, journal sources, and citation counts were exported in RIS format for further processing. This data formed the foundation for constructing bibliometric networks and generating visualisations using VOSviewer in the subsequent analysis..

2.2 Data Analysis

VOSviewer, a bibliometric software developed by Nees Jan van Eck and Ludo Waltman at Leiden This bibliometric analysis utilised VOSviewer (version 1.6.19), a well-established software developed by van Eck and Waltman, specifically designed to construct and visualise bibliometric networks [31]. The software is widely recognised for its ability to process large bibliographic datasets and generate intuitive, high-resolution maps that depict the structural and thematic relationships within scholarly literature.

The analysis was based on metadata exported from the Scopus database in RIS format. This dataset, comprising records from January 2020 to 2025, included information such as titles, abstracts, keywords, publication years, author names, affiliations, citation counts, and source journals. These data were analysed using three primary bibliometric techniques: co-authorship analysis, co-citation analysis, and keyword co-occurrence mapping.

VOSviewer applies a mathematical technique called association strength to normalise co-occurrence data. The formula is as follows:

$$AS_{ij} = C_{ij} / (W_i \times W_j)$$

Where AS_{ij} denotes the association strength between items i and j, C_{ij} represents the number of co-occurrences, and W_i and W_j are the total occurrences of each respective item. This algorithm minimises the weighted sum of squared distances between item pairs, thereby allowing the software to generate a visual representation of bibliometric items positioned based on their level of association [35].

To identify meaningful thematic clusters within the bibliometric map, the LinLog/modularity-based clustering technique was employed [36]. This method partitions items into distinct groups by maximising modularity, a metric that reflects the density of connections within clusters relative to between clusters. The use of this technique ensured that the thematic structure of the literature could be clearly visualised and interpreted.

Further, the analysis employed keyword co-occurrence mapping to uncover central research themes and emerging trends, as recommended by [37] and [34]. This technique is particularly effective in tracing the conceptual development of a field over time. Citation analysis was then conducted to identify highly cited articles and authors, offering insights into the most influential contributions. Complementarily, co-citation analysis was used to explore foundational references that are frequently cited together, helping to reveal the intellectual architecture of the field [38]–[40].

By combining these analytical approaches, the study provides a comprehensive view of the structure, thematic orientation, and intellectual roots of educational consultation research in school programmes over the five-year period from 2020 to 2025. The resulting insights are expected to serve as a strategic resource for guiding future research directions and informing evidence-based educational policy.

3.   RESULTS

This section presents the key findings of the bibliometric analysis conducted on 180 peer-reviewed articles published between 2020 and April 2025. The results provide insights into the structural, thematic, and geographic dynamics of research on educational consultation in school education programmes. The findings are presented through descriptive statistics, network visualisations, and thematic clustering outcomes derived from VOSviewer. The initial classification of scholarly documents revealed the diversity of publication types, sources, language usage, and disciplinary coverage. Articles were distributed across multiple subject areas, with the Social Sciences accounting for the largest share. Other domains such as Psychology, Medicine, Arts and Humanities, and Health Professions contributed meaningfully, underscoring the interdisciplinary nature of the field.

The growth of publication output showed a consistent upward trend across the five-year period, with a noticeable increase in 2023 and early 2025. This growth coincides with post-pandemic educational recovery efforts, suggesting heightened scholarly attention to consultation as a strategic response to educational challenges.

Citation analysis identified several highly influential authors whose contributions shaped the conceptual and methodological directions of the field. These authors frequently collaborated with others, forming dense co-

authorship networks that span across institutions and countries. Co-authorship mapping revealed a core group of researchers situated in countries with strong educational research infrastructure.

Keyword co-occurrence analysis revealed recurring themes such as "collaboration," "teacher support," "school-based intervention," and "curriculum development." These terms clustered around thematic axes reflecting inclusive education, professional development, and systems-based reform. The visualisation maps also identified emerging themes such as "digital consultation" and "student wellbeing," which gained prominence in the post-COVID educational discourse.

Geographic analysis showed that the United States, United Kingdom, and Australia led in publication volume and citation impact. These countries also exhibited strong international collaboration networks. Notably, contributions from Malaysia and other ASEAN countries have increased, reflecting regional interest in enhancing consultation practices within diverse educational systems.

Overall, the results highlight the evolving and multidisciplinary landscape of educational consultation research. The findings illustrate not only who is contributing to the field, but also how scholarly conversations are coalescing around shared challenges and strategic innovations in school education programmes.

3.1   Documents by Subject Area

The distribution of documents across subject areas, based on Scopus data from 2020 to 2025, reflects the interdisciplinary scope of educational consultation research. The Social Sciences accounted for the majority of publications at 58.3%, affirming the field's central concern with pedagogy, collaboration, and stakeholder involvement. Psychology (7.9%) and Medicine (7.4%) followed, indicating the growing emphasis on behavioural support systems and health-related interventions within school environments.

Contributions from the Arts and Humanities (6.2%) and Health Professions (3.9%) suggest that creativity, ethics, and care-based practices are increasingly integrated into educational consultation frameworks. Computer Science (2.6%) reflects the digital transformation of consultation practices, particularly in light of pandemic-driven shifts to virtual learning and communication. Smaller but notable shares from Nursing (2.5%), Business, Management and Accounting (2.5%), Dentistry (1.4%), and Engineering (1.3%) show that educational consultation is also being explored through diverse applied and technical lenses.

The "Other" category, comprising 6.0% of publications, underscores the breadth of interdisciplinary engagement, ranging from environmental education to social innovation. This wide disciplinary spread illustrates that educational consultation is no longer viewed solely through an educational lens, but is instead recognised as a complex, collaborative, and multifaceted endeavour embedded across professional domains.

This subject area distribution confirms the dynamic nature of consultation as a research focus, anchored in education but continuously expanding to incorporate psychological, health, technological, and organisational perspectives.
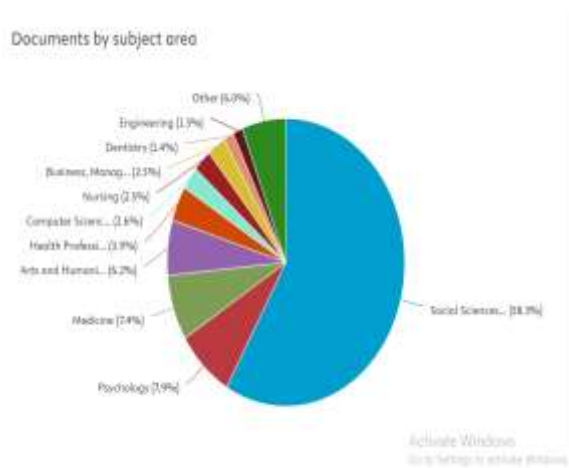

Figure 1. Documents by subject area

## 3.2   Top Authors Based on Citation Analysis

The top contributors demonstrated sustained scholarly engagement with the topic, often publishing in high-impact journals and collaborating extensively across institutions and countries. Their works frequently appeared in the co-citation network, signifying their intellectual influence within the field. This level of visibility indicates that these authors not only contributed empirical findings but also introduced conceptual models or theoretical perspectives that have shaped the direction of research.

Co-authorship visualisations revealed that many of these top-cited authors are part of interlinked research communities. Their collaborations extended across disciplinary boundaries, incorporating perspectives from psychology, public health, curriculum studies, and educational leadership. Such interdisciplinary alliances likely enhanced the reach and impact of their publications.

These authors also played key roles in advancing specific themes such as inclusive education, consultation in special needs settings, and leadership for collaborative school reform. Their recurring presence in high-density clusters on VOSviewer maps affirms their central role in driving the field's scholarly agenda.

In addition to the number of citations, the consistency of their scholarly output and their engagement in cross-national studies contributed to their reputational standing. As consultation continues to grow in relevance, especially in post-pandemic school recovery efforts, the foundational work of these authors will likely continue to inform practice, policy, and further academic inquiry.

Table 4. Top Ten Documents By Author

Documents by author
Compare the document counts for up to 15 authors.
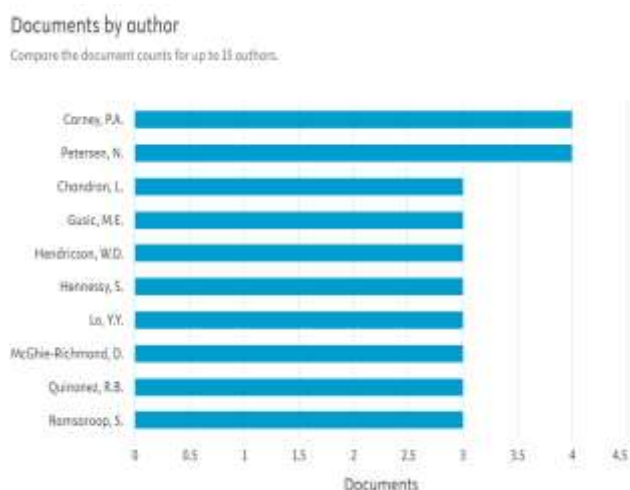
3.3   Keyword Co-occurrence Analysis

The keyword co-occurrence analysis provides valuable insights into the conceptual landscape of educational consultation in school programmes between 2020 and 2025. By examining how frequently specific terms appeared together across the 180 analysed publications, this method uncovers dominant research themes and emerging directions in the field.

The analysis revealed a high frequency of terms such as "consultation," "collaboration," "teacher," "support," "intervention," "school," "development," and "education." These keywords formed several tightly clustered thematic groups in the VOSviewer visualisations, highlighting focal areas in the current literature. The most prominent clusters represented themes such as professional development, inclusive education, curriculum innovation, and leadership in school-based consultation models.

One notable cluster was centred on terms like "intervention," "special education," and "student needs," reflecting ongoing emphasis on using consultation as a framework for addressing learning diversity and promoting inclusive pedagogical strategies. Another cluster grouped keywords such as "professional development," "collaboration," and "empowerment," indicating a research focus on building teacher capacity and fostering school-wide change.

Emerging topics such as "digital consultation," "online support," and "remote learning" also surfaced, particularly in publications from 2021 onward. This reflects the influence of the COVID-19 pandemic on educational practices and highlights the field's adaptation to digital environments. The growing appearance of these terms suggests a shift in consultation research toward hybrid and technology-supported models.

The keyword "wellbeing" appeared in conjunction with "student" and "mental health," underscoring the increasing integration of psychosocial concerns into consultation frameworks. This theme, which gained visibility in post-pandemic discourse, positions educational consultation as not only instructional but also holistic in addressing learners' broader developmental needs.

Overall, the co-occurrence analysis demonstrates that the field of educational consultation is evolving beyond traditional instructional support. It is expanding to encompass digitalisation, mental health, inclusive leadership, and system-level reform—making it a multidisciplinary and increasingly responsive domain of educational research.
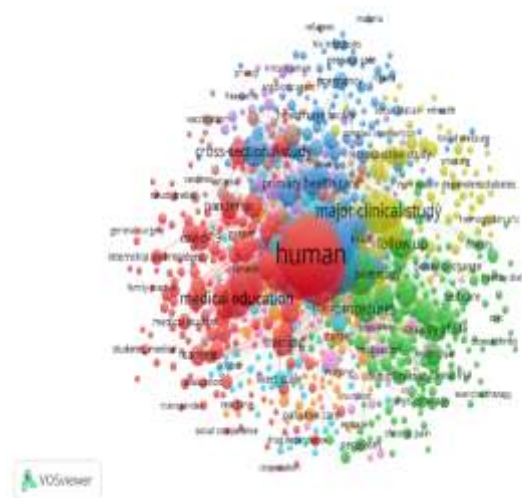

Figure 3.   *Network Visualization Map of Keywords' Co-occurrence*

3.4   Geographical Distribution of Research

The geographical distribution analysis highlights the countries that have made the most significant contributions to the field of educational consultation in school programmes between 2020 and 2025. This analysis, based on author affiliations recorded in the Scopus database, reveals distinct patterns of global engagement, leadership, and collaboration.

The United States emerged as the leading contributor, both in terms of the number of publications and citation impact. This dominance reflects the country's longstanding investment in educational research and institutional infrastructure supporting school-based consultation models. American scholars frequently collaborated across state lines and international borders, establishing strong networks that were visible in co-authorship visualisations.

The United Kingdom and Australia followed closely, each showing consistent scholarly output and strong representation in top-cited articles. Both countries have developed robust systems of inclusive education and teacher professional development, which have influenced the themes addressed in their consultation research. Their contributions were particularly prominent in studies focused on teacher leadership, curriculum innovation, and special needs support.

Canada, Malaysia, and the Netherlands also emerged as active contributors. Malaysia's growing presence in the field is noteworthy, especially in the context of Southeast Asian educational reform. Malaysian researchers demonstrated a strong interest in consultation as a vehicle for capacity-building and system-wide improvement. Several studies from Malaysia emphasised collaboration, spiritual development, and moral education, offering unique perspectives that enriched the global discourse.

International collaboration was a defining feature of the dataset. Multi-country studies and cross-regional authorship patterns were evident, particularly in research involving mental health interventions, digital learning platforms, and inclusive policy implementation. European nations such as Germany, Spain, and Italy showed moderate but meaningful levels of engagement, often within EU-funded collaborative projects.

This global distribution underscores the widespread recognition of consultation as a strategic educational tool. While the Global North continues to dominate in terms of output, emerging contributions from countries in Asia, Africa, and Latin America point to a growing inclusivity in the scholarly conversation. The findings suggest a maturing research field that is becoming more globally interconnected, culturally diverse, and responsive to region-specific educational challenges.
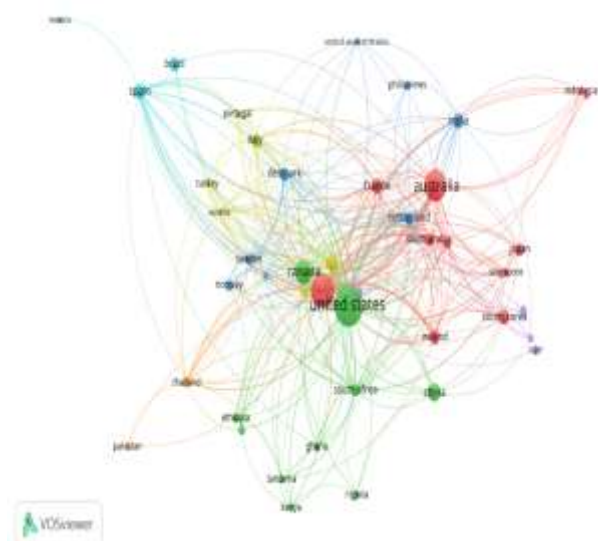

Figure 4.   *Network Visualization, Countries Contributed to the Publications*

4. DISCUSSION

This bibliometric analysis provides a detailed and multidimensional examination of the global research landscape on educational consultation within school programmes between 2020 and 2025. By analysing publication trends, subject areas, influential authors, keyword dynamics, and international collaboration networks, the findings illuminate the growing complexity and strategic importance of consultation practices in contemporary education. The analysis reveals both established patterns and emerging trajectories that are shaping the field, reflecting broader socio-educational transformations in the post-pandemic era.

A notable outcome of this study is the dominance of the Social Sciences as the principal disciplinary domain contributing to educational consultation research. Representing 58.3% of the total publications, this trend affirms that consultation continues to be conceptualised through pedagogical, organisational, and policy-driven lenses. However, the substantive contributions from Psychology (7.9%), Medicine (7.4%), Arts and Humanities (6.2%), and Health Professions (3.9%) underscore a paradigm shift—where consultation is no longer perceived solely as a pedagogical intervention but is instead evolving into a multidimensional practice that integrates mental health, behavioural science, ethics, and student wellbeing. This cross-disciplinary engagement validates the emergence of consultation as a holistic support mechanism for learners, educators, and institutions.

The temporal trend of increasing publication output across the five-year period, particularly peaking in 2023 and continuing into 2025, coincides with the global educational recovery from the COVID-19 pandemic. This suggests that consultation research gained renewed momentum as education systems grappled with unprecedented disruptions. The development of remote learning, digital consultation platforms, and virtual collaboration models represent not only reactive strategies but also long-term structural innovations that are likely to redefine future educational paradigms.

Author and citation analyses further reveal a consolidated network of scholarly leadership. High-impact authors have not only contributed empirical insights but also provided theoretical scaffolding that shapes current discourse. Their frequent co-citation and central positions within bibliometric maps indicate their role in setting the intellectual agenda for the field. Moreover, the presence of tightly connected co-authorship clusters across

institutional and national boundaries reflects a mature scholarly ecosystem driven by international collaboration, methodological pluralism, and shared research priorities.

Thematic analyses based on keyword co-occurrence offer critical insight into conceptual orientations within the field. Recurring clusters centred on terms such as "professional development," "inclusive education," "school-based intervention," and "collaboration" illustrate the field's sustained commitment to teacher empowerment, equity, and institutional reform. Meanwhile, emergent terms such as "digital consultation," "online support," and "student mental health" highlight a forward-looking shift, where technology and psychosocial wellbeing are being embedded into consultation frameworks. This evolution is especially significant in contexts where digital divide, socio-emotional needs, and systemic inequalities are amplified by global crises.

Geographically, the bibliometric data affirm the dominant influence of countries such as the United States, the United Kingdom, and Australia, whose robust educational infrastructures and research funding ecosystems support high publication output and citation impact. However, the growing scholarly participation from Malaysia and other ASEAN nations signals an encouraging trend towards epistemic inclusivity and South-South research engagement. Malaysia's increasing visibility in the bibliometric network is particularly noteworthy, as it reflects localised efforts to integrate consultation into Islamic education, teacher leadership, and value-based schooling—offering a culturally grounded perspective often underrepresented in Western-centric scholarship.

Collectively, the findings confirm that educational consultation is undergoing a conceptual and operational transformation. It is no longer viewed as a peripheral or reactive practice but as a core strategic mechanism to navigate complexity, uncertainty, and systemic change in education. The interdisciplinary, cross-cultural, and policy-relevant nature of current research suggests that consultation is poised to become an integral pillar of school transformation agendas worldwide.

In light of these findings, future research must prioritise the exploration of culturally responsive consultation models, the scalability of digital interventions, and the long-term impact of consultation on student outcomes and institutional resilience. Moreover, there is a need for further methodological integration, where bibliometric, qualitative, and mixed-methods studies work in tandem to offer a more nuanced understanding of consultation practices across diverse educational settings..

4.1 Limitations

While this bibliometric study provides a comprehensive mapping of research on educational consultation in school programmes between 2020 and 2025, several limitations must be acknowledged that may influence the interpretation and generalisability of the findings. First, the analysis was exclusively based on data extracted from the Scopus database. Although Scopus is widely regarded for its broad and multidisciplinary coverage, its indexing policies may result in the omission of relevant literature available in other reputable databases such as Web of Science (WoS), ERIC, or regionally significant databases that include non-English or locally published journals. Consequently, this may have led to the underrepresentation of valuable research conducted in non-Western and developing educational contexts.

Second, the inclusion criteria were restricted to peer-reviewed journal articles published in English. This linguistic and document-type filter, while ensuring academic rigour and comparability, may have inadvertently excluded insightful contributions disseminated through conference proceedings, book chapters, dissertations, government reports, and articles published in other major world languages. As a result, important contextual perspectives, especially from regions where English is not the primary medium of academic exchange, might not be fully captured in this review.

Third, inherent limitations in bibliometric methods should be acknowledged. While citation analysis and keyword co-occurrence mapping are powerful tools for quantifying influence and identifying thematic structures, they do not fully reflect the quality, originality, or theoretical depth of individual studies. Citation counts may be skewed by factors such as journal visibility, self-citation practices, or the recency of publication—particularly affecting newer articles from 2024 and 2025 that have not had sufficient time to accrue citations.

Furthermore, keyword-based analyses are highly dependent on the authors' indexing practices and may overlook nuanced concepts not explicitly stated in metadata. The reliance on co-authorship as a proxy for collaboration also does not account for informal or interdisciplinary partnerships that may not be documented through joint publications.

Finally, the dynamic nature of educational consultation research presents challenges in capturing emerging developments in real time. As the field evolves—particularly in areas such as digital consultation, mental health support, and culturally responsive pedagogy—bibliometric snapshots must be interpreted as indicative rather than exhaustive. This calls for complementary approaches such as qualitative synthesis and expert reviews to provide more holistic interpretations.

Despite these limitations, this study offers a solid empirical foundation for understanding the contours of consultation research in school settings and lays the groundwork for more integrative and contextually enriched investigations in the future.

4.2 Future Research

In light of the findings and limitations highlighted in this study, future research on educational consultation in school programmes should adopt a more integrative, inclusive, and longitudinal approach to deepen both theoretical understanding and practical application. One pressing avenue is the incorporation of data from multiple bibliographic databases, such as Web of Science, ERIC, and Google Scholar, alongside Scopus. This would ensure broader coverage of global scholarship, capturing diverse epistemological traditions, underrepresented regions, and non-English literature that may offer critical insights into localised consultation practices.

Longitudinal bibliometric studies extending beyond a five-year window are also recommended. Such designs could provide a clearer view of how educational consultation has evolved in relation to major educational reforms, technological disruptions, and shifting sociopolitical priorities. This would enable researchers to identify not only emerging trends but also the sustainability and long-term impact of consultation interventions across various educational systems.

In parallel, there is a significant need for combining bibliometric techniques with qualitative and mixed-methods approaches. While bibliometric mapping uncovers structural patterns, thematic clusters, and research impact, it often lacks the depth needed to unpack contextual intricacies and theoretical progressions. Integrating qualitative content analysis, meta-synthesis, and expert interviews could offer richer, more nuanced perspectives on how consultation models are conceived, implemented, and adapted in different cultural and institutional contexts.

Another important direction involves cross-regional comparative studies. Many developing countries, including those in Southeast Asia, Africa, and Latin America, are increasingly engaging in educational consultation yet remain marginal in global citation networks. Comparative research examining consultation practices across socio-culturally diverse regions can inform the development of context-sensitive frameworks that are both culturally responsive and pedagogically effective.

As digital learning environments and hybrid education models continue to evolve, future research must also critically examine the affordances and limitations of technology-mediated consultation. Investigations into how artificial intelligence, learning analytics, and virtual advisory platforms reshape the dynamics of collaboration, teacher support, and student engagement will be pivotal in guiding evidence-based innovation in educational consultation.

Moreover, with increasing emphasis on mental health, equity, and holistic student development, interdisciplinary research that connects education with psychology, health sciences, and social policy is vital. Future studies should explore how consultation can be leveraged not only for academic support but also for building emotionally intelligent, resilient, and inclusive school communities.

Ultimately, the field must move toward building a global research agenda—grounded in collaboration, cultural sensitivity, and innovation—that positions consultation as a central driver of sustainable educational transformation. Strategic partnerships between researchers, practitioners, and policymakers will be key to operationalising the next frontier of consultation in education.

4.3 Reasoning

The rationale for undertaking this bibliometric analysis lies in the growing need to systematically understand how educational consultation has evolved as a field of study during a period marked by unprecedented educational, societal, and technological transformation. Between 2020 and 2025, education systems across the globe were profoundly affected by the COVID-19 pandemic, which disrupted traditional schooling models, intensified mental health concerns among learners and educators, and accelerated the shift toward hybrid and digital learning

environments. In response, educational consultation emerged not merely as a reactive measure but as a proactive and strategic framework for institutional support, teacher collaboration, and learner-centred intervention.

Despite its expanding application in both policy and practice, the scholarly landscape of educational consultation remained fragmented, with limited integrative reviews that comprehensively map its intellectual, geographical, and thematic contours. As the field matured and diversified, it became increasingly critical to examine which research communities were shaping its evolution, which topics were gaining traction, and how collaboration networks were forming across regions and disciplines. A bibliometric approach offered a powerful, data-driven methodology to answer these questions with clarity, objectivity, and empirical precision.

This study was designed to fill that gap by analysing a five-year span (2020–2025) of peer-reviewed literature from the Scopus database, focusing specifically on school-based consultation. The use of bibliometric indicators such as citation counts, co-authorship mapping, co-citation analysis, and keyword co-occurrence enabled the identification of influential authors, dominant research themes, interdisciplinary linkages, and regional trends in publication output. These metrics provided both macro-level insights into the structure of the field and micro-level understanding of how consultation is being operationalised in diverse educational contexts.

Moreover, the reasoning behind this research is rooted in the need to support evidence-informed decision-making. As schools and ministries of education seek to rebuild and reform post-pandemic education, a clear understanding of the scholarly foundation of consultation can help guide policy formulation, professional development design, and inclusive practice models. By revealing not only what has been studied but also what remains underexplored, this bibliometric review serves as a strategic roadmap for researchers, practitioners, and policymakers alike.

In essence, this study was not only motivated by academic curiosity but also by a practical imperative—to align the future direction of educational consultation research with the evolving needs of learners, educators, and systems navigating complexity and change.

5.   CONCLUSION

This bibliometric analysis provides a comprehensive and strategic overview of the evolution, scope, and intellectual structure of scholarly research on educational consultation in school programmes between 2020 and 2025. Drawing on a robust dataset retrieved from the Scopus database, the study employed advanced bibliometric techniques to examine publication output, disciplinary orientation, influential authors, thematic trends, and global research collaborations. The findings reveal that educational consultation has undergone significant transformation in response to contemporary educational challenges, particularly those brought on by the COVID-19 pandemic, digitalisation, and rising demands for equity, inclusivity, and student wellbeing.

The dominance of the Social Sciences and the emergence of interdisciplinary engagement from fields such as Psychology, Medicine, Computer Science, and Health Professions reflect a shift in the conceptualisation of consultation—from a narrowly defined instructional support mechanism to a multifaceted framework for systemic school improvement. This expansion aligns consultation with broader educational reform agendas, positioning it as a critical tool for teacher professional development, inclusive education, and whole-school transformation.

The mapping of co-authorship and citation patterns underscores the presence of a vibrant and collaborative research community, with increasing global participation from countries such as Malaysia, which reflects a decentralisation of knowledge production and a move toward greater epistemic inclusivity. Keyword co-occurrence analysis further highlighted the growing relevance of themes such as digital consultation, student wellbeing, and hybrid learning environments—signalling the field's responsiveness to emerging educational realities.

Collectively, the study offers both a retrospective assessment and a prospective framework for advancing the field. It serves not only as a synthesis of current scholarship but also as a catalyst for future inquiry, encouraging deeper interdisciplinary collaboration, contextual sensitivity, and innovation in consultation research and practice. As education systems worldwide continue to navigate post-pandemic recovery, rapid technological change, and increasingly diverse learning needs, educational consultation is poised to remain a cornerstone of sustainable, adaptive, and equitable schooling..

Acknowledgements

REFERENCES
[1] Ackerman, K. B., et al. (2024). Preparing Future Special Education Faculty for Service in Rural Communities. Rural Special Education Quarterly, 43(4), 205–216. https://doi.org/10.1177/87568705241277548
[2] Agarwal, G., et al. (2024). BELIEVE in collaboration: Effective evaluation partnerships for National Professional Development projects. BMC Medical Education, 24(1), 220. https://doi.org/10.1186/s12909-024-05709-3
[3] Alfayiz, A. S. (2024). The Role of Communication Strategies in Implementing Serious Creativity Strategies by High School Islamic Studies Teachers. Profesional de la Información. https://doi.org/10.3145/epi.2024.ene.0411
[4] Allahverdiyev, M., Yucesoy, Y., & Baglama, B. (2017). An Overview of Arts Education and Reflections on Special Education. International Journal of Educational Sciences, 19(2–3), 127–135. https://doi.org/10.1080/09751122.2017.1393956
[5] Appio, F. P., Cesaroni, F., & Di Minin, A. (2014). Visualizing the structure and bridges of the intellectual property management and strategy literature: A document co-citation analysis. Scientometrics, 101(1), 623–661. https://doi.org/10.1007/s11192-014-1329-0
[6] Arbain, A., Gunawan, F., Al Haddar, G., & Sitinjak, C. (2024). Commanding and Requesting: Teachers' Speech Acts in Indonesian Vocational English Schools. Forum Linguistic Studies. https://doi.org/10.30564/fls.v6i5.6989
[7] Beames, J. R., Roberts, A., Deady, M., O'Dea, B., & Werner-Seidler, A. (2024). "Very little is done other than the odd reminder"…"look after yourself": A mixed-methods evaluation of what Australian teachers need and want from a wellbeing program. The Australian Educational Researcher, 51(5), 2117–2139. https://doi.org/10.1007/s13384-023-00684-y
[8] Chen, W. W., Lee, S. P., Pigg, R. M., Huang, S.-Y., & Yen, E. H. W. (1990). Taiwan, R.O.C.: Perspectives in School Health. Journal of School Health. https://doi.org/10.1111/j.1746-1561.1990.tb05953.x
[9] Escala, N., Herrera-Pavo, M. Á., Guitert, M., & Romeu, T. (2024). Educational experiences integrating the arts into teaching practice in primary education in Ecuador. Thinking Skills and Creativity. https://doi.org/10.1016/j.tsc.2024.101671
[10] Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. International Journal of Production Economics, 162, 101–114. https://doi.org/10.1016/j.ijpe.2015.01.003
[11] Gu, D., Li, T., Wang, X., Yang, X., & Yu, Z. (2019). Visualizing the intellectual structure and evolution of electronic health and telemedicine research. International Journal of Medical Informatics, 130, 103947. https://doi.org/10.1016/j.ijmedinf.2019.08.007
[12] Guijarro-Romero, S., Mayorga-Vega, D., Casado-Robles, C., & Viciana, J. (2025). Effect of a gamified-based intermittent teaching unit in Physical Education on schoolchildren's accelerometer-measured weekly physical activity: A cluster-randomized controlled trial. Revista de Psicodidáctica. https://doi.org/10.1016/j.psicod.2024.500156
[13] Gustomo, A., Ghina, A., Zailani, S., & Xavier, D. D. F. (2025). Analyzing innovation capability: a case study of Timor Leste Business School and Indonesia Business School. Higher Education, Skills and Work-Based Learning. https://doi.org/10.1108/HESWBL-10-2024-0297
[14] Honra, J. R., Monterola, S. L. C., & Yangco, R. T. (2024). Career-focused teaching and its effects on students' biology-technical-vocational-fused skills. International Journal of Evaluation and Research in Education. https://doi.org/10.11591/ijere.v13i5.29131
[15] Janke, K. K., et al. (2024). A Case Study of Multi-Institutional Leadership Circles to Support Faculty Leadership Development. American Journal of Pharmaceutical Education, 88(11). https://doi.org/10.1016/j.ajpe.2024.101290
[16] Johnson, C. J. (1986). Educational content, levels of education, and disciplines needed for interdisciplinary gerontological education. Educational Gerontology. https://doi.org/10.1080/0380127860120507
[17] Khiste, G. P., & Paithankar, R. R. (2017). Analysis of Bibliometric Term in Scopus. International Journal of Library and Information Science, 3(3), 81–88.
[18] Larrosa, M., et al. (2024). Undergraduate occupational medicine education in European Medical Schools: Better training to meet today's challenges. BMC Medical Education. https://doi.org/10.1186/s12909-024-05809-0
[19] Margolin, E. J., Han, D. S., & Badalato, G. M. (2024). Development and Evaluation of a Multi-Institutional Virtual Urology Course for Medical Students. Journal of Surgical Education. https://doi.org/10.1016/j.jsurg.2024.06.018
[20] Moore, R., Gimbert, B. G., & Becce, M. (2024). BELIEVE in collaboration: Effective evaluation partnerships for National Professional Development projects. TESOL Journal. https://doi.org/10.1002/tesj.856
[21] Nguyen, C. D., & Trent, J. (2020). Community perceptions as a source of knowledge for transforming teaching and teacher education in Vietnam. Journal of Education for Teaching. https://doi.org/10.1080/02607476.2020.1733401
[22] Nguyen, C. N., Phan, T. T. H., & Tran, T. K. O. (2024). The Effect of Stem Education on Academic Performance: A Meta-Analysis Study. International Journal of Learning, Teaching and Educational Research. https://doi.org/10.26803/ijlter.23.11.9
[23] Patterson, L., & Hepburn, G. (2025). Implementing a competency-based assessment approach to micro-credentials. Distance Education. https://doi.org/10.1080/01587919.2024.2441247
[24] Poláčková, V., & Babulicová, Z. (2024). The Views of Students with Special Needs on Distance Education in Slovakia. TEM Journal, 13(4), 3373–3382. https://doi.org/10.18421/TEM134-71

[25] Qafa, A., Sina, Z., & Prendi, L. (2024). The Impact of Teachers' Attitudes on the Effectiveness of Teaching with the Student in the Center. Journal of Educational and Social Research. https://doi.org/10.36941/jesr-2024-0158

[26] SANFO, J.-B. M. B. (2025). Application of explainable artificial intelligence approach to predict student learning outcomes. Journal of Computational Social Science. https://doi.org/10.1007/s42001-024-00344-w

[27] Sarhan, M. M., Kelly, J., El-Farra, N., & Rashid, M. A. (2025). Collaborating for change: Reimagining medical education in Jordan through international partnerships. Discover Education. https://doi.org/10.1007/s44217-024-00395-1

[28] Tran, V. D. (2025). Impact of Principals' Transformational Leadership on School Culture: A Case of Vietnam. International Journal of Interdisciplinary Educational Studies. https://doi.org/10.18848/2327-011X/CGP/v20i01/179-202

[29] van Eck, N. J., & Waltman, L. (2007). Bibliometric mapping of the computational intelligence field. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, 15(5), 625–645. https://doi.org/10.1142/S0218488507004911

[30] van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics, 84(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

[31] van Meerkerk, E. (2025). Networker and intermediary: the role of the culture coordinator in schools. Arts Education Policy Review. https://doi.org/10.1080/10632913.2022.2076270

[32] Verbeek, A., Debackere, K., Luwel, M., & Zimmermann, E. (2002). Measuring progress and evolution in science and technology – I: The multiple uses of bibliometric indicators. International Journal of Management Reviews, 4(2), 179–211. https://doi.org/10.1111/1468-2370.00083

[33] Wu, Y.-C. J., & Wu, T. (2017). A decade of entrepreneurship education in the Asia Pacific for future directions in theory and practice. Management Decision, 55(7), 1333–1350. https://doi.org/10.1108/MD-05-2017-0518

[34] Zhang, T., et al. (2022). A Bibliometric Analysis of Atrophic Gastritis From 2011 to 2021. Frontiers in Medicine, 9. https://doi.org/10.3389/fmed.2022.843395

[35] Di Stefano, G., Peteraf, M., & Verona, G. (2010). Dynamic capabilities deconstructed: a bibliographic investigation into the origins, development, and future directions of the research domain. Industrial and Corporate Change, 19(4), 1187–1204. https://doi.org/10.1093/icc/dtq027

[36] Alves, J. L., Borges, I. B., & de Nadae, J. (2021). Sustainability in complex projects of civil construction: bibliometric and bibliographic review. Gestão & Produção, 28(4). https://doi.org/10.1590/1806-9649-2020v28e5389

[37] Assyakur, D. S., & Rosa, E. M. (2022). Spiritual Leadership in Healthcare: A Bibliometric Analysis. Jurnal Aisyah: Jurnal Ilmu Kesehatan, 7(2). https://doi.org/10.30604/jika.v7i2.914

[38] Bai, Y., Li, H., & Liu, Y. (2021). Visualizing research trends and research theme evolution in E-learning field: 1999–2018. Scientometrics, 126(2), 1389–1414. https://doi.org/10.1007/s11192-020-03760-7

[39] Zhang, T., et al. (2022). A Bibliometric Analysis of Atrophic Gastritis From 2011 to 2021. Frontiers in Medicine, 9. https://doi.org/10.3389/fmed.2022.843395

[40] Di Stefano, G., Peteraf, M., & Verona, G. (2010). Dynamic capabilities deconstructed: a bibliographic investigation into the origins, development, and future directions of the research domain. Industrial and Corporate Change, 19(4), 1187–1204. https://doi.org/10.1093/icc/dtq027