

# Instructional Leadership of Principals in Secondary Vocational and Special Education: A Bibliometric Analysis

Rabthah Abd. Rahim<sup>1\*</sup>, Syar Meeze Mohd. Rashid<sup>1</sup>

<sup>1</sup> Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia.

\*Corresponding Author: [p144708@siswa.ukm.edu.my](mailto:p144708@siswa.ukm.edu.my)

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**Abstract:** *Instructional leadership plays a critical role in enhancing teaching and learning processes, particularly within secondary vocational and special education contexts characterised by diverse learner needs and complex instructional demands. Despite increasing scholarly attention, the intellectual structure and research development in this field remain insufficiently synthesised. This study maps the research landscape on principals' instructional leadership using a bibliometric approach. Data were retrieved from the Scopus database, yielding 1,108 English-language journal articles within the Social Sciences domain. Bibliometric analyses were conducted using descriptive indicators and network visualisation through VOSviewer to examine publication trends, country contributions, collaboration patterns, and keyword co-occurrence structures. The findings indicate a significant growth in research output, reflecting rising academic interest in instructional leadership across specialised secondary education contexts. However, the research landscape remains geographically concentrated, with limited international collaboration. The thematic analysis reveals an interdisciplinary field integrating pedagogical, technological, and psychosocial perspectives. This study contributes by providing one of the earliest structured mappings of instructional leadership research within the intersecting domains of secondary vocational and special education, offering directions for theory development, cross-national collaboration, and evidence-informed leadership practice.*

**Keywords:** Instructional leadership, School principals, Secondary vocational education, Special education, Bibliometric analysis

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## 1. Introduction

Instructional leadership has long been recognised as a pivotal construct in educational leadership research, particularly for its influence on teaching quality, instructional coherence, and overall school effectiveness (Hallinger & Murphy, 1987; Stronge et al., 2008; Marzano et al., 2005). As schools increasingly operate within complex and accountability-driven environments, the role of principals has expanded beyond administrative management to encompass direct responsibility for guiding teaching and learning processes (Leithwood & Louis, 2012; Chance, 2022). Effective instructional leadership enables school leaders to align organisational vision with classroom practices, foster professional collaboration among teachers, and sustain continuous instructional improvement within diverse educational contexts (Hallinger, 2011; Ahmed, 2023).

In secondary school settings, instructional leadership is inherently complex due to the presence of subject-based departments, standardised curricula, and differentiated instructional pathways (Marshall, 2015; Walker & Qian, 2022). Principals are required to balance instructional supervision with teacher autonomy while simultaneously responding to increasing accountability and performance demands (Leithwood et al., 1999; Wijaya, 2023). This complexity is further intensified in secondary vocational and special education environments, where instructional leadership must address both academic learning and specialised vocational preparation. In such contexts, principals are expected to support diverse learner needs, integrate academic and vocational curricula, and ensure instructional practices remain responsive to students requiring specialised pedagogical approaches (Hallinger, 2011; Kim & Lee, 2020).

Despite the extensive body of research examining instructional leadership in mainstream education, empirical studies focusing specifically on secondary vocational and special education contexts remain fragmented and under-synthesised (Ma & Marion, 2021; Muspawi, 2021; Massouti et al., 2024). Much of the existing literature concentrates on general school settings, with limited attention given to how instructional leadership is conceptualised and examined within vocational and special education institutions. Consequently, there is a lack of systematic understanding regarding global research trends, thematic orientations, and collaboration patterns within this specialised domain. This gap highlights the need for a comprehensive synthesis of existing scholarship to clarify how instructional leadership research has evolved within secondary vocational and special education contexts.

Bibliometric analysis offers a robust methodological approach for addressing this gap by enabling the systematic mapping of research productivity, collaboration networks, and thematic structures across large bodies of literature (Zupic & Čater, 2015; Donthu et al., 2021). Unlike traditional narrative reviews, bibliometric methods provide a macro-level perspective on the intellectual landscape of a research field, revealing dominant research trends, emerging themes, and underexplored areas (van Eck & Waltman, 2017; Moral-Muñoz et al., 2020). Accordingly, this study conducts a bibliometric analysis of Scopus-indexed publications on principals' instructional leadership in secondary vocational and special education. By examining publication trends, country-level research contributions, international collaboration patterns, and keyword co-occurrence structures, this study aims to provide a comprehensive overview of the field and to identify directions for future research. The findings are expected to contribute to both theoretical advancement and practical understanding of instructional leadership within specialised secondary education contexts. Despite the expanding body of research on instructional leadership, no bibliometric study to date has comprehensively examined this construct within the intersecting contexts of secondary vocational and special education. This study therefore addresses a critical scholarly gap by systematically mapping the intellectual structure, collaboration patterns, and thematic evolution of research in this specialised domain.

Although instructional leadership has been widely examined in mainstream educational settings, bibliometric investigations focusing specifically on the intersection of secondary vocational and special education remain extremely limited. Existing studies tend to explore leadership within general school environments, resulting in fragmented understanding of research development, collaboration structures, and thematic evolution in specialised secondary contexts. Consequently, a systematic mapping of this field is necessary to clarify its intellectual structure and identify emerging research directions. This study addresses this

critical gap by providing a comprehensive bibliometric analysis of principals' instructional leadership within secondary vocational and special education.

### Research Questions

To achieve the objectives of this study, the following research questions are addressed:

1. What are the publication trends over time in research on principals' instructional leadership in secondary vocational and special education, as indexed in Scopus?
2. Which countries have contributed most to the research on principals' instructional leadership in secondary vocational and special education, based on publication output and citation impact?
3. What international collaboration patterns can be identified in research on principals' instructional leadership in secondary vocational and special education based on country-level co-authorship networks?
4. What are the main research themes and thematic clusters in studies on principals' instructional leadership in secondary vocational and special education based on keyword co-occurrence analysis using VOSviewer?

## 2. Methodology

### Research Design

This study adopted a bibliometric research design to analyse the research landscape on principals' instructional leadership in the context of secondary vocational and special education. Bibliometric analysis is a quantitative research approach that enables the systematic examination of large volumes of scholarly literature to identify publication trends, geographical research contributions, collaboration patterns, and thematic structures within a specific research domain (Zupic & Čater, 2015; Donthu et al., 2021). Accordingly, this approach is appropriate for providing a comprehensive overview of research developments and identifying dominant research focuses in studies on principals' instructional leadership in secondary vocational and special education. The methodological decisions were guided by established bibliometric protocols to ensure analytical robustness, transparency, and replicability.

### Data Collection and Search Strategy

Data were collected from the Scopus database, which is widely recognised as one of the most comprehensive bibliographic databases for high-impact scholarly literature in the social sciences and education fields. Scopus was selected due to its extensive journal coverage and suitability for bibliometric and science mapping analyses. Although other databases such as Web of Science and ERIC also index educational research, Scopus was selected due to its broader journal coverage, strong representation of social sciences publications, and compatibility with bibliometric mapping tools. The use of a single comprehensive database also enhances data consistency and reduces duplication during the analysis process.

An initial literature search was conducted using the *Advanced Search* function in Scopus, focusing on the TITLE-ABS-KEY fields. This initial search aimed to obtain a broad and comprehensive dataset related to principals' instructional leadership in secondary vocational and special education without applying any filters. The Boolean search string used was as follows:

(( "instructional leadership" OR "instructional leader\*" )  
 AND ( principal\* OR headteacher\* )  
 AND ( "secondary school" OR "secondary education" OR "high school" )  
 AND ( vocational OR "vocational education" OR TVET OR "special education" OR "special needs" OR SEN ))

This initial search resulted in 1,687 documents, representing the preliminary body of literature on principals' instructional leadership in secondary vocational and special education.  
 Refinement and Inclusion Criteria

To ensure the relevance, consistency, and quality of the dataset for bibliometric analysis, the initial search results were subsequently refined by applying predefined inclusion criteria directly within the Scopus database. The refinement process involved limiting the documents to:

- Subject area: Social Sciences
- Document type: Journal articles (article)
- Source type: Academic journals
- Language: English

The refined search strategy applied in Scopus was as follows:

(( "instructional leadership" OR "instructional leader\*" )  
 AND ( principal\* OR headteacher\* )  
 AND ( "secondary school" OR "secondary education" OR "high school" )  
 AND ( vocational OR "vocational education" OR TVET OR "special education" OR "special needs" OR SEN ))  
 AND ( LIMIT-TO ( SUBJAREA , "SOCI" ) )  
 AND ( LIMIT-TO ( DOCTYPE , "ar" ) )  
 AND ( LIMIT-TO ( LANGUAGE , "English" ) )  
 AND ( LIMIT-TO ( SRCTYPE , "j" ) )

Following this refinement process, a total of 1,108 journal articles were identified and retained as the final dataset for the bibliometric analysis. This dataset was considered adequate and robust for conducting publication performance analysis and scientific mapping. The initial search strategy and the refined inclusion criteria applied in this study are summarised in Tables 1 and 2, respectively.

**Table 1: Initial Search Strategy in Scopus**

Item	Description
Database	Scopus
Search field	TITLE-ABS-KEY
Search string	("instructional leadership" OR "instructional leader*") AND (principal* OR headteacher*) AND ("secondary school" OR "secondary education" OR "high school") AND (vocational OR "vocational education" OR TVET OR "special education" OR "special needs" OR SEN)
Filters applied	None
Document type	All document types
Source type	All source types
Subject area	All subject areas
Language	All languages

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Initial dataset      **1,687 documents**

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**Table 2: Refined Search Strategy and Inclusion Criteria**

Item	Description
Database	Scopus
Search field	TITLE-ABS-KEY
Search string	("instructional leadership" OR "instructional leader*") AND (principal* OR headteacher*) AND ("secondary school" OR "secondary education" OR "high school") AND (vocational OR "vocational education" OR TVET OR "special education" OR "special needs" OR SEN)
Subject area	Social Sciences
Document type	Journal articles
Source type	Academic journals
Language	English
Final dataset	1,108 journal articles

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### Data Analysis

The bibliometric dataset was analysed through the integration of descriptive and network-based approaches to examine publication patterns, intellectual structures, and collaboration dynamics within the field of principals' instructional leadership in secondary vocational and special education (Donthu et al., 2021; van Eck & Waltman, 2017). Descriptive indicators were obtained using the analytical functions available in the Scopus database, while bibliometric networks were constructed and visualised using VOSviewer (version 1.6.20), a widely used software tool for bibliometric mapping and network visualisation (van Eck & Waltman, 2017; Moral-Muñoz et al., 2020). The combined use of these analytical approaches enabled a comprehensive examination of both research trends and collaboration structures within the literature. To strengthen methodological rigor, the bibliometric structures were interpreted through iterative examination and cross-validated to ensure conceptual coherence and analytical reliability.

### Descriptive Analysis

Descriptive analysis focused on annual publication output and country-level research contributions to provide an overview of global research growth and geographical participation in studies on principals' instructional leadership in secondary vocational and special education. The examination of annual publication trends aimed to trace the development and progression of scholarly interest in instructional leadership within vocational and special education settings at the secondary level.

In addition, the analysis of contributing countries was conducted to identify major research-producing nations and to illustrate the global distribution of research activities in this domain. These descriptive indicators offer an initial understanding of the scope, development, and international reach of research on principals' instructional leadership (Donthu et al., 2021; Öztürk et al., 2024).

### Co-Authorship Analysis

Co-authorship analysis was performed using VOSviewer to explore patterns of international research collaboration, as co-authorship networks are commonly used to examine collaborative structures and knowledge exchange within scientific fields (Glänzel & Schubert, 2004; Zupic & Čater, 2015). The analysis was conducted at the country level to identify collaborative linkages and research networks among participating countries. For network construction, the

minimum number of documents per country was set to one, and the minimum citation threshold was set to zero, allowing all contributing countries to be included. This approach facilitated a comprehensive representation of global collaboration patterns within an interdisciplinary research context.

### **Keyword Co-Occurrence Analysis**

Keyword co-occurrence analysis was undertaken to identify dominant research themes and thematic clusters, as this technique is widely used to map the intellectual structure and conceptual development of a research field (Zupic & Čater, 2015; Donthu et al., 2021). The analysis incorporated all keywords, including both author-provided and indexed keywords, to ensure a broad representation of thematic patterns across studies.

A minimum keyword occurrence threshold of one was applied to accommodate the diverse and fragmented use of terminology across vocational and special education contexts. This threshold enabled the identification of both established and emerging research themes, thereby supporting a more inclusive mapping of the field's intellectual structure. To enhance methodological rigor, the analytical procedures were conducted systematically, and the resulting bibliometric structures were interpreted through iterative examination to ensure conceptual coherence and thematic validity.

## **3. Results**

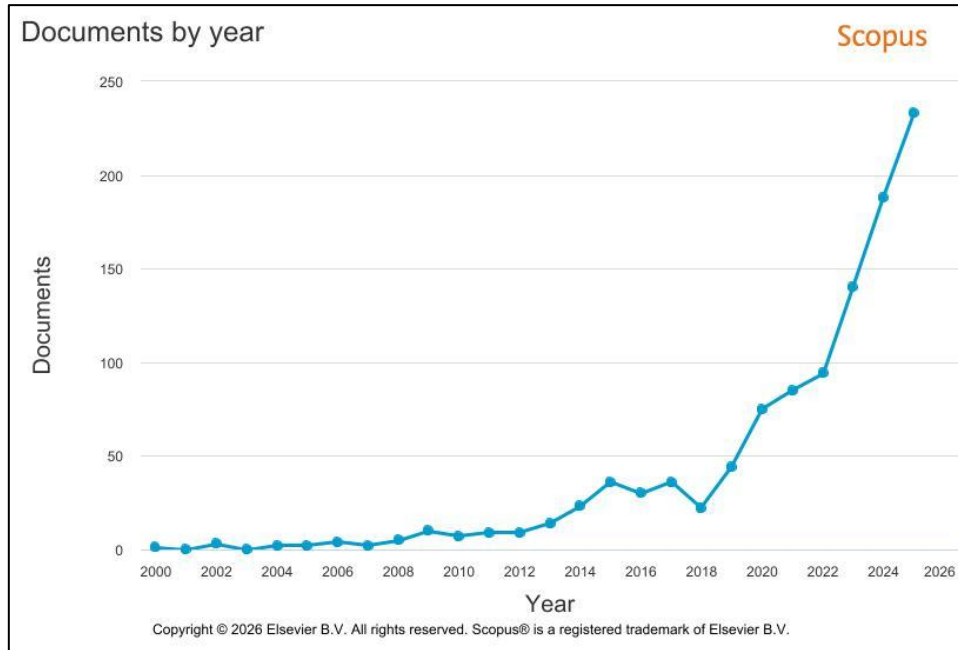
This section presents the key findings of the bibliometric analysis, focusing on publication trends over time, country-level research contributions, international collaboration patterns, and thematic structures in studies on principals' instructional leadership in secondary vocational and special education.

### **Publication Trends Over Time**

The bibliometric analysis reveals a clear and sustained increase in research output related to principals' instructional leadership in secondary vocational and special education over the period examined. As illustrated in Figure 1, publication activity remained relatively low and stable during the early years (2000–2008), indicating a preliminary phase in which scholarly attention to instructional leadership within vocational and special education contexts was still limited.

From approximately 2010 onwards, a gradual increase in the number of publications can be observed, reflecting growing academic interest in instructional leadership at the secondary school level. This upward trend becomes more pronounced after 2018, with a sharp acceleration in publication output during the most recent years. The highest number of publications is recorded in the latest period of the analysis, indicating a substantial expansion of research activity in this field.

Overall, the publication trends suggest a transition from sporadic early research toward a more established and rapidly growing research domain, highlighting increasing scholarly recognition of the importance of instructional leadership in vocational and special education settings.



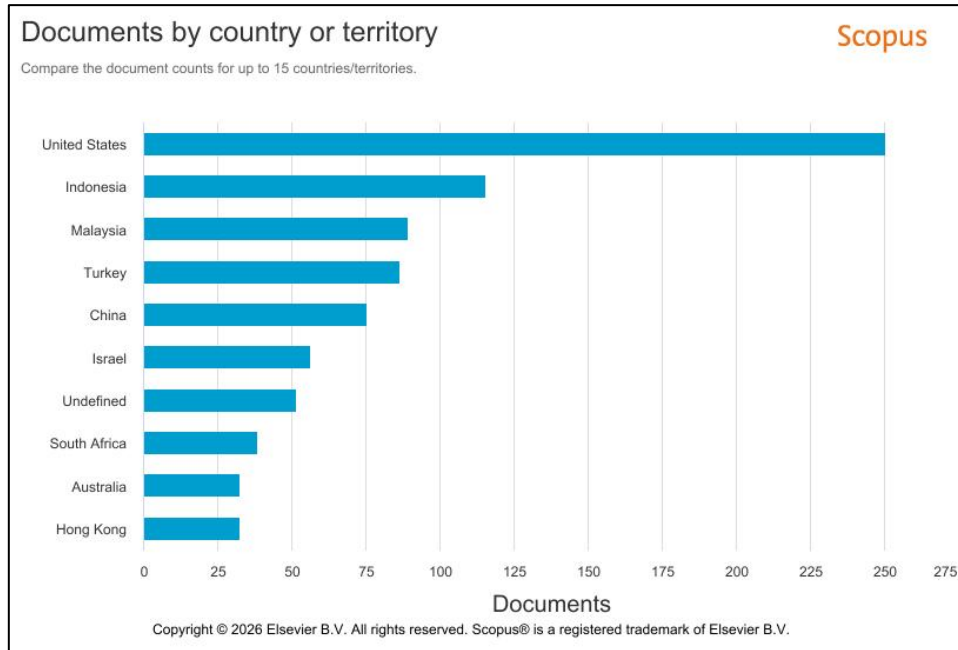
**Figure 1: Annual Publication Trends of Studies on Principals’ Instructional Leadership in Secondary Vocational and Special Education**

### Country Contributions to Research Development

To address the second research question, the geographical distribution of research output was examined based on country-level publication counts. As shown in Figure 2, research output is unevenly distributed across countries, with a small number of countries contributing a substantial proportion of the total publications.

The United States emerges as the most prolific contributor, accounting for the highest number of publications by a considerable margin. This dominance reflects the strong research infrastructure and sustained scholarly engagement in educational leadership and school improvement research within the United States. Indonesia, Malaysia, and Turkey also appear as major contributors, indicating notable research activity within Southeast Asian and Middle Eastern contexts.

In addition, countries such as China, Israel, South Africa, Australia, and Hong Kong contribute a moderate number of publications, reflecting a broader, though less intensive, international engagement with instructional leadership research in vocational and special education contexts. Despite the presence of multiple contributing countries, the distribution remains highly skewed, suggesting that research activity is concentrated within a limited number of national contexts. Overall, the country-level analysis highlights both the dominance of a small group of high-output countries and the gradual expansion of research contributions across diverse geographical regions.



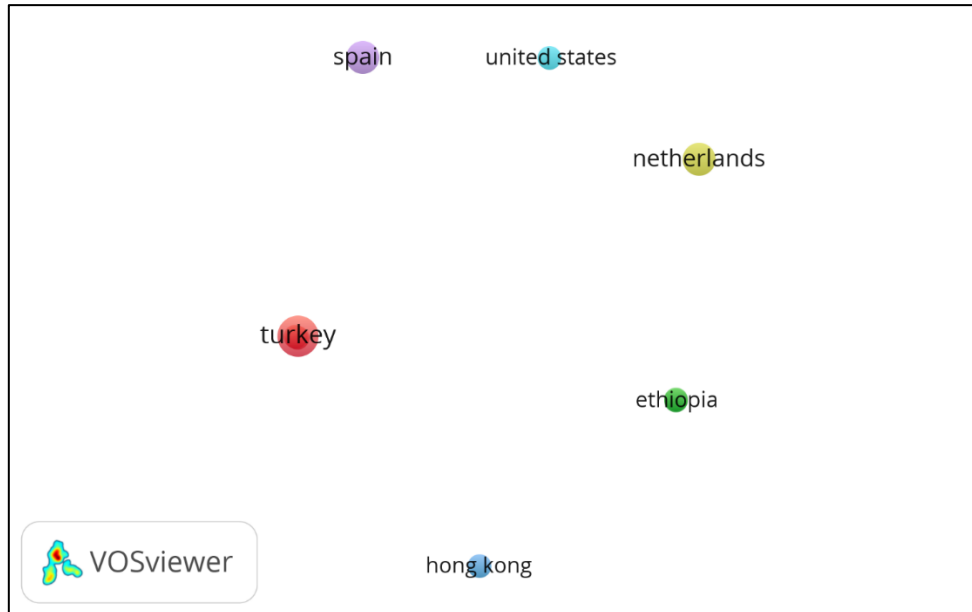
**Figure 2: Country-Level Contributions to Research on Principals’ Instructional Leadership in Secondary Vocational and Special Education**

### International Collaboration Patterns Based on Country-Level Co-Authorship

To examine international collaboration patterns, a country-level co-authorship analysis was conducted using VOSviewer. The co-authorship network, presented in Figure 3, reveals a highly fragmented pattern of international collaboration within the research field.

As shown in the network visualisation, only a small number of countries are interconnected through co-authored publications, forming a limited core of collaborative relationships. Several countries, including the United States, Spain, and the Netherlands, appear as individual nodes with minimal or no direct collaborative links. Other contributing countries, such as Turkey, Ethiopia, and Hong Kong, are represented as isolated or weakly connected nodes.

The absence of dense linkages and well-defined collaborative clusters indicates that research on principals’ instructional leadership in secondary vocational and special education is largely conducted within national or regional boundaries, with limited cross-national collaboration. Overall, the co-authorship analysis suggests that while research output is geographically diverse, international research collaboration in this field remains underdeveloped and fragmented.



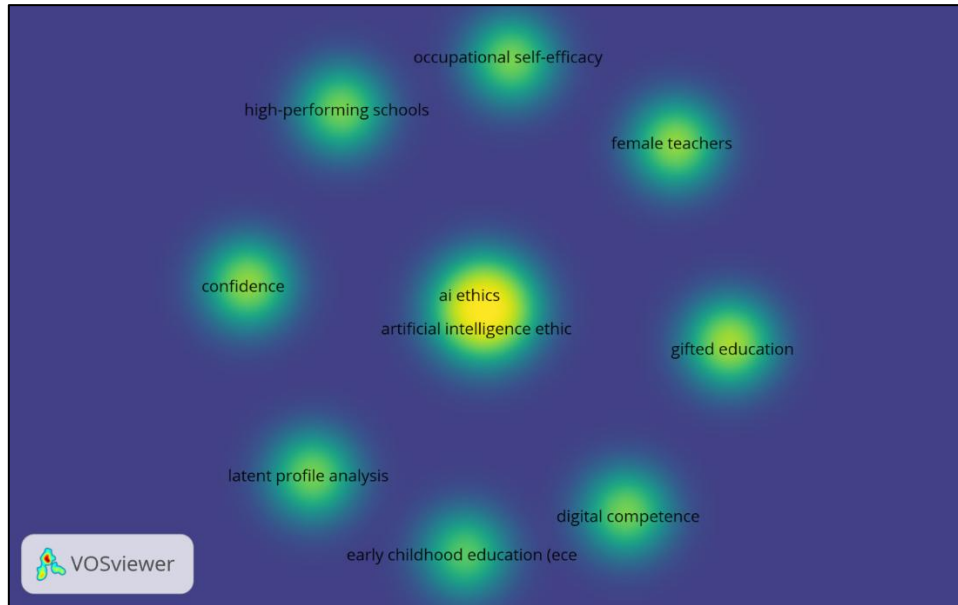
**Figure 3: Country-Level Co-Authorship Network in Research on Principals’ Instructional Leadership in Secondary Vocational and Special Education**

### Thematic Structure Based on Keyword Co-Occurrence Analysis

To address the fourth research question, a keyword co-occurrence analysis was conducted to identify dominant research themes and thematic structures within the literature. The density visualisation generated by VOSviewer is presented in Figure 4.

As illustrated in the figure, the research landscape is characterised by multiple dispersed thematic concentrations rather than a single cohesive thematic core. High-density areas are centred around keywords such as artificial intelligence ethics, occupational self-efficacy, high-performing schools, female teachers, digital competence, confidence, gifted education, and early childhood education.

The prominence of keywords related to artificial intelligence ethics and digital competence suggests an emerging research focus on the intersection between instructional leadership and technology-enhanced educational environments. Similarly, keywords such as occupational self-efficacy and confidence reflect an emphasis on psychological and professional dimensions associated with leadership and teaching practices. The presence of terms related to gifted education and early childhood education further indicates that instructional leadership research extends beyond a single educational context and encompasses a broad range of learner populations. Overall, the keyword co-occurrence analysis reveals a thematically diverse and interdisciplinary research field, with instructional leadership being examined across technological, psychological, and pedagogical domains. The dispersion of themes suggests that research on principals’ instructional leadership in secondary vocational and special education is conceptually broad and continues to evolve across multiple interconnected strands.



**Figure 4: Keyword Co-Occurrence Density Map of Research on Principals' Instructional Leadership in Secondary Vocational and Special Education**

#### 4. Discussion

This study provides a comprehensive bibliometric overview of research on principals' instructional leadership in secondary vocational and special education by examining publication trends, geographical research contributions, international collaboration patterns, and thematic structures. The findings contribute to a deeper understanding of how this research field has evolved and highlight key areas of concentration as well as existing gaps in the literature. By mapping the global knowledge structure of instructional leadership within specialised secondary education, this study provides an evidence base to inform leadership policy, strategic school improvement, and future international research collaboration.

##### **Growth of Research on Principals' Instructional Leadership**

The analysis of publication trends reveals a substantial and sustained increase in research output over time, particularly in the most recent years. This growth suggests a rising scholarly recognition of the critical role played by principals' instructional leadership in improving teaching and learning processes within vocational and special education settings. The sharp increase observed after 2018 may reflect broader educational reforms and policy initiatives emphasising school leadership, accountability, and instructional quality, especially in contexts characterised by diverse learner needs and complex instructional demands. The accelerating growth of this research field signals a paradigmatic shift in how instructional leadership is conceptualised within specialised secondary education. Leadership is no longer viewed solely as an administrative function but increasingly as a strategic mechanism for navigating pedagogical complexity, technological transformation, and learner diversity. This transition reflects broader global education reforms that position school leadership as a critical lever for systemic improvement.

From a broader perspective, this trend indicates a shift from earlier exploratory studies toward more systematic and empirically grounded investigations. The maturation of the research field aligns with global educational priorities that emphasise leadership as a key driver of school effectiveness, teacher professional development, and inclusive educational practices.

### **Geographical Distribution and Research Concentration**

The country-level analysis highlights a highly uneven distribution of research output, with a small number of countries contributing a disproportionate share of publications. The dominance of the United States reflects its strong research infrastructure, long-standing scholarly interest in educational leadership, and sustained investment in vocational and special education research. At the same time, the substantial contributions from countries such as Indonesia, Malaysia, and Turkey point to growing research engagement in non-Western and emerging educational contexts.

This geographical pattern suggests that while instructional leadership research is expanding globally, it remains concentrated within specific national settings. The increasing visibility of contributions from Southeast Asia, the Middle East, and parts of Africa indicates a gradual diversification of the research landscape. However, the imbalance in research output also highlights the need for greater representation of under-researched regions to ensure that leadership models and practices reflect diverse educational systems and cultural contexts.

### **Limited International Research Collaboration**

Despite the growing volume of research, the country-level co-authorship analysis reveals a fragmented pattern of international collaboration. Most research appears to be conducted within national or regional boundaries, with relatively few cross-national partnerships. This limited collaboration may be influenced by contextual differences in educational systems, policy priorities, funding structures, and language of publication.

The absence of dense collaborative networks suggests that knowledge exchange across countries remains constrained, potentially limiting the transferability and comparative understanding of instructional leadership practices in vocational and special education. Strengthening international research collaboration could enhance methodological diversity, promote comparative perspectives, and support the development of more globally informed leadership frameworks. Such collaboration is particularly important in vocational and special education contexts, where leadership challenges often transcend national boundaries.

### **Thematic Diversity and Interdisciplinary Orientation**

The keyword co-occurrence analysis reveals a thematically diverse and interdisciplinary research landscape. Rather than converging around a single dominant theme, research on principals' instructional leadership spans multiple thematic areas, including technology-related issues, psychological constructs, school performance, and diverse learner populations. The prominence of keywords related to artificial intelligence ethics and digital competence reflects the increasing intersection between instructional leadership and technology-enhanced educational environments.

Similarly, the presence of themes related to occupational self-efficacy, confidence, and teacher characteristics underscores the growing emphasis on the human and professional dimensions of instructional leadership. These findings suggest that contemporary research increasingly conceptualises instructional leadership as a multifaceted construct that integrates pedagogical, technological, and psychosocial considerations.

The dispersion of themes also indicates that the field is still evolving and has not yet consolidated into a unified theoretical framework. While this diversity reflects the adaptability and relevance of instructional leadership across contexts, it also highlights opportunities for

future research to integrate these thematic strands more coherently. Such thematic fragmentation is commonly observed in emerging and interdisciplinary research domains, particularly in leadership and education studies (Öztürk et al., 2024).

Beyond mapping the intellectual structure of the field, the findings carry several important implications for research, policy, and leadership practice.

The identified thematic diversity suggests that future empirical studies should prioritise context-specific leadership practices that address the instructional complexities of vocational and special education environments. Policymakers may utilise these insights to strengthen leadership preparation programmes that integrate technological readiness, inclusive pedagogies, and interdisciplinary collaboration. For researchers, the fragmented collaboration patterns highlight the importance of cross-national studies to support the development of globally relevant instructional leadership frameworks.

## **5. Limitations and Future Work**

### **Limitations**

Despite providing a comprehensive overview of research on principals' instructional leadership in secondary vocational and special education, this study is subject to several limitations that should be acknowledged when interpreting the findings. First, the bibliometric analysis was based solely on publications indexed in the Scopus database. Although Scopus is one of the most comprehensive and widely used bibliographic databases, it does not capture all relevant scholarly output. Publications indexed in other databases, such as Web of Science, ERIC, or regional databases, were not included. Consequently, some relevant studies—particularly those published in local or non-indexed journals—may have been excluded from the analysis.

Second, this study was limited to English-language journal articles within the Social Sciences subject area. While this restriction was applied to ensure data consistency and analytical robustness, it may have resulted in the underrepresentation of research published in other languages or disciplinary fields. Given the contextual and practice-oriented nature of vocational and special education, valuable insights from non-English or practitioner-focused publications may not be fully reflected in the findings. Third, bibliometric analysis focuses on quantitative patterns such as publication output, co-authorship networks, and keyword relationships. As a result, this study does not examine the content quality, methodological rigor, or empirical findings of individual studies. The thematic structures identified through keyword co-occurrence analysis represent patterns in terminology usage rather than in-depth conceptual or theoretical analysis.

In addition, the keyword co-occurrence analysis relied on author-provided and indexed keywords, which may vary in precision and consistency across publications. Differences in terminology usage and indexing practices could influence the visibility of certain themes, particularly in a research field characterised by conceptual diversity and interdisciplinary approaches.

### **Future Work**

Future research could address these limitations in several ways. First, expanding the data sources to include multiple bibliographic databases would provide a more comprehensive representation of the research landscape and allow for cross-database comparisons. Future

studies could incorporate advanced bibliometric techniques such as co-citation analysis and bibliographic coupling to further uncover the intellectual foundations of instructional leadership research. Second, incorporating non-English publications and broader subject areas may offer deeper insights into regional and contextual variations in instructional leadership research. Furthermore, future studies could complement bibliometric analysis with systematic reviews or qualitative content analysis to examine theoretical frameworks, research designs, and empirical findings in greater depth. Such approaches would help bridge the gap between quantitative mapping and substantive interpretation of instructional leadership practices.

Finally, given the limited international collaboration identified in this study, future research may benefit from increased emphasis on cross-national and comparative studies. Strengthening international research partnerships could enhance knowledge exchange, support the development of more context-sensitive leadership models, and contribute to a more globally informed understanding of instructional leadership in vocational and special education.

## **6. Conclusion**

This study provides a comprehensive bibliometric overview of research on principals' instructional leadership in secondary vocational and special education. By analysing publication trends, country-level research contributions, international collaboration patterns, and thematic structures, the study offers a systematic mapping of the intellectual landscape and developmental trajectory of this research field.

The findings reveal a rapidly growing body of literature, particularly in recent years, indicating increasing scholarly attention to instructional leadership within vocational and special education contexts. Despite this growth, the research landscape remains geographically concentrated, with a small number of countries accounting for a substantial proportion of publications. In addition, international research collaboration is limited, suggesting that knowledge production in this field is still largely shaped by national or regional research agendas.

The thematic analysis further demonstrates that research on principals' instructional leadership is conceptually diverse and interdisciplinary, encompassing technological, psychological, and pedagogical perspectives. While this diversity reflects the adaptability and relevance of instructional leadership across varied educational contexts, it also highlights the absence of a unified theoretical framework and the need for greater conceptual integration.

Overall, this study contributes to the literature by systematically synthesising existing research and identifying key trends, gaps, and opportunities for future investigation. By providing a structured overview of the field, the findings offer valuable insights for researchers, policymakers, and practitioners seeking to advance instructional leadership practices and research in secondary vocational and special education. Continued efforts to strengthen international collaboration, broaden geographical representation, and integrate emerging themes are essential for the sustained development of this research domain.

Unlike prior leadership syntheses that largely privilege mainstream educational settings, this study advances the field by systematically mapping instructional leadership within specialised secondary education. In doing so, it establishes an intellectual platform upon which future theoretical refinement, comparative inquiry, and globally coordinated research efforts may be

built. As educational systems continue to confront increasing complexity, the strategic role of instructional leadership in vocational and special education will become progressively more indispensable.

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### Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study.

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