

# Trends and Future Directions of Accreditations in Higher Education : Bibliometric Analysis

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## Abstract

**Purpose :** The study aimed to highlight the importance of accreditation in higher education and its relevance in enhancing the quality and standardization of the education system. The purpose of this research was to analyze the trends and future directions of accreditation in higher education using bibliometric analysis. Specifically, the study aimed to identify the relationship between accreditation-originating countries and top publishing countries in this domain, assess the relevance of accreditation over time, and propose future research areas through citation analysis and thematic evaluation.

**Design/Methodology/Approach :** The bibliometric method was used in our research to study and explore accreditation in higher education research. Bibliometric analysis is famous for quantitative data analysis. Using the relevant keywords in the Scopus database, we performed a bibliometric analysis on 1,544 articles. We used the biblioshiny tool through "R" open-source software for performance analysis and thematic mapping analysis, and VOSviewer was used for co-occurrence keyword analysis and network analysis.

**Findings :** The findings of the analysis substantiate with literature to infer the relationship between accreditation-originating countries and top countries publishing in this domain. The findings revealed that the relevance of accreditation has been increasing over the years, and the accreditation-originating countries were leading the research through publications in this area. The study proposed future research areas using citation analysis and thematic evaluation.

**Practical Implications :** The implications are relevant to higher education institutes, policymakers, and other stakeholders. The study is expected to be a catalyst in driving the research in the area of accreditation in higher education.

**Novelty :** This study's novelty is its use of bibliometric analysis to explore the trends and future directions of accreditations in higher education. The study also highlighted the increasing relevance of accreditation in enhancing the quality and standardization of the education system. The study is expected to be a catalyst for driving research in the area of accreditations in higher education.

**Keywords :** Accreditation, higher education, quality, international accreditations, AACSB, EQUIS, AMBA

**JEL Classification Codes :** I2, I22, I23

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Higher education is rapidly growing across the globe. Accreditations and quality assurance are essential in higher education (Lejeune & Vas, 2009). Accreditations help institutions to improve the quality, program outcome, and placements. Successfully implementing accreditation standards at school leads to enhanced quality, continuous improvement, and infrastructure developments (Bagga, 2017; Kundu, 2020). The accreditation standards are considered effective in higher education, and the accreditation process encourages excellence in higher education (Sahay & Thakur, 2007). The accreditation agencies are working toward improving quality and excellence in higher education institutes (Sinha & Subramanian, 2013). Stakeholders in higher education expect external validation and certification for quality assurance (Bagga et al., 2016; Romero, 2008). The accreditation agencies are working toward improving curriculum review and continuous improvement. Accreditation is a rigorous evaluation process that aims to ensure the quality and enhancement of a program or institution in an accredited institution by critically assessing its compliance with the norms and standards set by the regulator. Accreditation is a certification that a program or institution meets specified criteria (NBA Accreditation, 2021).

Due to global competition, individuals and national governments emphasize higher education quality. The accreditation agencies are improving the standards to ensure higher education. Properly implementing accreditation standards may improve the quality, and it helps the regulatory bodies meet the minimum criteria (Boelen & Woollard, 2009; Reddy et al., 2023). Lejeune and Vas (2009) have stated that the various AACSB, EQUIS, and AMBA accreditation standards emphasize the production aspects and are aligned toward the quality of higher education. The information about AACSB accreditation issues and faculty concerns helps the faculty demonstrate the importance of AACSB accreditation. The AACSB accreditation improves innovation, quality, and continuous improvement in a competitive environment (Romero, 2008).

The Indian Government introduced the NAAC and NBA accreditations to augment the quality and continuously improve to bring excellence in education (Sinha & Subramanian, 2013). The social impact and evidence that there is an urgent need to adopt accreditations in higher education reflect social accountability (Boelen & Woollard, 2009). The AACSB accreditation standards check the faculty qualification, admission criteria, curriculum review and infrastructure, which improve the significant value to the stakeholders and school (Romero, 2008).

Integrating a strategic plan with program-level and institute-level objectives and goals is achieved through accreditations (Sahay & Thakur, 2007), which helps institutions improve their quality (Bagga, 2017). Accreditation agencies encourage institutions to introduce sustainability and innovation courses in their curriculum (Wu et al., 2010). The existing research suggests that accreditation is a technique for disrupting the status quo and can assist institutions in differentiating themselves from their rivals. According to the findings of this study, institutions that pursue accreditation tend to enhance their rankings and reputation, resulting in higher enrolment and financing opportunities. In addition, the authors of the study argued that the advantages of certification are more significant (Alajoutsijärvi et al., 2018).

The accreditations process and its impact on organizational culture and effectiveness reveal that these are important constructs for organizational identity. Further, quantitative research is suggested to determine how the accreditation process helps improve resources and infrastructure (Lejeune & Vas, 2009). The existing researchers have already discussed the driver and barriers to accreditation adoption in the health sector. The critical barriers to accreditation adoption are lack of top management support (Liu et al., 2017), collegiality and teamwork, motivation, employee commitment, continuous improvement culture, and lack of awareness of accreditations (Kundu, 2020) are dependent barriers to adoption of accreditation in higher education institutions. A variety of factors influence the choice of schools to adopt accreditation. Identifying the factors and barriers that internally and externally influence the adoption of accreditation in schools is crucial (Reddy et al., 2022). The research aims to study accreditation as a concept in academic research articles to reveal the past, present, and future directions of accreditations through review and analysis (Prashar & Sunder, 2020).

Accreditations and quality assurance are essential in a rapidly growing higher education landscape. Accreditation standards help institutions improve their quality, program outcomes, and placements and encourage excellence in higher education. Accreditation agencies work toward improving curriculum review and continuous improvement, satisfying stakeholders' expectations of external validation and certification for quality assurance. This research article aims to investigate the significance of accreditation in higher education, its fundamental research metrics, high-quality publications, the dynamics between the origin countries of accreditation agencies and the leading countries publishing in this field, and the future exploration of topics in accreditation research. Given the lack of reviews on accreditations in higher education, this study aims to identify the most researched topics in this area and address this research gap. The first research question seeks to investigate the overall quantity of research undertaken in the field of accreditation and the level of scholarly interest in the subject.

Given the lack of reviews on accreditations in higher education, we aim to address this gap by conducting a review to identify the most commonly researched topics in this area. The objective of the first research question is to investigate the significance of accreditation in higher education. This question's reporting covers the number of publications, the number of publications by author, and the average number of publications each year. These metrics provide insight into the quantity of research undertaken in the field of accreditation and the level of scholarly interest in the subject. Therefore, our first research question is:

↪ **RQ1.** Based on the published research, what is the relevance of accreditations in higher education?

Secondly, using the descriptive research method, it is crucial to identify key research metrics in the accreditation field to establish a solid foundation for research. The reporting used to answer this question includes top authors, single-author publications, country-wise publications, and a three-field plot. The three-field plot provides an understanding of the interconnectivity between different authors and their contributions to the field of accreditation. Therefore, we propose a second question:

↪ **RQ2.** What are the fundamental research metrics in this field, considering the descriptive research method?

The third research question aims to identify high-quality publications in the field of accreditation. The reporting used to answer this question includes quality articles based on average citations per year and the quality of ABDC journal articles. These metrics provide an understanding of the impact of research on the field of accreditation.

↪ **RQ3.** Which publications can be deemed as high-quality in this field?

The fourth research question aims to explore the dynamics between accreditation agencies' origin countries and top countries publishing in the field of accreditation. The reporting used to answer this question includes country-wise average citations per year and bibliometric coupling. Bibliometric coupling provides an understanding of the interconnectivity between different countries and their contributions to the field of accreditation.

↪ **RQ4.** How are the dynamics between accreditation agencies originating countries and top countries publishing in the area of accreditations?

The fifth research question aims to explore future research topics in the field of accreditation. The reporting used to answer this question includes citation analysis and thematic evaluation. Citation analysis provides an understanding of the impact of research on the field of accreditation. Thematic evaluation offers an understanding of the emerging themes in the field of accreditation.

**Table 1. Research Questions and Reporting Used to Answer These Questions**

Research Questions	Reporting Used
<b>RQ1</b> : Based on the published research, what is the relevance of accreditations in higher education?	<ul style="list-style-type: none"> <li>• Total no. of publications</li> <li>• Publications by author</li> </ul>
<b>RQ2</b> : What are the fundamental research metrics in this field, considering the descriptive research method?	<ul style="list-style-type: none"> <li>• Average publication per year</li> <li>• Top authors</li> <li>• Single author publications</li> <li>• Country-wise publications</li> <li>• Three field plot (Figure 4)</li> </ul>
<b>RQ3</b> : Which publications can be deemed as high-quality in this field?	<ul style="list-style-type: none"> <li>• Quality articles based on Avg. citations per year</li> <li>• Quality ABDC Articles</li> </ul>
<b>RQ4</b> : How are the dynamics between accreditation agencies' originating countries and top countries publishing in the area of accreditations?	<ul style="list-style-type: none"> <li>• Country-wise average citation per year</li> <li>• Bibliometric coupling (Figure 7)</li> </ul>
<b>RQ5</b> : What topics can the researchers explore in the future in the field of accreditation	<ul style="list-style-type: none"> <li>• Citation analysis</li> <li>• Thematic evaluation (Figure 9)</li> </ul>

Source : Created by authors after identifying the research gap.

➤ **RQ5.** What topics can researchers explore in the future in the field of accreditation?

Initially, it is important to know the present trends, most prolific contributing authors, most prolific contributing countries, most cited articles, and journals that publish most articles in the field of accreditations in higher education. Secondly, there is a lack of evidence of reviews about accreditations in higher education. Hence, we reviewed relevant literature to identify the related topics in the field of accreditations research. Knowing the scholar's existing research is important to identify the gaps. Finally, the main objective of this paper is to explore the current research in the field of accreditation in higher education and identify future research directions. For this purpose, it is important to know the research gaps in existing research.

This paper explores research questions related to the relevance of accreditation in higher education, fundamental research metrics, high-quality publications, the dynamics between accreditation agencies' origin countries and top countries publishing in this field, and future exploration of topics in accreditation research. The identified research gaps are operationalized using five research questions, and reporting is used to answer the research questions, as depicted in Table 1. For this purpose, we identified five research questions.

## Methodology

The bibliometric method was used in our research to study and explore accreditation in higher education research. The bibliometric method is famous for quantitative data analysis (Chaman Sab et al., 2020; Donthu, Kumar, Pandey, Pandey, & Mishra, 2021; Dinh et al., 2023; Ludhani et al., 2023; Ubgade & Joshi, 2022). As per bibliometrics aid in the exploration, organization, and analysis of vast amounts of data (Chaman Sab et al., 2020; Daim et al., 2006). Albort-Morant et al. (2017) stated that bibliometric analyses enable the comprehension of research progressions in the past and, at the same time, provide a platform to develop future lines of research through its indicators. This research followed ethical guidelines. The research findings were reported transparently and objectively without manipulating or suppressing data.

We used author keyword co-occurrence as per Donthu, Kumar, Mukherjee, Pandey, and Lim (2021) and bibliographic coupling by Donthu, Kumar, Pandey, Pandey, and Mishra (2021) for identifying research

objectives. Based on the frequency of words used in articles, various contemporary studies have acknowledged this technique as an efficient approach for conducting clustering analysis, which facilitates the exploration of trends and graphical grouping of literature data (Pollack & Adler, 2015). Since the scope of the review was broad, the dataset was too large for manual review. Hence, the bibliometrics method was used to evaluate and interpret data.

After briefly going through the literature using the following keywords “bibliometric,” “analysis,” and “accreditation” in Scopus, we attempted to identify the research gaps. For example, a study by Muslimin and Bosthomi (2022) investigated the literature progression in Indonesia’s specific higher education system. In another study by Tuppal et al. (2019), the bibliometric analysis was performed in accreditation but was restricted to nursing, and the study was limited to the Philippines. Compared to the above bibliometric studies, we took a global perspective and did not restrict ourselves to any discipline to understand the dynamics of accreditation and academic research.

The data used for this study was obtained from Scopus, one of the largest research databases. The search keyword included “accreditation” and “higher education.” Since our research was related to higher education, we restricted search criteria to social science journals. We considered the period of publications between the year 2000 – March 2022. Initially, we received 5,244 documents from Scopus. Later, it was reduced to 1,544 articles using inclusion and exclusion criteria. We limited our selection to scholarly articles published in English-language journals to achieve this objective. We used all 1,544 articles for performance analysis and co-occurrence network analysis. For the literature review, top-cited journals were taken into consideration. We used the biblioshiny tool through “R” open-source software for performance analysis and thematic mapping analysis, and VOSviewer software was used for co-occurrence keyword analysis and network analysis.

These articles were fetched from 614 journals with an average citation of approximately 8.69 per document. The total number of authors involved in the publications was 4,162. The single-authored articles were 443 out of 1,544 articles.

## Empirical Analysis and Results

Performance analysis, scientific mapping, and network analysis are the three basic types of bibliographic analysis

**Table 2. Bibliometric Analysis Tools**

Bibliometric Analysis	
Performance Analysis	Science Mapping
<b>Publications Related Metrics</b>	“Citation & Co-citation analysis”
Total number of publications - TP	“Bibliographic coupling”
Total number of publications by an author - NPA	“Co-word analysis”
Single-authored publication - SAP	“Co-authorship analysis”
Average publications per year - APY	
Number of publications per year - NPY	
Country-wise publications - CWP	
<b>Citation and Publications - Related Metrics</b>	
Total Citations - TC	
Average Citations - AC	
Cited publications - CP	
Citations per cited publications - CCP	
<b>Note.</b> Donthu et al. (2021).	

(Cobo et al., 2011), as shown in Table 2. We conducted the performance analysis to identify the most prolific contributing authors, countries, publications with the most citations, and journals that published the most articles in the field (Noyons et al., 1999).

Co-occurrence analysis using author keywords appearing in two or more documents describes the relationship level of the two authors' research. Every author uses their keywords in the research as important, and therefore, uses the theme to mention the research themes. We are using a large number of documents for our study. Hence we considered keyword co-occurrence analysis to identify the intellectual structure of research in accreditations (Donthu, Kumar, Pandey, Pandey, & Mishra, 2021).

Secondly, science mapping evaluates the research's dynamic and structural aspects (Cobo et al., 2011; Noyons et al., 1999). Different techniques, including co-citation and co-word analysis (Callon et al., 1983), have been used to create science maps. Henry Small first initiated the co-citation technique and developed it in the 1970s (Small, 1973). Two cited papers can easily be determined from bibliographic data using co-citation analysis. The number of cited articles in two different forms is the strength of the co-citation network. The frequently cited papers represent the key experiments, methods, and processes used in the research field using a co-citation network (Small, 1973).

## Performance Analysis

Performance analysis reveals the research field's publication and citation-related metrics (Cobo et al., 2011). Researchers commonly use performance analysis to evaluate the performance of authors, countries, organizations, and journals.

### *Publication Analysis (Annual Publications)*

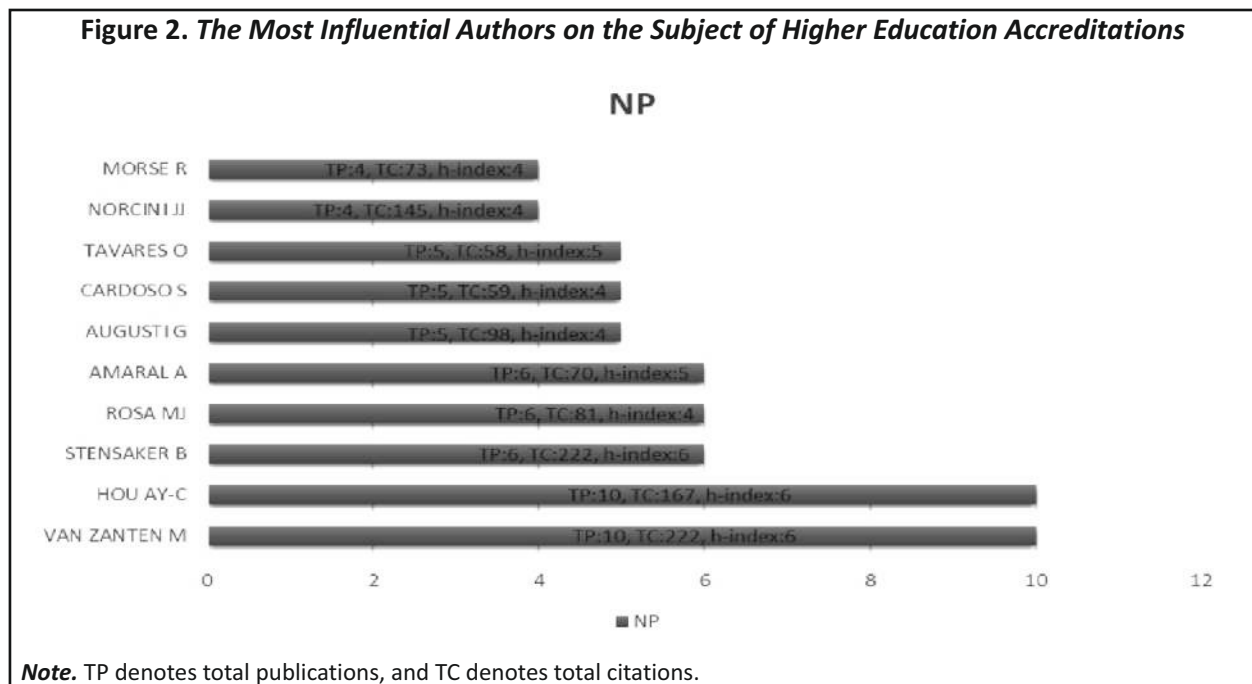
Figure 1 shows the year-wise publication trends in the field of accreditation. The year-wise publications have increased gradually, showing the author's interest in accreditations. Also, the figure shows the increase in the importance of accreditation across the globe over a period of time. The average number of publications between



2000 and 2010 was 36 per year. The developing countries started accreditations from 2000 onward. The effect of accreditation in higher education can be seen from the average number of articles published during 2016–2021, which is 140 publications per year.

### ***The Number of Publications by the Authors***

Figure 2 depicts the most renowned authors contributing to the accreditations field. Van Zanten and Hou are the most prolific authors in the field, having published 10 articles on the subject and receiving 222 and 167 citations, respectively. They are followed by Stensaker B, Rosa MJ, and Amaral A, each authoring six articles and obtaining 224, 81, and 70 citations, respectively. The 10 leading publishers have received more than 100 citations per author and more than 100 citations per article on average.



### ***Citation and Publication-Related Analysis (Country-Wise Citation Analysis)***

Table 3 shows the most productive countries that contributed to accreditation. Authors from the United States

**Table 3. Country-Wise Publications in the Field of Accreditations**

Country	TP	Total Citations	Average Article Citations
USA	414	5,008	12.097
United Kingdom	86	1,064	12.372
Australia	61	754	12.361
China	34	370	10.882
Spain	33	392	11.879
Malaysia	27	118	4.37

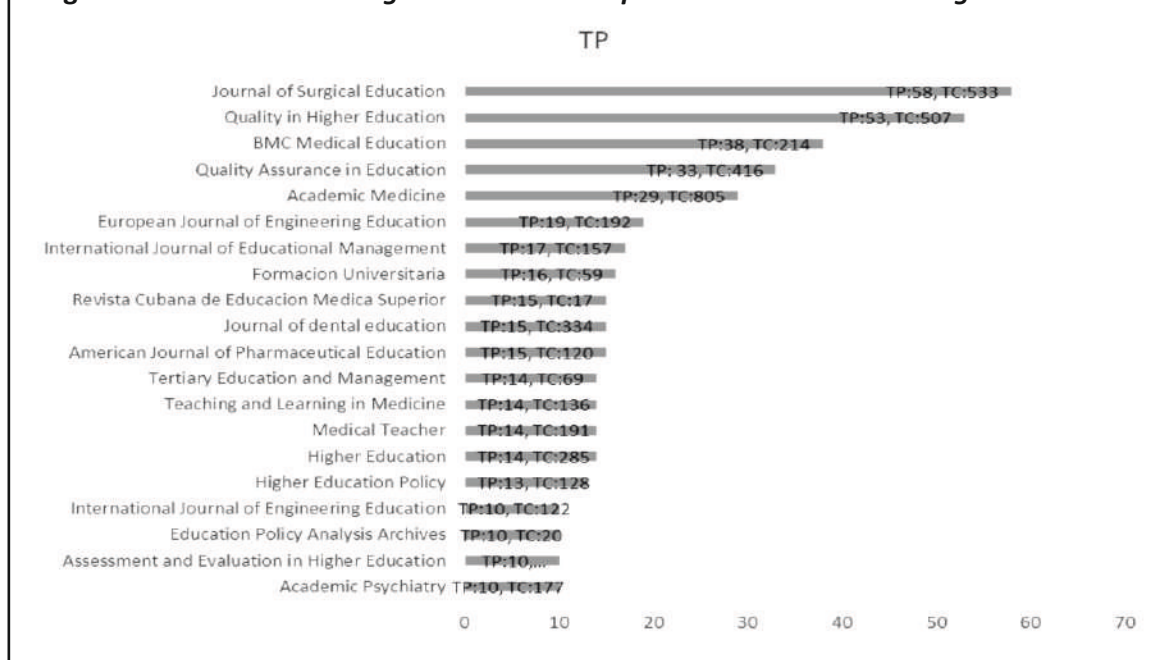
Canada	25	447	17.88
Chile	21	162	7.714
Germany	21	140	6.667
Portugal	20	171	8.55
India	19	84	4.421
Turkey	17	95	5.588
Netherlands	15	171	11.4
Italy	11	134	12.182
Mexico	11	78	7.091

Source : Authors' compilation using citation details from Scopus Database.

significantly contributed to 414 articles, which were cited 5,008 times. Authors from the United Kingdom and Australia contributed more than 50 articles. The worldwide accreditations, such as AACSB, AMBA, and EQUIS, originated in the United States of America, the United Kingdom, and Europe, respectively. These countries have started accreditations a bit early in comparison with other countries. In the beginning, accreditation as a field grew more in developed countries. This is most likely because most renowned accreditation agencies originated in the US, the UK, and Europe.

Our study reveals that most of the contributing countries to accreditations have primarily originated from the USA and UK. Also, we can observe that AACSB accreditation, which started in the early 1900s, has a greater impact on higher education and has become more popular in the USA. More research papers may be produced due to more number of accredited schools in the US and UK. In addition, it is noted that emerging countries have just begun international accreditations and studying in the field.

**Figure 3. Journals Publishing the Maximum Papers on Accreditation in Higher Education**



## Journal-Wise Citation Analysis

The journals that publish far more articles in the field of accreditation are shown in Figure 3. The *Journal of Surgical Education* and *Quality in Higher Education*, which contributed 58 and 53 papers on the topic, are the highest-publishing journals in the field. The articles published in these journals have received 533 and 507 citations, respectively. These journals are ranked in the Scopus database and have received high cite scores.

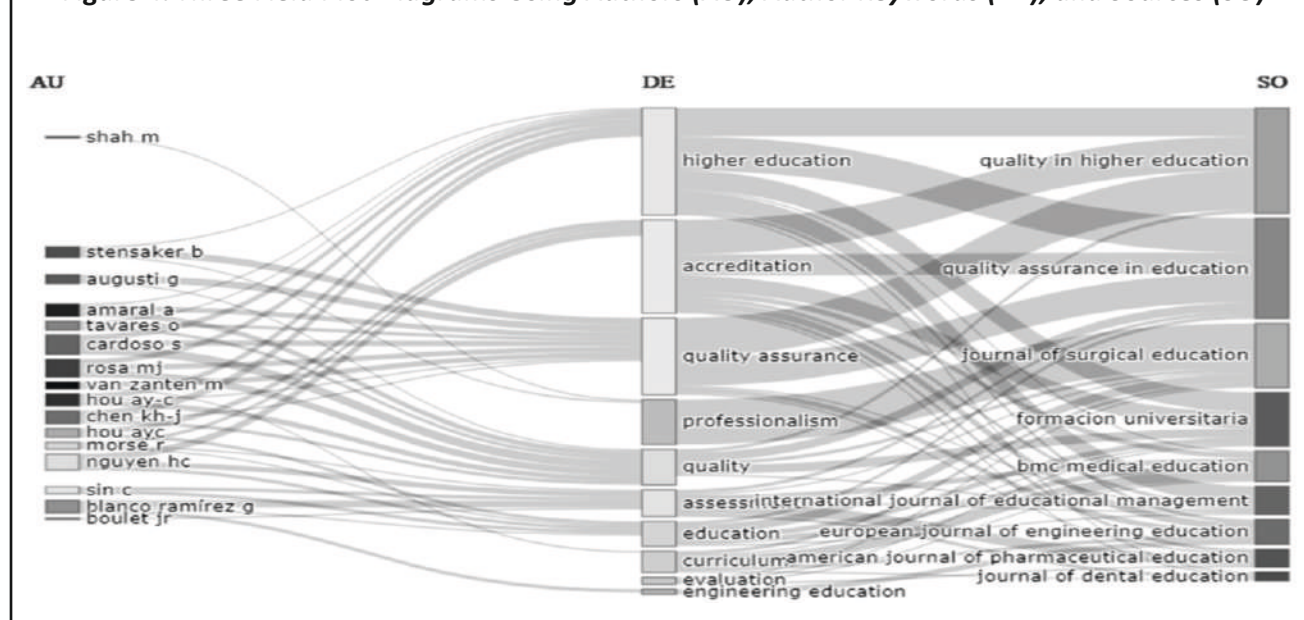
## Top Cited Articles

Table 4 lists the most frequently cited journal articles on higher education accreditation. With 246 citations and an

**Table 4. Most Cited Publications in the Field of Accreditations**

Authors	Year	Source Title	Cited by	C/Y
Yaghmour et al. (2017)	2017	<i>Academic Medicine</i>	93	23.25
Aguillo et al. (2010)	2010	<i>Scientometrics</i>	194	17.64
Morphew & Hartley (2006)	2006	<i>Journal of Higher Education</i>	246	16.40
Knight (2013)	2013	<i>Perspectives: Policy and Practice in Higher Education</i>	120	15.00
Henzi et al. (2007)	2007	<i>Journal of Dental Education</i>	138	9.86
Chen et al. (2008)	2008	<i>Journal of Engineering Education</i>	122	9.38
Golub et al. (2007)	2007	<i>Academic Medicine</i>	128	9.14
Weerts & Sandmann (2008)	2008	<i>Review of Higher Education</i>	102	7.85
Usher (2002)	2002	<i>Higher Education Research and Development</i>	111	5.84
Gibbs (2001)	2001	<i>Studies in Higher Education</i>	105	5.25

**Figure 4. Three Field Plot Diagrams Using Authors (AU), Author Keywords (DE), and Sources (SO)**



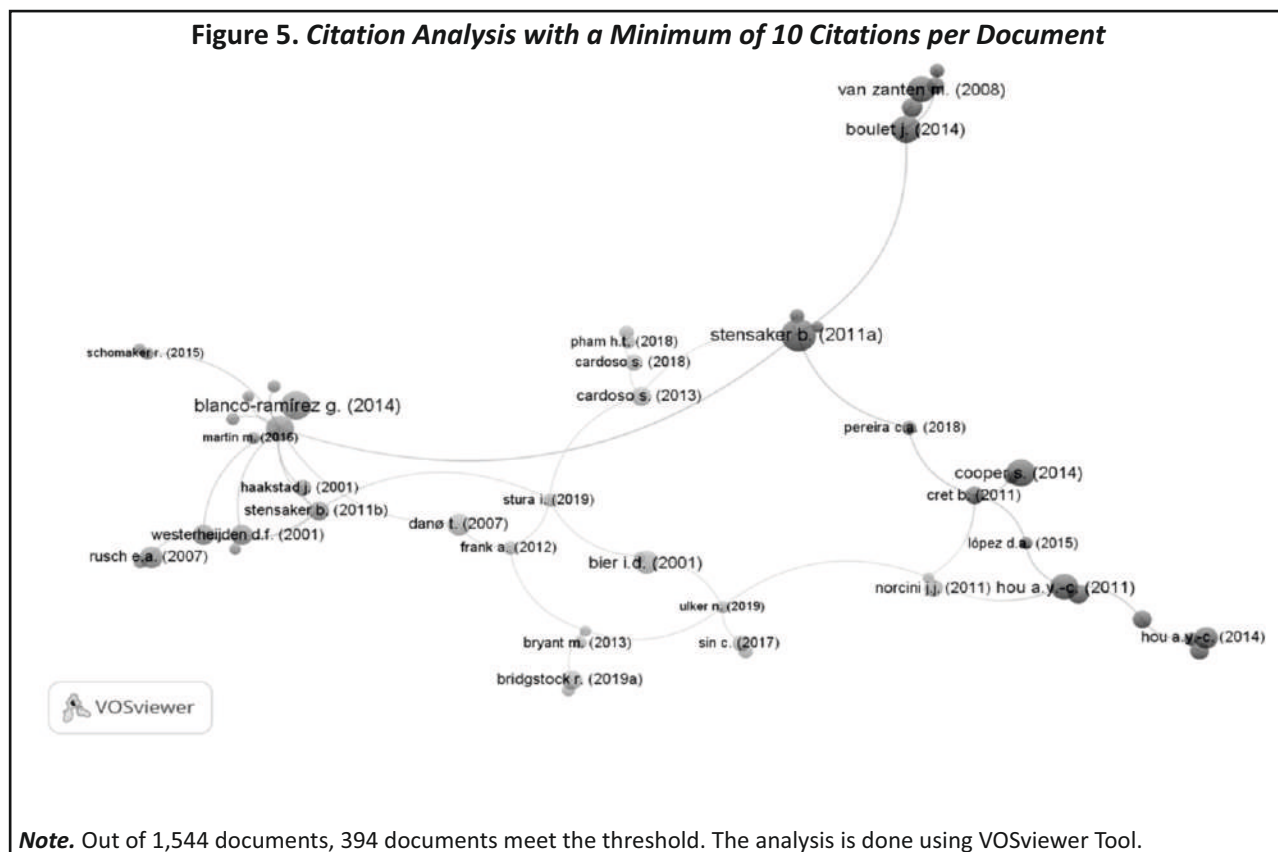
average of 16.40 citations per year since its publication, Morphew and Hartley (2006) is the most cited work in the discipline. The importance of accreditations in higher education is emphasized in this article, which have been mentioned 138 and 128 times, respectively.

### Three-Field Plot Analysis

The three-field relationship graphic illustrates the connection between authors, keywords, and sources (Figure 4). The size of the middle boxes indicates the frequency with which the terms appeared. Our analysis reveals that the top three keywords are “higher education, accreditation, and quality assurance.” *Quality in Higher Education* and *Quality Assurance in Education* are the leading academic journals on research. The authors continue to examine accrediting research to enhance the quality of higher education. *Quality in Higher Education* and *Quality Assurance in Education* are the two most commonly distributed books on higher education.

### Science Mapping

Science mapping examines the relationship between research components (Baker et al., 2021). The examination focuses on the intellectual and structural links between the subjects of the study. “Citation analysis, co-citation analysis, co-word analysis, bibliographic coupling, and co-authorship analysis” are the methodologies utilized in science mapping (Donthu et al., 2021). When combined with network analysis, such methods are useful for demonstrating a research field’s bibliometric and conceptual framework.



## Citation Analysis

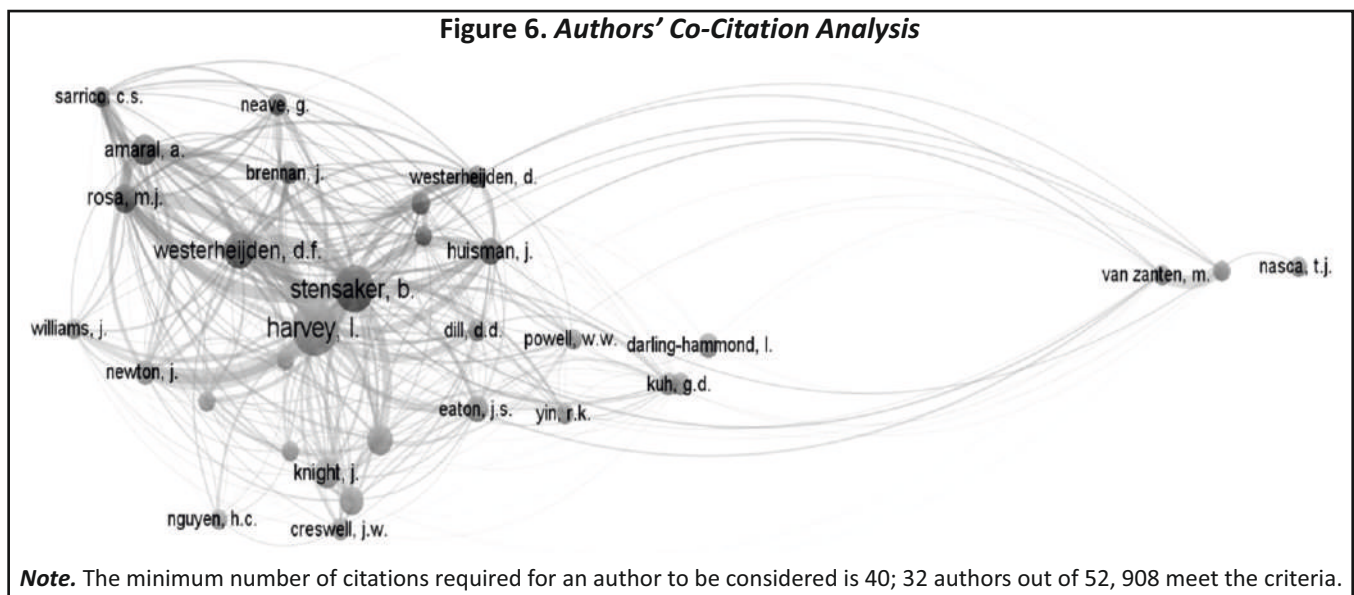
Citation analysis is a mapping approach based on the notion that citations imply conceptual linkages between published works when one author references another. This study uses the number of citations received by an article to evaluate its influence. The methodology helps to identify the most significant publications on a particular academic topic.

Various methods are available to examine the publications' importance in the research field. A straightforward method is to measure its citations (Pieters & Baumgartner, 2002; Stensaker & Harvey, 2006). As an outcome, citations can be used to analyze the most relevant topics in a proposed study to understand the intellectual dynamics of the field better. Figure 5 shows the citation analysis.

## Co-Citation Analysis

Co-citation analysis is a scientific mapping technique that believes extensively cited publications are thematically connected (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021). The purpose of interpretation is to uncover the underlying structure of a study subject, such as its essential topics. When two publications are cited in the bibliography of a third publication, they form a co-citation network. Figure 6 demonstrates that co-citation analysis has the added benefit of helping authors uncover theme clusters and locate the most influential publications.

"Stensaker B." and "Harvey L." were highly co-cited authors in the research field. They have together published three articles having 160 citations together. The authors have discussed the quality assurance evaluation method by the external agency NOKUT in Norway.

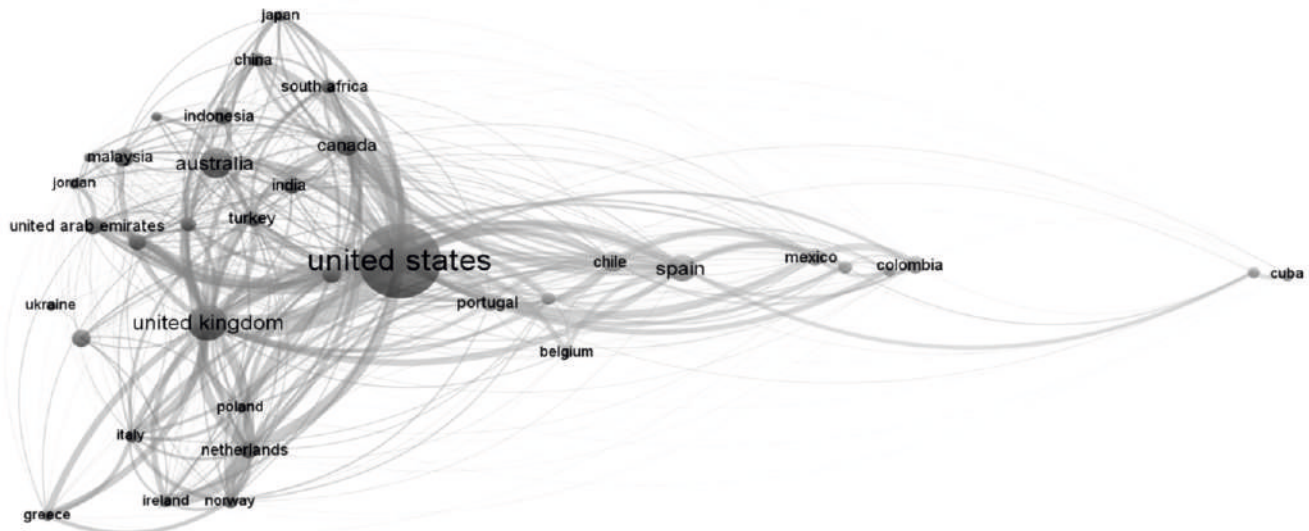


## Bibliographic Coupling

If at least one cited source appears in both publications' bibliographies or reference lists, they are said to be bibliographically connected (Ahuja & Madan, 2022; Aria & Cuccurullo, 2017; Kessler, 1963). The authors'

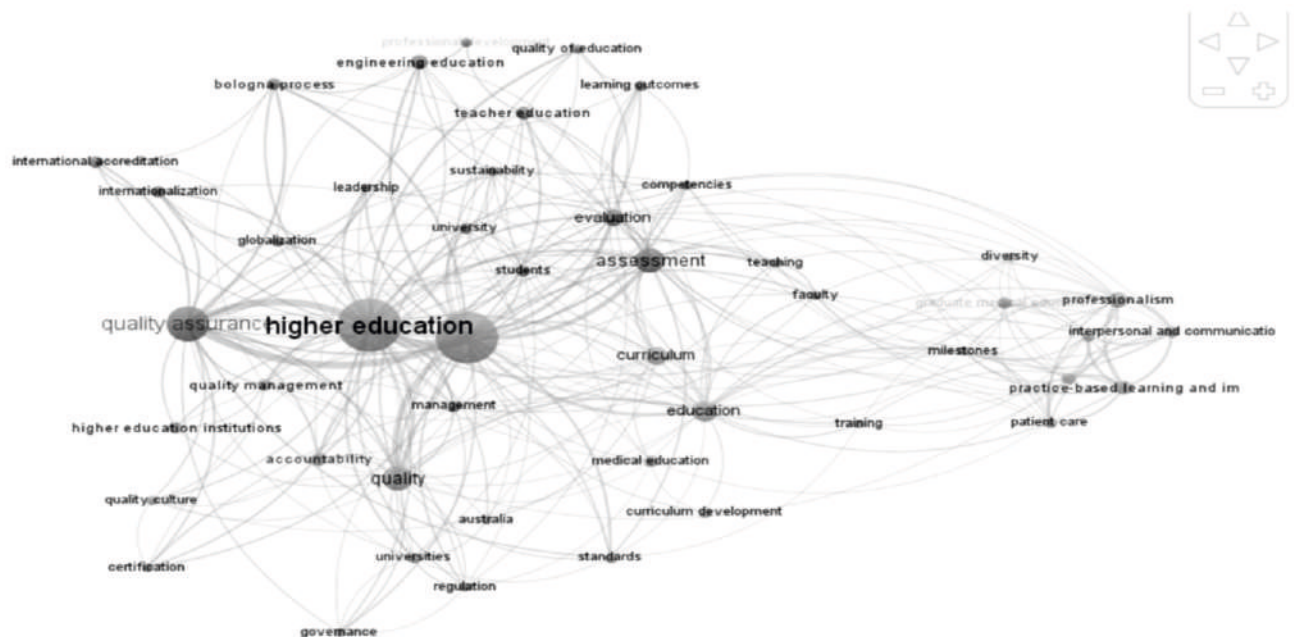
countries' bibliographic coupling is analyzed through VOS viewer software and is presented in Figure 7. According to our study, the US, the UK, and Australia are the countries where sources are most frequently cited.

**Figure 7. Bibliographic Coupling Based on Authors' Countries**



**Note.** The minimum number of countries per document considered is 40. The minimum number of documents considered is 10. Out of 133 countries, 37 meet the threshold.

**Figure 8. Co-occurrence of Author Keywords (Co-word Analysis)**



**Note.** The minimum number of keyword occurrences is considered to be 10. Out of 3,633 keywords, 47 meet the threshold.

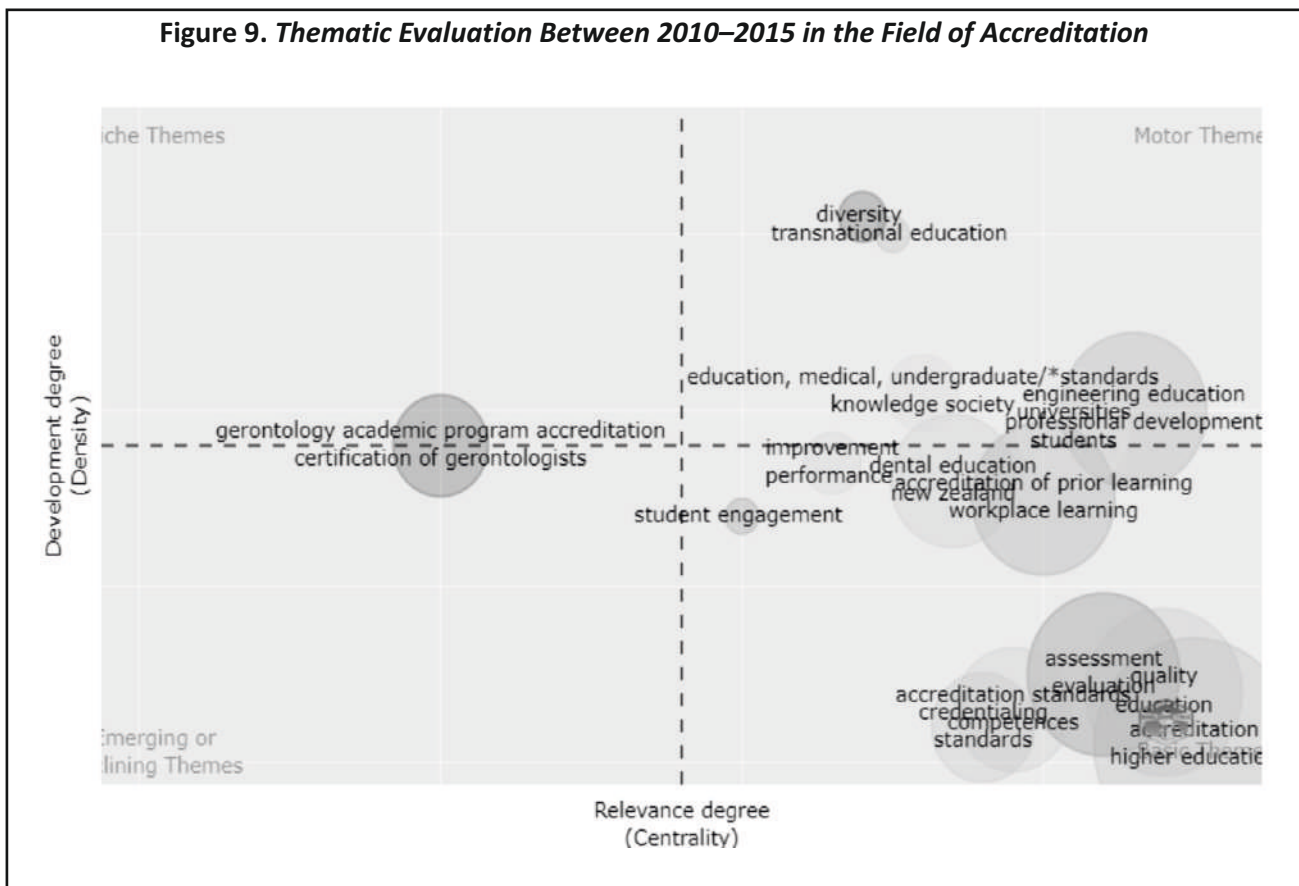
The analysis shows one big cluster out of two collections because of the greater number of schools accredited in the United States and the United Kingdom and more articles published in the past 20 years.

### Co-occurrence of Keywords

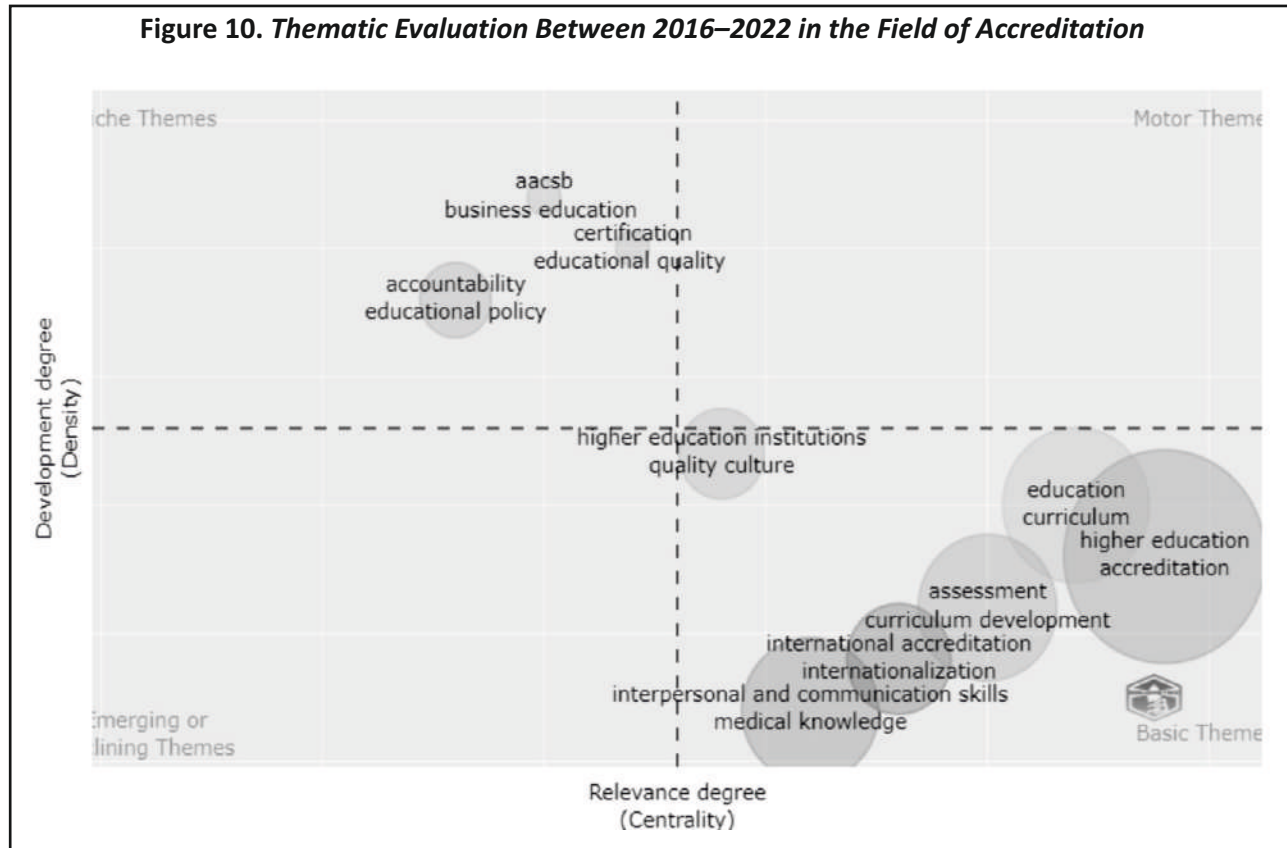
The keywords in a co-word analysis are frequently obtained from “author keywords.” However, in the absence of author keywords, essential terms for co-word analysis can be derived from “article titles,” “abstracts,” and “full texts” (Baker et al., 2020; Donthu et al., 2021). Like co-citation analysis, the co-word analysis assumes that words that frequently appear together have a thematic association. We used author keywords to develop a co-occurrence network in our research. A co-occurrence network using the author’s keyword is created to study the topics related to “accreditations” in research. Keeping ten as a minimum number of keyword occurrences, 47 out of 3,633 keywords meet the threshold.

The total strengths of the co-occurrence of the author’s keyword are analyzed using VOSviewer software. The analysis of Figure 8 shows two significant clusters out of three clusters. These three clusters are : (a) accreditations in higher education, (b) quality assurance and learning outcomes, and, (c) curriculum development. Our study reveals that the important research topics are accreditations, quality assurance, learning outcomes, curriculum development, training, and evaluation.

**Figure 9. Thematic Evaluation Between 2010–2015 in the Field of Accreditation**



**Figure 10. Thematic Evaluation Between 2016–2022 in the Field of Accreditation**



### Thematic Evaluation

The thematic evaluation is examined using the R-Bibliometric software. The outcomes are depicted in Figures 9 and 10. On the themed map, each of the four quadrants is shown. A collection of study topics in a two-dimensional space is divided into four categories.

The upper-right quadrant's principles are complex and fundamental to the accreditation research framework (Aria & Cuccurullo, 2017). The topics mentioned in the upper left quadrant of the area of accreditation are more sophisticated and less relevant. The topics mentioned in the lower left quadrant are undeveloped and of little importance. These are fading or resurfacing concepts, and the concepts mentioned in the lower right quadrant are essential to the investigation. These themes are currently under development.

Figure 9 and Figure 10 show the basic and emerging themes in the accreditation field. These themes are identified as curriculum development, quality, and higher education. Significant research is needed on these themes. Also, these are important themes for continuous improvement and quality improvement in higher education.

### Discussion

The data in the performance analysis (Figures 1 and 2) clearly shows extensive research on the importance of accreditations in higher education. There is a lot of scholarly interest in this topic, as evidenced by the volume of publications, the distribution of publications by authors, and the average number of publications per year. The

Indian higher education institutes started international accreditations in 2005, and the first school in India was accredited in 2006 by AMBA accreditation. In recent years, accreditations have become widespread and mandatory for higher education institutions to meet the compliance or minimum requirement for participation in World University Rankings (Singh & Singh, 2021).

The citation analysis in Table 3 reveals that most of the contribution countries on accreditations primarily originated from the USA and UK. Also, we can observe that AACSB accreditation started in the early 1900 and has more impact on higher education. It has become more popular in the USA. More research papers may be produced due to more number of accredited schools present in the USA and UK. In addition, it is noted that emerging countries have just begun international accreditations and research in the field.

When examining the fundamental research measures on this topic, the top authors, single-author publications, and country-specific publications reveal that certain individuals and nations are especially active in this field. This notion is further corroborated by the three-field plot shown in Figure 4, which illustrates how accreditation is multidisciplinary and encompasses numerous higher education disciplines. Figure 5 shows the most significant publication in the research field, where the author discussed the significance of higher education accreditation in Europe. The author compared Europe's widely accepted set of public and private accrediting bodies and discussed the significance of accreditations in higher education. Figure 6 shows the highly cited authors in the domain of accreditations.

Notably, the data also reveals a correlation between the leading publishing nations and the countries where certification agencies are headquartered. Figure 7's bibliometric coupling and average citations per country demonstrate that while some nations are more active in publishing research on accreditation, others have a bigger influence on developing accreditation norms and procedures. The analysis of Figure 8 reveals that the important research topics are accreditations, quality assurance, learning outcomes, curriculum development, training, and evaluation.

Lastly, the findings point to several prospective directions for accrediting studies in the future. Finding new areas of investigation or highlighting significant trends in this field may be made easier with citation analysis and theme evaluation (Figures 9 and 10). The information could also be used to investigate how accreditation affects many facets of higher education, including student outcomes, institutional performance, and area economic growth. Overall, the information emphasizes how crucial accreditation is to higher education and how much attention it has received from the scholarly community. This research can direct future research and provide information for policy decisions relating to certification by identifying significant indicators and trends in this area.

## **Implications**

### ***Research Implications***

This research on accreditation in higher education will likely inspire additional research in the future, particularly in areas such as the effectiveness of various accreditation models and approaches, the role of technology in accreditation processes, and the impact of accreditation on global trends in higher education. The research findings can guide future studies by identifying emerging themes, influential authors, and countries. The study sheds light on the antecedents of the adoption of accreditation in higher education, providing useful insights for academic leaders and policymakers to make informed decisions on implementing accreditation in their institutions. Overall, the practical implications of the research suggest that accreditation is a crucial aspect of higher education, and policymakers and institutions should prioritize quality assurance mechanisms to maintain their global competitiveness and enhance the quality of education.

## ***Theoretical Implications***

The study contributes to the theoretical understanding of accreditation in higher education and provides insights into its relevance and future directions. These theoretical implications have important practical implications for higher education institutes, policymakers, and other stakeholders who can use the study's findings to improve the quality and standardization of education.

## **Conclusion, Limitations of the Study, and Future Research Directions**

Accreditation is a widely adopted quality assurance mechanism in higher education. This paper explores research questions related to the relevance of accreditation in higher education, fundamental research metrics, high-quality publications, the dynamics between accreditation agencies' origin countries and top countries publishing in this field, and future exploration of topics in accreditation research. The reporting used to answer research questions provides an understanding of the impact of research in the field of accreditation and emerging themes that can be explored in the future. The results reveal emerging topics: accreditations, curriculum, continuous improvement, and quality improvement. In addition, the research reveals the influencing factors of antecedents of the adoption of accreditation in higher education. This study attempts to comprehend the published literature on higher education accreditation. The study yields the following insight and directions for future research:

- ✦ In the beginning, accreditation as a field grew more in developed countries. This is most likely because most international accreditation agencies originated in the United States, the United Kingdom, and Europe. This aligns with Lowrie and Willmott (2009) that accreditations have become an international benchmark for higher education.
- ✦ According to the research findings, more articles were published in medical journals describing the pioneering role of accreditations' research in the health and medical field.
- ✦ In the last decade, research and publications on accreditations in non-originating countries have seen a noticeable increase.
- ✦ Accreditation, higher education, and quality assurance are emerging research themes. More scholarly debate on accreditation, quality assurance, continuous improvement, and other topics is expected, particularly in developing countries.
- ✦ The results of this study emphasize the value of global accreditations and the necessity of numerous accreditations for business schools.
- ✦ Our research reveals that higher education institutes are gradually adopting accreditation, and thus research is increasing. This is most likely due to competitive pressure, brand visibility, obtaining external funds, or continuing to improve rankings, among other things.
- ✦ This study examines the understanding of accreditation and recommends further study.
- ✦ The topic analysis found that curriculum and quality assurance have also emerged as important study topics.
- ✦ This research also highlights the elements that influence the adoption of accreditation in higher education, giving academic leaders and policymakers useful insights from their investigation.

While no research is without constraints, this study is likewise restricted to articles from the previous two decades. The scope of this study encompasses certification in all professions. However, future researchers may consider repeating this exclusively for management education—a rapidly expanding subject of study over the

next decade. Future researchers may explore the antecedents of adopting accreditations in higher education, especially in developing countries.

In the future, the systematic literature review on published papers may investigate compiling the methodologies, background, and ideas of various authors in the existing study. The findings provide a future road map and a comprehensive understanding of trends in accreditations to higher education institutes and academic leaders. The Scopus database was used for bibliometric analysis in the present study. Future studies may extend by adding articles from other databases, Web of Science, EBSCO, and ProQuest.

## Authors' Contribution

The manuscript is a collaborative effort of J. Srikanth Reddy, Dr. Ritu Sharma, and Dr. Amit Kumar Gupta. Mr. Reddy extracted research papers of high repute and filtered them based on keywords to generate concepts and codes relevant to the study design. Dr. Sharma was responsible for writing the introduction and literature review sections. Dr. Gupta and Mr. Reddy jointly developed the bibliometric analysis and wrote the discussion section. All three authors contributed equally to the manuscript by discussing and developing the practical implications, limitations, and conclusion sections. Therefore, it can be stated that the manuscript is the result of a team effort, with all three authors making substantial contributions to the study.

## Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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