Research Paper

Visualizing Research Theme in AACSB Accreditation Field Based on Co-word Analysis

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ABSTRACT: *This paper aims to provide a comprehensive understanding of the research themes in the AACSB accreditation field. Based on descriptive statistical analysis of literature published in relevant journals from the years 1991 to 2023, a-co-word analysis was employed for the analysis of the 709 keywords collected from 234 articles. Specifically, a cluster analysis was applied in the analysis for two time periods: 1991–2018 and 2019– 2023. The results indicate that the number of published papers has significantly increased since 2019, and this field has attracted the attention of scholars from many countries around the world. The interdisciplinary integration of journals is obvious, and the degree of association among scholars in co-authorship networks is not high, and a group with significant influence has not yet formed. The research topic involves AACSB accreditation system and standards, management and business education, business school management, curriculum design, and other relevant topics. The research results also indicate that AACSB accreditation research has undergone a health evolution over the past four decades. Early research focused on the introduction of accreditation standards and systems, while in recent years, attention has been paid to the penetration of accreditation in talent cultivation and curriculum design in business education. Recently, there has been a particular focus on the integration of new-generation information technology. The results offer useful hints on the future direction of how the field may evolve.*
KEYWORDS: *AACSB Accreditation, Co-word Analysis, Research Theme*

I. INTRODUCTION

With the changing trends of globalization, world free trade and other economic structures, the rapid development of communication technology, and the rapid flow of information, global enterprise competition is becoming increasingly fierce. To enhance competitiveness, enterprises have put forward higher requirements for the skills and innovation capabilities of talents. As the cradle of business talents, business schools must ensure that graduates can master the necessary skills [1]. Correspondingly, business education in various countries around the world is increasingly pursuing quality, and many universities have incorporated teaching quality and the process of ensuring quality into the requirements of business education.

There are three most authoritative accreditation systems for global business education: AACSB, EQUICS, and AMBA. Although these three systems have different emphases on accreditation content, each business school takes pride in obtaining one of them, indicating that the quality of their education and teaching is widely recognized. Among them, AACSB (The Association to Advance Collegiate Schools of Business) accreditation enjoys the highest reputation due to its long history and wide influence. Its core system construction proposed in the accreditation of business education provides an effective teaching quality assurance system framework and operating mechanism for business education. It is also the effective operation of this system that ensures the continuous improvement of teaching quality in various accredited business schools.

Currently, many scholars have used some qualitative methods to review and sort out research on AACSB accreditation, including analyzing the value of AACSB accreditation on four key topics of importance to schools, prospective students, and employers [2], using institutional theory and systematic literature review to identify the institutional role of business school accreditation agencies (AACSB, EQUIS and AMBA)[3], conducting a systematic review of the research on the quality and value of AACSB International accreditation

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[4], and identifying the strategic leadership and change management used to obtain the AACSB accreditations as well as the research development on AACSB in the past decade [5].

In summary, although scholars have conducted extensive review research on the AACSB accreditation of business schools, there is still a lack of comprehensive research on the AACSB accreditation as a specific group, making it difficult to have a comprehensive understanding of this field. Given this, this study attempts to use bibliometric methods to analyze the current research progress of AACSB accreditation, hoping to make up for the shortcomings of current research and promote the development of this field through a more systematic review.

The rest of this paper is arranged as follows. Section 2 is a research design, including data sources and the research method used in the research. Section 3 is the analysis results. Section 4 summarizes the research conclusions and suggestions.

II.   RESEARCH DESIGN

2.1 Research Method

Knowledge visualization has become a new research field that combines many theories such as graph theory, bibliometrics, and statistics. It concretizes abstract knowledge, making it easy to observe and helping more people better grasp the knowledge. Co-word analysis is based on the following assumptions: keywords can provide a comprehensive description of the content. Its effectiveness in identifying and revealing potential cooperative structures and patterns has been demonstrated by many previous studies in other fields [5-6]. We described the keyword network of our research, where nodes are keywords and links represent the coexistence of these keywords. VOSviewer is a software tool used to construct and visualize bibliometric maps. Unlike most computer programs used for bibliometric mapping, VOSviewer is particularly suitable for displaying large bibliometric maps in an easily interpretable manner and pays more attention to drawing and clustering.

In this study, descriptive statistics were mainly conducted on the number of publications, journals, and authors in the research field to reveal the development patterns. In addition, the keywords of the articles were statistically analyzed to reveal the research hotspots and changes in the field. When conducting specific analysis, the research results were better presented and visualized using the scientific metrology software VOSviewer.

2.2 Data Source and Index Selection

The dataset to be analyzed in this article was retrieved from the Web of Science (WoS), which provides a comprehensive citation search and supports interdisciplinary research on references. Therefore, the WOS core collection database was selected as the source of literature related to AACSB accreditation research. In the exploratory topic search process of relevant literature, it was found that many records included AACSB in the abstract and/or keywords provided by the author. Therefore, the samples used in this study were retrieved from the WoS core collection and filtered using "AACSB" and "Association to Advance Collegiate Schools of Business" in the title and theme. For the maximum recall quantity, the time range is from 1991 to 2023. The data was extracted on May 5, 2024. The search results were cleaned and organized, removing articles such as editor's notes, conference introductions, academic hot topics, topic selection guides, and missing authors. At the same time, literature that did not involve AACSB was deleted, resulting in 234 relevant articles, which were used as the main dataset for this study.

III.   RESEARCH RESULTS

3.1 Descriptive Statistics of the Literature

Based on the literature collected in this field, this article conducts statistical analysis on publication year, journal, main authors and their affiliations, as well as the research field. The descriptive statistics are shown in Figure 1, Figure 2, Figure 3, Figure 4, and Table 1.

Figure 1 provides annual trends in the number of publications from 1991 to 2023. In terms of the period, before 2018, there was only one article published per year. The number of published AACSB accreditation documents has increased sharply since 2019, 28 articles were published in 2019, while 32 were published in 2021. The annual publication average is 39.93, highlighting that with the development trend of education globalization, AACSB certification has gradually received widespread attention from scholars.

The geographic area statistics of the publications in Figure 2 show that countries including the US, Australia, and Canada are the countries with a good deal of research on AACSB accreditation, which is explained by the fact that these countries are the leading countries in developing AACSB accreditation. The remaining countries are mostly in Asia, Europe, and the Americas.
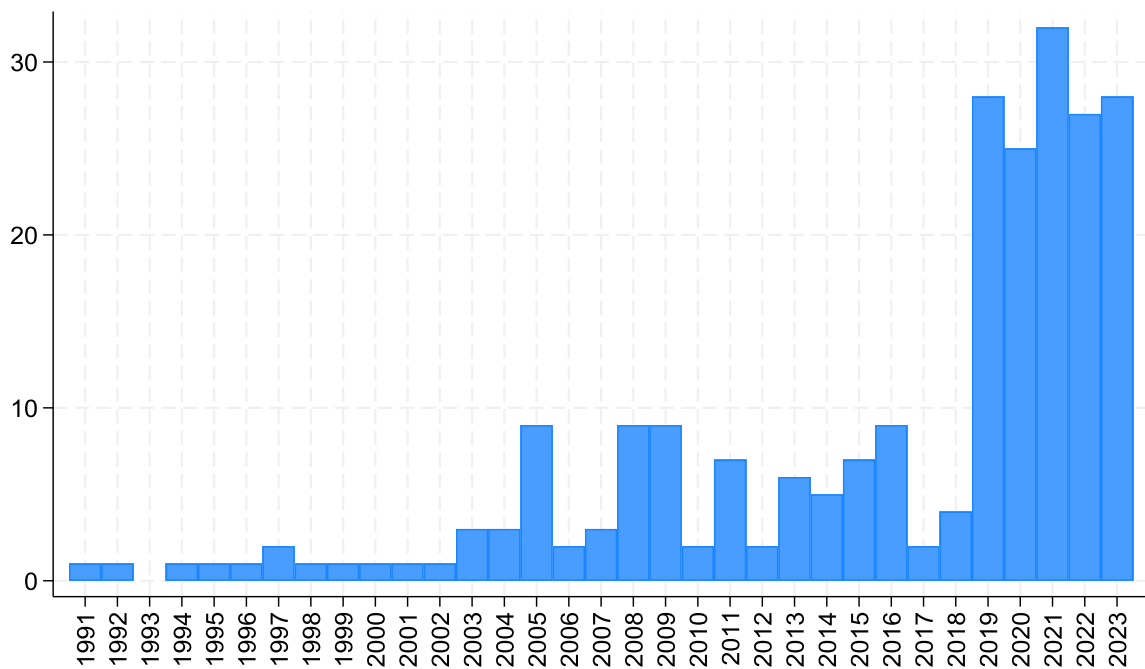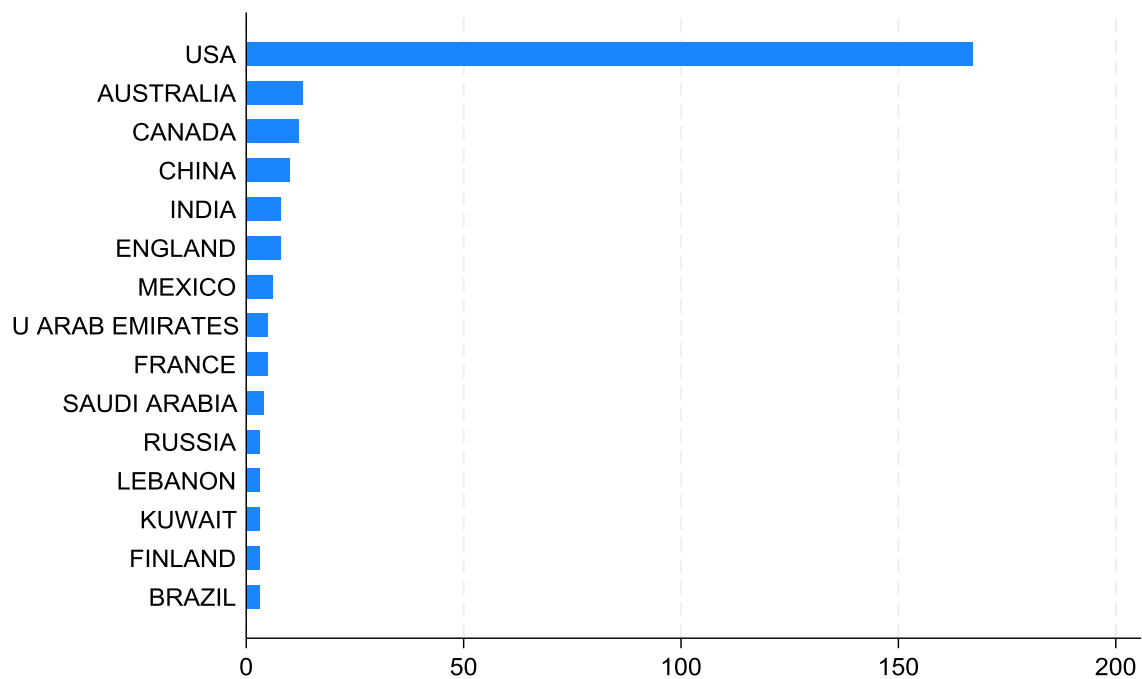
Figure 1: Year of publication

Figure 2: Distribution of publications by leading countries.

According to the journals published in the literature, 234 articles were sourced from 107 journals, which mainly cover fields such as education, social science integration, finance, business management, and library and information technology. Therefore, this indicates that AACSB accreditation research highlights the role of interdisciplinary and cross-disciplinary integration. Among the 107 journals, 19 have published more than 2 articles (as shown in Figure 3), representing the main publications in the AACSB certification field. From the perspective of the fields involved in these journals, the interdisciplinary and interdisciplinary characteristics mentioned above have also been verified.
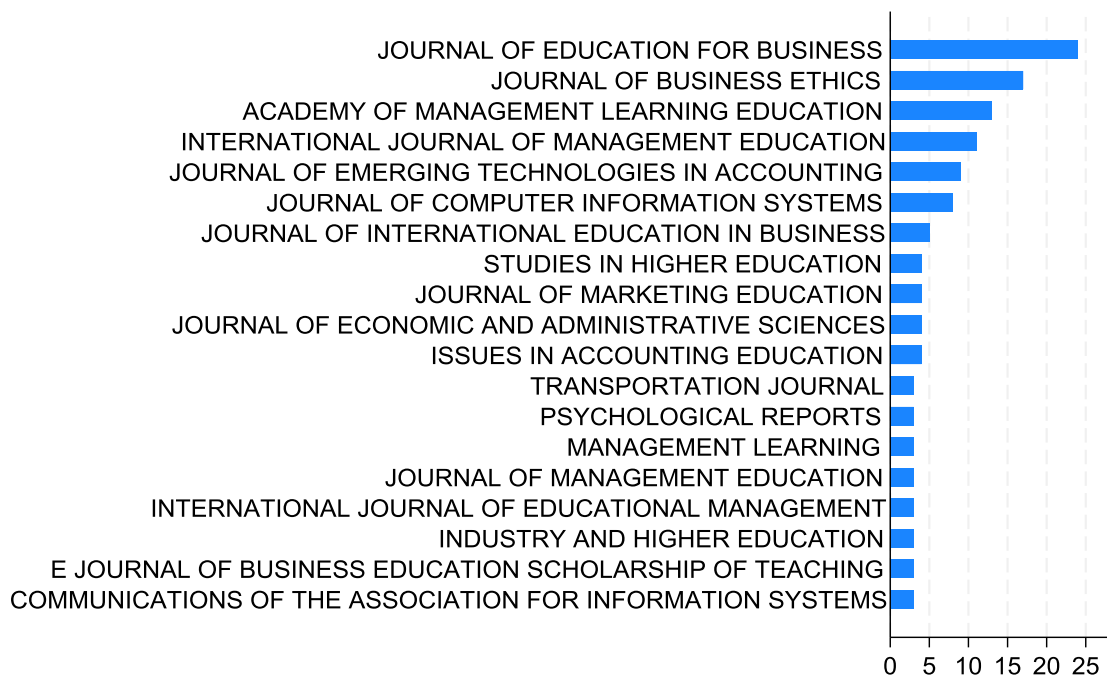
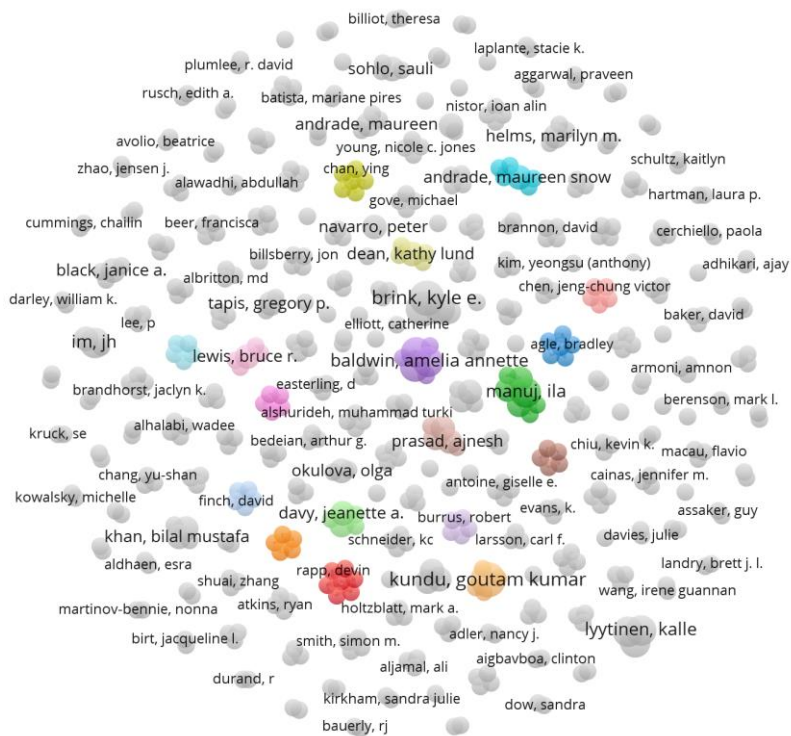**Figure 3:** Distribution of publications by leading journals.

Figure 4: Co-authorship network.

From the perspective of author participation in paper publication, a total of 543 authors participated in paper publication, of which 499 authors participated in publishing 1 paper, 30 authors participated in publishing 2 papers, 11 authors participated in publishing 3 papers, and 3 authors participated in publishing 4 papers. In addition, from the perspective of co-authorship, 36 papers are single-authored, 83 papers are co-authored by 2

authors, 72 papers are co-authored by 3 authors, 33 papers are co-authored by 4 authors, 8 papers are co-authored by 5 authors, and there is also 1 paper co-authored by 6 authors and 7 authors, respectively. To further analyze the author situation of the paper, Figure 4 shows the co-authorship situation of the authors. From the results of Figure 4, it can be seen that the authors involved in AACSB certification research are relatively scattered. Although some scholars have cooperative relationships, overall, the degree of correlation in the relationship network is not close, which also indicates that there is no significant influence group formed in this field.

Table 1. Areas of research in AACSB accreditation

No.	Research area	Frequency	No.	Research area	Frequency
1	Business Economics	129	7	Operations Research Management Science	4
2	Education Educational Research	98	8	Public Administration	3
3	Social Sciences Other Topics	20	9	Science Technology Other Topics	3
4	Computer Science	17	10	Transportation	3
5	Psychology	10	11	Environmental Sciences Ecology	2
6	Information Science Library Science	7	12	Other topics	4

AACSB accreditation is a topic related to various areas such as management, education sociology, and psychology. Table 1 presents the research areas related to AACSB accreditation. The Web of Science database contains 129 business economics publications, 98 on education educational research, 20 on social issues, 17 on computer science, 10 on psychology, and other topics.

3.2 Keyword Analysis and Co-word Analysis

The statistical analysis of keywords shows that 234 articles contain 709 keywords, of which 609 keywords have a frequency of 1, 54 keywords have a frequency of 2, 21 keywords have a frequency of 3, and 5 keywords have a frequency of 4. In addition, Table 2 shows 20 keywords with frequencies greater than 5. According to the high-frequency keywords in Table 2, AACSB accreditation research mainly involves higher education (including higher education, business schools, business education, management education, accounting education), accreditation systems (including AACSB, accreditation, AACSB standards, AACSB accreditation, assurance of learning, assessment), curriculum management (data analysis, sustainability, curriculum, ethics, corporate social responsibility, curriculum design), etc.

Table 2. High-frequency keywords

No.	Keyword	Frequency	No.	Keyword	Frequency
1	AACSB	47	11	Management Education	7
2	Accreditation	46	12	Experiential Learning	7
3	Business Schools	29	13	Management	6
4	Business Education	16	14	Sustainability	6
5	Higher Education	15	15	Curriculum	6
6	AACSB Accreditation	15	16	Ethics	6
7	Assurance of Learning	10	17	Business	5
8	Assessment	10	18	Corporate Social Responsibility	5
9	Data Analysis	9	19	Curriculum Design	5
10	AACSB Standards	8	20	Accounting Education	5

To explore the potential research themes in AACSB accreditation from 1991 to 2023, two sub-periods were established within the explosion in the number of AACSB accreditation documents including 1991–2018 (94 documents with 261 keywords) and 2019–2023 (140 documents with 497 keywords). Keywords were collected and divided into two periods. Keyword co-occurrence networks are created by VOSviewer software. Figures 5, Figure 6, Figure 7, and 8 show the two keyword networks in the two periods with the minimum number of occurrences of a keyword being three. The frequency of keywords is expressed by the size of the bubble and the intensity of the occurrence of the two keywords is expressed by the thickness of the line connecting the two keywords. Furthermore, the clustering results of keywords in each period are shown in Table 3 and Table 4.

Table 3. Research theme in 1991-2018

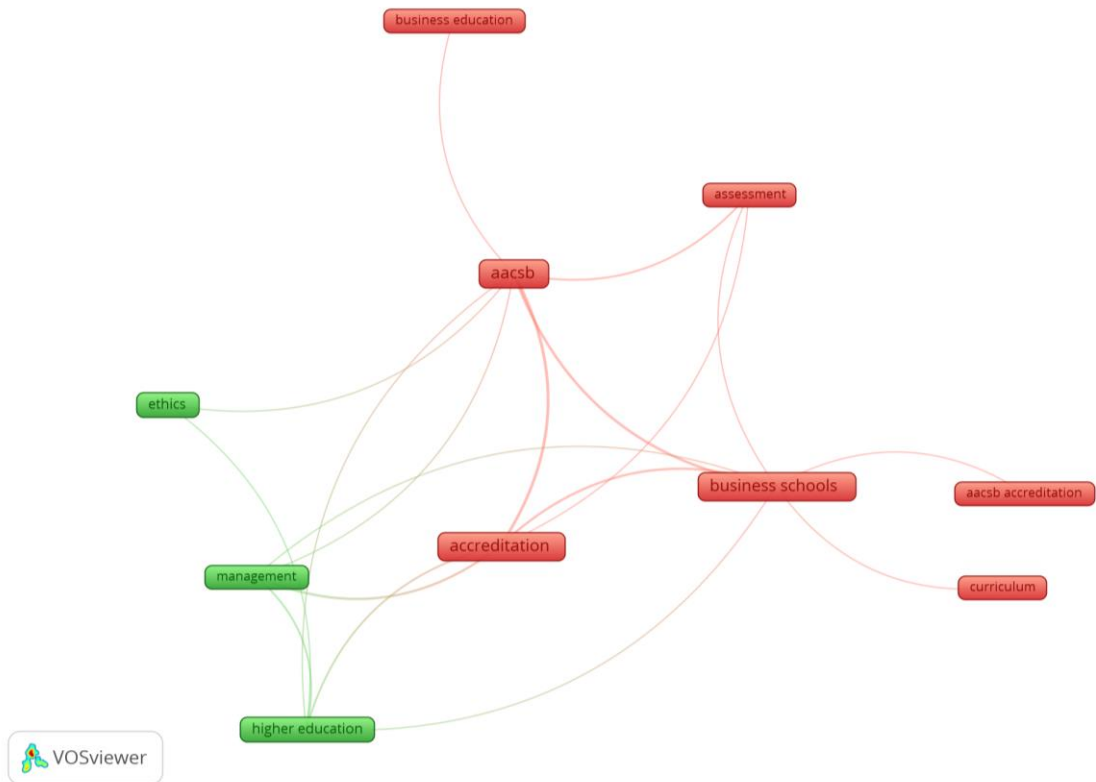| Cluster (size)	Keywords
A1 (7)	AACSB (12); Accreditation (12); Business Schools (11); Assessment (3); Business Education (3); AACSB Accreditation (3); Curriculum (3)
A2 (3)	Higher Education (5); Ethics (4); Management (3)

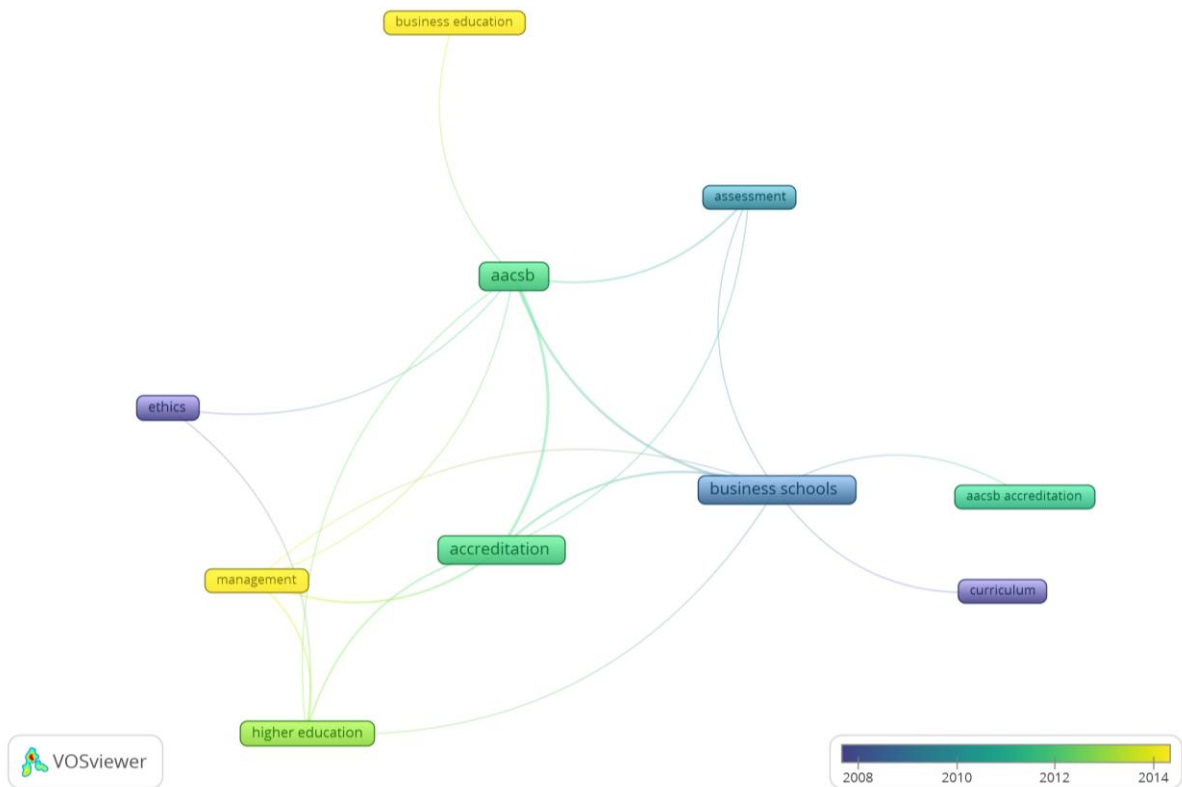**Figure 5:** Cluster view of keyword co-occurrence network (1991-2018).

Figure 6: Overlap view of keyword co-occurrence network (1991-2018).

According to the keywords statistics in Table 3 and the clustering results in Figure 5, it can be seen that the research theme in the first stage can be roughly divided into two clusters. The first cluster is highlighted in red, consisting of 7 keywords, mainly emphasizing the relationship between AACSB certification, business schools, and business education. The second cluster is the green part, which includes three keywords and mainly emphasizes the ethics and management of higher education. In addition, according to the results in Figure 6, it can be seen that the hot topics in the first stage are mainly business education and management, indicating that the new direction in the first stage is the guidance application of AACSB certification.

According to the keyword statistics in Table 4 and the clustering view results in Figure 7, it can be seen that the research topics in the first stage can be roughly divided into four clusters. The first cluster is marked in red, consisting of 11 keywords, mainly emphasizing the content of AACSB accreditation and the content related to technology, curriculum, and teaching methods in the standards. The second cluster is the green section, which includes 8 keywords and mainly emphasizes the teaching of sustainable development and social responsibility in management and business education. The third cluster is highlighted in blue, which includes 7 keywords and mainly emphasizes the AACSB accreditation system of business schools. The fourth cluster is highlighted in yellow, which includes 5 keywords and mainly emphasizes the role of the current new generation of emerging technologies in curriculum design. In addition, according to the results in Figure 8, it can be observed that in the second stage, recent research hotspots have emerged in emerging technologies and curriculum design.

Table 4. Research theme in 2019-2023

| Cluster (size)	Keywords
B1 (11)	AACSB Accreditation (12); Data Analysis (9); AACSB Standards (7); Accounting Education (5); Emerging Technologies (4); Accounting Pedagogy (3); Accounting Curriculum (3); Curriculum (3); Data Visualization (3); Information Technology (3); Management (3)
B2 (8)	Business Education (13); Higher Education (10); Management Education (5); Sustainability (5); International Accreditation (4); Corporate Social Responsibility (3); E-portfolio (3); Marketing Curriculum (3)
B3 (7)	AACSB (35); Accreditation (34); Business Schools (18); Assurance of Learning (9); Assessment (7); Benchmarking (3); Business (3)
B4 (5)	Experiential Learning (6); Curriculum Design (5); Artificial Intelligence (3); Big Data Analysis (3); IS Curriculum Recommendations (3)
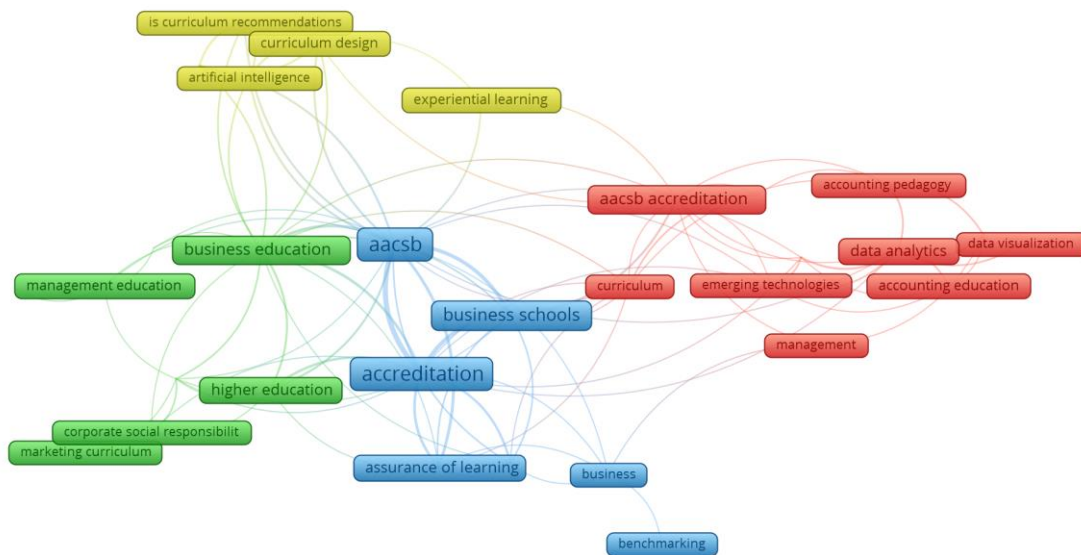
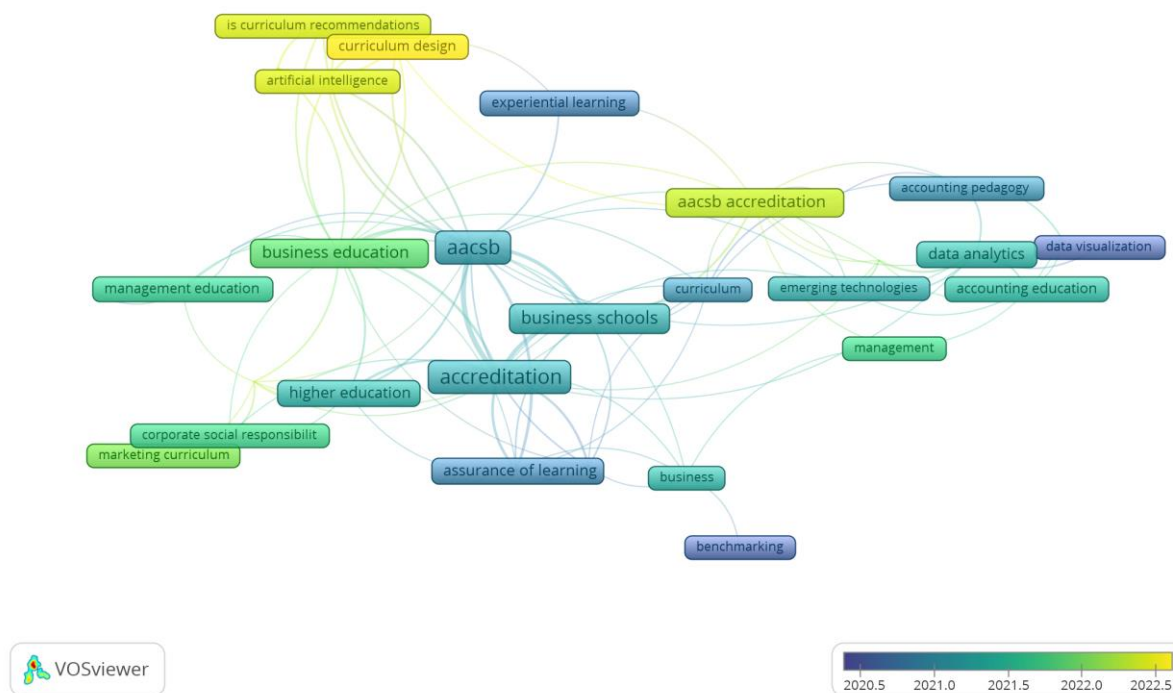**Figure 7:** Cluster view of keyword co-occurrence network (2019-2023).

Figure 8: Overlap view of keyword co-occurrence network (2019-2023).

IV.   CONCLUSION

Based on the literature retrieved from the Web of Science, this paper analyzed 234 articles in the field of AACSB accreditation from 1991-2023 with the knowledge map visualization function of Vosviewer. Through the descriptive statistical analysis and co-occurrence of keywords, this paper systematically summarizes the research hotspot and development trend of AACSB accreditation.

The descriptive statistics show that AACSB accreditation studies have rapidly grown since 2019. The US, Australia, and Canada are the leading countries in developing AACSB accreditation. The most influential journal about AACSB accreditation research is the Journal of Education for Business, and the main research area is business economics. The interdisciplinary integration of journals is obvious, and the degree of association among scholars in co-authorship networks is not high, and a group with significant influence has not yet formed.

The research topic involves AACSB accreditation system and standards, management and business education, business school management, curriculum design, and other relevant topics. Two sub-periods were established within the explosion in the number of AACSB accreditation documents for co-word analysis, the authors propose future research directions in AACSB accreditation through the comparison of the repetition and the appearance of new keywords in the two time periods. The research results also indicate that AACSB accreditation research has undergone a health evolution over the past four decades. Early research focused on the introduction of accreditation standards and systems, while in recent years, attention has been paid to the penetration of accreditation in talent cultivation and curriculum design in business education. Recently, there has been a particular focus on the integration of new-generation information technology.

Although this article has a certain value in exploring the theme of AACSB accreditation, there are also deficiencies. First, limited by the number of documents included in the database, some representative documents are not included in the analysis, so the research accuracy will be affected. Secondly, due to the author's subjective judgment, there may be deviations in the classification and naming of themes. In addition, due to the limited number of keywords in publications, keywords may not fully describe the content of the publication. Therefore, several keywords may not be mentioned. Future research may combine various methods to provide a theoretical overview of AACSB certification.

ACKNOWLEDGEMENT

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