

Mapping the field of Islamic banking and finance education: A bibliometric analysis and future research agenda

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ABSTRACT

This article examined trends in Islamic education and finance publications using bibliometric analysis. The authors used co-citation and co-word analysis to examine 449 Islamic education and finance studies from Scopus database. In the co-citation analysis, 10 themes in Islamic education and finance were identified. After that, co-word analysis is used to understand and identify each research theme's potential future research directions. The results showed that per year the average publication of articles was 2.65. There has been extensive research on this topic in the United States (US) and the United Kingdom (UK), and the most popped-up keywords are 'education', 'finance education', 'banking education' and very limited 'Islamic finance education'. Further research can be developed using Islamic jurisprudence education, Islamic insurance education, Islamic capital market education, *zakat* education and *waqf* as keywords. In addition, the study offers a visualization map of theme patterns for future studies to create educational fields for Islamic banking and finance education, particularly in Muslim-majority nations like Indonesia, Malaysia, and the Middle East. This research contributes as a foundation for further research in enriching and developing knowledge about Islamic education and finance, especially in majority countries.

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1. INTRODUCTION

One of the sectors that has experienced tremendous expansion over the past few decades is the Islamic banking and finance sector [1]. This is especially noticeable on a global scale, where the sector has one of the fastest rates of growth [2]. Its growth was influenced by various factors, such as the increase in the number of Islamic banks and financial institutions established in various countries [3]. In recent years, Islamic banking and finance (IBF) is one of the fastest-growing businesses in both Muslim countries and other world countries [4], [5]. In line with that, various countries began to offer study and education programs in the field of Islamic banking and finance, as well as developing curricula and training programs in the field of IBF [6], both at the undergraduate and postgraduate levels such as several Asian regions such as Indonesia, Malaysia and the Middle East, European regions such as the United States (US) and United Kingdom (UK). The role of study and education programs in the field of IBF is essential to ensure that the

workforce in the IBF industry has the necessary knowledge and skills to manage finance and investments in accordance with *shariah* (the holy laws of Islam that cover all parts of a Muslim's life) principles [7].

Along with that growth, many researchers have been interested in conducting studies on various aspects in the field of IBF. IBF have increasingly become a popular area of interest among economists and educators for more than three decades [8]. Thus, research in this field will continue to develop in the future. Previous research analyzed bibliometric approaches with the theme of health education [9]–[12], theme with mathematics education [13], [14], artificial intelligence in education [15], and robotics in education [16]. In addition, research has explored the use of technology in higher education [17], big data in education [18], distance education [19], e-learning in higher education [20], and technology in physical education [21]. Furthermore, active methodologies in education [22], highlight innovative teaching approaches, entrepreneurship education [23], promotes business skills development, trends in autism research in the field of education [24], shed light on evolving research directions, and urban education [25] addresses educational challenges in urban settings.

In addition, research has explored moral education [26], curriculum education [27], self-esteem-based curriculum [28], developing self-esteem-based curriculum [29], and science, technology, engineering, and mathematics (STEM) education [29]. Further research exploring the themes of the evolution of leadership [30], the term equity in education [31], educational administration [32], shadow education [33], initial teacher education for inclusive [34], virtual and remote labs in education [35], and language education [36]. Previous studies have also explored features of educational methods such as gamification in education [37], and the metaverse in education [38]. It is also interesting that several studies discuss education during the COVID-19 pandemic [39]–[42]. Nonetheless, there is a lack of research analyzing the research structure of IBF using bibliometric analysis.

Bibliometric analysis is an innovative methodology that aims to quantitatively analyze a collection of publications or scientific papers, such as journals, books, conference papers, and so on. Through a bibliometric network analysis can help in identifying collaborations between authors or institutions, relationships between different research topics, identifying groups of researchers working on the same topic, as well as finding possible bridges between different research topics. Therefore, the current study fills this gap and uses bibliometric networks to investigate scientific publications of IBF education. The aim of this study is to analyze the bibliometrics of all publications in Scopus on IBF education. Researchers integrate two bibliometric method techniques, including co-citation and co-word analysis, to develop scientific maps while providing insight into the evolution of Islamic banking education literature and *zakat* (a donation that Muslims regard as a mandatory act within their faith). The following are the study's particular goals: i) Conducting descriptive statistics on IBF education publications; ii) Using co-word analysis to foretell future study; and iii) Exploring the structure of IBF education.

2. RESEARCH METHOD

Researchers used VosViewer software and statistical computing R version 4.1 to develop citation analysis and joint analysis. Based on the quantity of articles and citations, significant authors are determined. Authorship concentration is evaluated using Lotka's law [43]. The most frequently cited articles in IBF educational research are found using citation analysis. For sequential IBF educational citations (i.e., historiographic networks), keyword common events, conceptual structure, and thematic material, graphical network maps are also created using VosViewer software and R-statistical computing. These techniques ensure the completion of a thorough assessment of IBF educational research. The most popular software tools for creating graphical maps for objects of interest are VosViewer and R statistical computations. More visualization of the literature on IBF education is possible using bibliometric analysis, which also allows for the observation of research theme trends and co-citation and co-word analysis units.

2.1. Data collection and screening

The Scopus database allows searches of collections of English-language articles, books, editorial content, book chapters, notes, and letters. The keyword [(TITLE-ABS-KEY ("Islamic banking education") OR TITLE-ABS-KEY ("Finance education") OR TITLE-ABS-KEY ("banking education"))] in the Scopus database. The study examined publications published before December 2022. An initial search yielded 449 publications. All articles' titles and abstracts were thoroughly screened for keyword relevancy [(TITLE-ABS-KEY ("Islamic banking education") OR TITLE-ABS-KEY ("Finance education") OR TITLE-ABS-KEY ("banking education"))], or these publications were not included in the sample, either. As a consequence, 449 publications altogether were kept for the following round.

2.2. Analysing the data

There are three steps in the data analysis process, they are: i) Descriptive statistics are offered to demonstrate the following information (a) number of pertinent papers published annually, (b) geographic distribution of selected publications, (c) research areas in IBF education, and (d) distribution of publications by journals; ii) Using VosViewer software, a co-citation network was created and shown for the topic of IBF. In addition, it was decided that the study theme would examine the research design in IBF education; and iii) All the keywords from all the chosen publications are categorized into a co-citation research theme using co-word analysis. For recommendations of potential future research directions on IBF education will be visualized by VosViewer software. The author bases his or her suggestions for the direction or focus of additional research on the appearance of new keywords.

3. RESULTS AND DISCUSSION

The author bases his or her suggestions for the direction or focus of additional research on the appearance of new keywords. In the following section, this article delves into the results and discussions surrounding key aspects of the research landscape in IBF education. Bibliometric analysis is a method used to analyze publishing trends and growth in a particular field of study. In the case of Islamic finance, bibliometric analysis has been used to examine the current status of literature, publishing trends, top countries, authors, organizations, authorship patterns, keywords, and articles with the highest citations [44]–[47]. Recent studies used bibliometric analysis to examine the future trends of Islamic finance in the era of financial technology [48]–[50]. However, there has been no specific bibliometric article on IBF education, therefore, this article seeks to fill these gaps.

3.1. Year of publication

The annual trend in the number of publications from 1972 to 2022 is shown in Figure 1. Since 1972, there has not been a significant growth in the number of "Islamic banking education", "finance education," and "banking education" materials issued. The average number of publications per year is 2.65, indicating that the academic community pays little attention to Islamic economics and financial education.

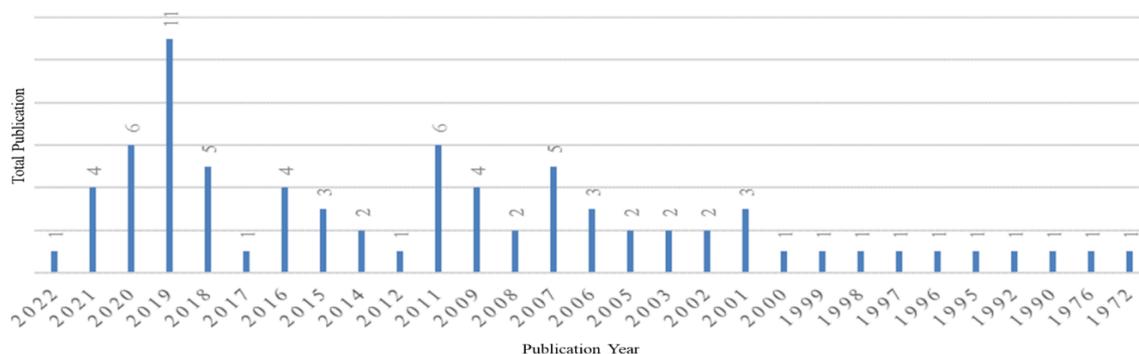


Figure 1. Trend in total publications from 1972 to 2022

3.2. Country

The US and the UK are among the nations with an abundance of research on Islamic economics and finance education, according to the publication's geographic area statistics as seen in Table 1. This is understandable given that these two nations are the leaders in developing Islamic economics and finance education. The remaining nations are largely in China, Australia, and India. Asia only has Malaysia and Indonesia on this list. Additionally, the South African nation noted that given the increasing diversity of Islamic economic and financial education, future studies should concentrate on nations on these two continents.

Table 1 presents a ranking of countries based on the number of publications related to research on Islamic economics and finance education. The US leads the list with 107 publications, indicating a significant focus on this subject within academic circles in the country. Following closely behind are the UK with 43 publications and India with 41, highlighting a substantial presence of research activity in these countries as well. China, Australia, Turkey, Canada, and Malaysia also make notable contributions to the field with

varying numbers of publications, ranging from 25 to 13. Indonesia and South Africa are tied at the 10th position with 11 publications each, underlining the global interest in the study of Islamic economics and finance education across diverse geographic regions. Table 1 provides insights into the distribution of research efforts in this specialized area of study.

Table 1. Countries where research on Islamic economics and finance education has been published

Rank	Country	Total publications
1	United States	107
2	United Kingdom	43
3	India	41
4	China	25
5	Australia	22
6	Turkey	21
7	Canada	18
8	Malaysia	13
9	Indonesian	11
10	South Africa	11

3.3. Journal

Learning is very important when conducting a literature review [51]. Additionally, steering to relevant journals aids people with an interest in cutting down on search time and concentrating more on well-known, high-ranking journals. The periodicals with the most articles on Islamic finance and economics are shown in Table 2. The table presents a distribution of publications based on the journals in which they have been published. Table 2 ranks journals by the number of publications they have received. At the top of the list, both International Conference Proceeding Series (ICPS) and Lecture Notes in Networks and Systems have the highest number of publications, with seven each. Lecture Notes in Computer Science follows closely with six publications. The list continues with various journals, such as Accounting Education and Journal of Education for Business, each having five publications, and several others with decreasing publication counts down to the 10th-ranked Journal of Higher Education Theory and Practice, which has three publications. Table 2 provides a quick overview of where the research has been published, offering insights into the distribution of scholarly output across different journals in the given field.

Table 2. Publication distribution according to journal

Rank	Journal	Total publications
1	International Conference Proceeding Series (ICPS)	7
2	Lecture Notes in Networks and Systems	7
3	Lecture Notes in Computer Science	6
4	Accounting Education	5
5	Journal of Education for Business	5
6	Human Resources for Health	4
7	Educational Philosophy and Theory	3
8	Journal for Critical Education Policy Studies	3
9	Journal of Financial Counseling and Planning	3
10	Journal of Higher Education Theory and Practice	3

3.4. Research area

Islamic finance and economics education is a subject that focuses on many different areas, including economics, banking, Islamic banking, higher education, and financial education. Table 3 lists the topics of study for Islamic finance and economics. Scopus database ranks 1-20 contains 38 educational publications, 22 on financial education, 19 on financial issues, 15 on economic and banking education, learning, blockchain, financial education and higher education and other topics.

According to the quantity of publications in each study area. Table 3 ranks them in the subject of Islamic economics and finance education. The research area "Education" tops the list with 38 publications, indicating a significant focus on educational aspects within this field. Following closely are "Finance Education" with 22 publications and "Finance" with 19 publications, highlighting the importance of financial education and finance-related topics. The "Banking Education" and "Economics" tie with 15 publications each, emphasizing the attention given to banking and economic subjects in Islamic finance education research. This table also shows that various other areas such as "Students," "Teaching," "Blockchain," and "Financial Education" have received substantial research attention. Overall, this table provides an overview

In the first topic, terms like "artificial intelligence," "big data," "data mining," "machine learning," and others that were popular throughout this time period can reveal trends in this area of educational study. This implies that the subject matter of the current study is "artificial intelligence education in banks and finance". Additionally, there needs to be greater discussion of "blockchain" and "security" in Islamic economics and finance curricula. The study of Islamic finance and economics in comparison to artificial intelligence education could be a future research area.

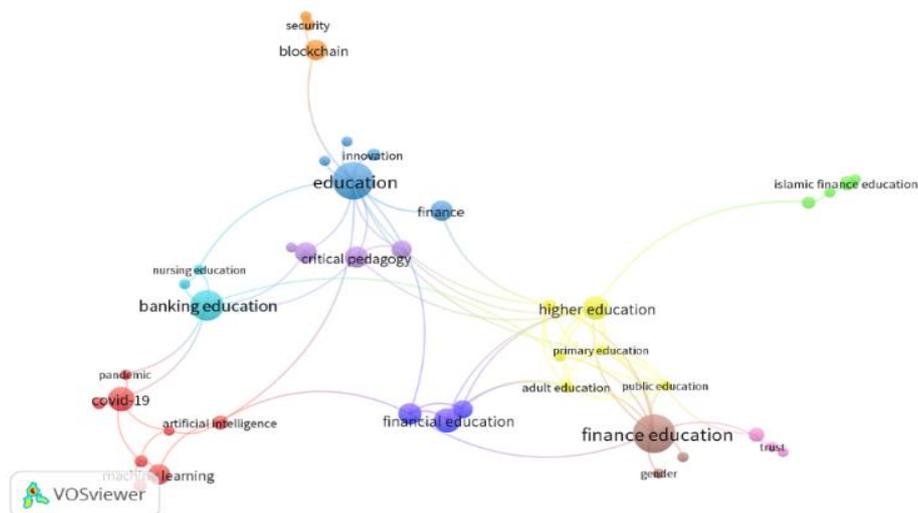


Figure 3. Keyword network

The study of this time period concentrates on topics connected to the "level of education" in the second and third themes. This is indicated by trending keywords that appear in this research theme, such as, adult education, primary education, higher education, public education, vocational education, finance, education, and student. Future research could examine the relationship between educational attainment and knowledge of Islamic finance and economics using both qualitative and quantitative methods. In the literature of Islamic economics and finance education, the 4th theme has undergone the most development. The theme of this research is emerging keywords like, Islamic banking, Islamic finance education and Malaysia. Studies in this group focus on shedding light on themes directly related to Islamic banking and finance education. This is clearly a challenge and research opportunity in the future.

The 5th and 6th themes, keywords such as social justice, banking education and others were the focus of the researchers. This enables potential opportunities for future research themes by linking with Islamic banking and finance education. In the 7th and 8th themes keywords that often appear such as entrepreneurship education, finance education, and blockchain. This suggests that research opportunities in Islamic banking and finance need to be highlighted in this field. In the 9th and 10th themes, keywords such as financial education, financial literacy, personal finance and human capital became the focus of the research theme. Finally, further research can be developed using Islamic *muamalah* (commercial and civil acts or dealings under Islamic law) education, Islamic insurance education, Islamic capital market education, *zakat* education and *waqf* (Islamic endowment of property to be held in trust and used for a charitable or religious purpose) as keywords. Furthermore, the study provides a visualization map of thematic trends for future research to develop educational areas on Islamic banking and finance education, particularly in Muslim-majority countries such as Indonesia, Malaysia and the Middle East.

4. CONCLUSION

The following can be concluded about the literature on IBF education based on the author's keyword analysis: i) There are 2.65 papers published on average each year; ii) The US and UK are the two nations that have conducted the most research on this subject; and iii) The keywords "education," "finance," and "banking," as well as a relatively small number of others, are the ones that appear most frequently. Due to the author's subjective judgment, theme classification, and naming of this theme may be biased. Additionally, because there are not many keywords in the article, the keywords might not accurately reflect

the content. Therefore, it is possible that some terms are omitted. Future studies could combine different methodologies to conduct a theoretical analysis of Islamic money and education. The article contribution lies in shedding light on the state of the literature surrounding IBF education through a meticulous keyword analysis. By revealing that the average annual publication rate is 2.65 articles, this article offers a quantitative perspective on the field's scholarly output. The future research to employ a multifaceted approach for a more comprehensive theoretical review demonstrates a forward-looking perspective and an aspiration for enhanced understanding in the realm of Islamic education and finance.

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