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Financial Literacy as A Character-Based Education for Students: A Bibliometric Analysis

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	Consumerism, fueled by digitalization and pay-later mechanisms, often leads to unwise spending behaviors, reflecting a lack of financial literacy (Lusardi & Mitchell, 2014). This study emphasizes financial literacy as a form of character-based education to foster responsible financial behaviors among students. Prior research highlights that financial literacy positively influences decision-making and long-term financial well-being (OECD, 2016). However, comprehensive bibliometric analyses focusing specifically on students' financial literacy and its integration with character-based education remain limited. This study addresses this gap by systematically analyzing 745 articles published between 2000 and 2024, sourced from the Scopus database, using inclusion and exclusion criteria. Utilizing VOSviewer software, the bibliometric analysis identifies key trends, significant authors, research gaps, and dominant themes within the field. The findings reveal the existing studies on financial literacy has been expanded, not only on the various topics in finance, but also interdisciplinary fields. However, it has found only small integration with character-based education. This study contributes to the literature by offering a structured overview of research trends, gaps and actionable insights for enhancing students' financial literacy and well-being through targeted educational programs and policies particularly and its integration with character-based education.

1. Introduction

The era of digitalization, where anything can be done by only touching the device screen, has brought significant effects on people's spending behavior. It provides a seamless shopping experience, enabling buyers to avoid visiting physical stores or allocating funds for transportation. The emergence of e-commerce has enhanced convenience, occasionally eliminating transportation or delivery costs entirely.

However, this market transformation also impacts consumption behavior, one of its impacts is fostering a consumptive tendency driven by convenience. Consumerism encourages buyers to spend money impulsively without considering the utility of the goods. Such behavior is often motivated by irrational factors, such as trends, aesthetics, or brand influence. The situation worsens when consumers engage in impulsive buying without adequate financial resources, often resorting to services like "pay later," which allows individuals to purchase goods without immediate funds, increasing financial risks.

This phenomenon is particularly concerning among students, a demographic increasingly participating in online shopping and digital transactions. As the digital economy expands, students often lack the financial literacy necessary to navigate these challenges responsibly. Financial literacy, defined as the ability to understand and apply financial knowledge, plays a crucial role in fostering prudent financial behavior and informed decision-making. Prior research has demonstrated a direct correlation between financial literacy and improved financial outcomes, such as debt reduction and savings (Lusardi & Mitchell, 2014). The significance of financial education programs in fostering responsible financial practices is further emphasized by research by (Atkinson & Messy, 2012).

Despite these findings, a large portion of the material now in publication concentrates on particular vocations or general audiences, frequently ignoring its crucial significance in educational contexts. For instance, recent studies highlight gaps in addressing financial literacy among students specifically. The OECD's PISA Financial Literacy assessment, initiated in 2012, provides valuable data showing that financial literacy levels among young people in many countries, including developed ones, remain low (Lusardi, 2019). Furthermore, research indicates that integrating financial education into school curricula can yield significant benefits for students' financial knowledge and behaviors (Urban, Schmeiser, Collins, & Brown, 2020). However, limited attention has been given to how financial literacy can be incorporated into character-based education to develop responsible financial behavior among students, particularly in light of the digital economy.

This research seeks to address these gaps by conducting a bibliometric analysis of studies on financial literacy as an integral component of character-based education. The study aims to identify prevailing trends, thematic focuses, and research gaps in the existing literature, thereby providing a comprehensive overview of how financial literacy can be effectively incorporated into educational frameworks. By emphasizing the integration of financial literacy with character education, this study introduces a novel perspective, addressing an underexplored area. The findings aim to contribute valuable insights for educators and policymakers, enabling the development of innovative strategies to promote financial responsibility among students in the digital era.

2. Literature Review

Financial literacy has gained increasing attention over the past decade due to its role in equipping individuals with the knowledge and skills necessary to manage personal finances effectively. It is showed by the gradually increase of study related to financial

literacy and education for student from 2015 recorded in Scopus. When integrated into education, financial literacy can serve as a foundation for character development, instilling values such as responsibility, discipline, and long-term planning. This literature review is focusing on financial literacy as a character-based education for students.

The interest of research on financial literacy education has seemed to rise significantly in the last decade. Early studies (2013–2016) predominantly concentrated on the definition and measurement of financial literacy (Lusardi & Mitchell, 2014; Atkinson & Messy, 2012). Researchers highlighted the differences in financial literacy among various demographic groups at this time. The introduction of financial literacy into formal education, with a focus on its inclusion in school curricula, was brought about by studies conducted between 2017 and 2020 (OECD, 2022). Recent research has begun evaluating the effectiveness of financial literacy programs in fostering ethical financial behavior among students.

One of the most important abilities for preparing people to deal with financial difficulties is financial literacy. Early financial education is crucial for promoting sound financial practices and well-informed decision-making, according to a wealth of research. Teaching core ideas like investing, saving, and budgeting in adolescence can create a solid basis for long-term financial stability. These skills encourage improved money management and assist people in avoiding typical problems such as high debt levels and adult financial instability.

The COVID-19 epidemic made the importance of being financially prepared even more apparent, emphasizing the need to keep emergency funds on hand and practice responsible credit management. According to Lusardi & Mitchell (2014), people who possess greater financial literacy are considerably more adept at-risk management and planning, which translates into increased resilience in the face of economic shocks. In a similar vein, (Fernandes, Lynch Jr., & Netemeyer, 2014) study discovered that financial literacy interventions, particularly those centered on debt management and budgeting, successfully enhanced financial behaviors over time. Furthermore, as early exposure to financial concepts is highly correlated with better financial results in adulthood, (Sherraden & Ansong, 2016) emphasize the significance of including financial education into school curricula. Financial education acts as a proactive strategy to reduce risks and promote economic resilience by giving people these fundamental skills, especially in an increasingly uncertain global economy.

Financial literacy can be developed through family and social environments. A study rooted in family financial socialization theory shows that open conversations about money within families, such as sharing financial experiences and mistakes, contribute to better financial habits among young individuals. These parent-initiated discussions allow children to learn about budgeting and decision-making in real-life contexts, enhancing their ability to manage finances independently in adulthood. Such informal education complements institutional efforts by embedding financial awareness into everyday life. (LeBaron, et al., 2020)

This study positions itself within the evolving discourse on financial literacy by emphasizing its role as a character-building tool for students. Unlike previous studies that focus solely on cognitive outcomes, this research investigates the interplay between financial education and the development of personal values, offering a holistic perspective on student growth. The integration of financial literacy into character-based education holds immense potential for shaping responsible, ethical individuals. By addressing thematic, methodological, and theoretical gaps, this research seeks to contribute to a more inclusive and impactful financial literacy framework for students.

3. Research Method

This research employs a bibliometric analysis approach to explore the concept of financial literacy as a character-based education for students. Bibliometric analysis is a quantitative analysis method used to evaluate academic literature and identify trends, patterns, and relationships among published works within a specific field (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021). This section outlines the step-by-step procedure for data collection, processing, and analysis.

The following research questions (RQs) will be addressed in this study.

RQ1. What are the publications trends, most prominent sources, documents, and authors on financial literacy as character-based education for students?

RQ2. Which are the major contributing countries yielding research related to financial literacy as character-based education for students?

RQ3. What are the major themes on financial literacy as character-based education for students?

RQ4. What are the potential future areas of research on financial literacy as character-based education for students?

The primary source of bibliometric data for this study is the Scopus database (http://www.scopus.com), a widely recognized and credible academic database. The following steps were undertaken to collect the initial dataset showed in Figure 1 as follows:
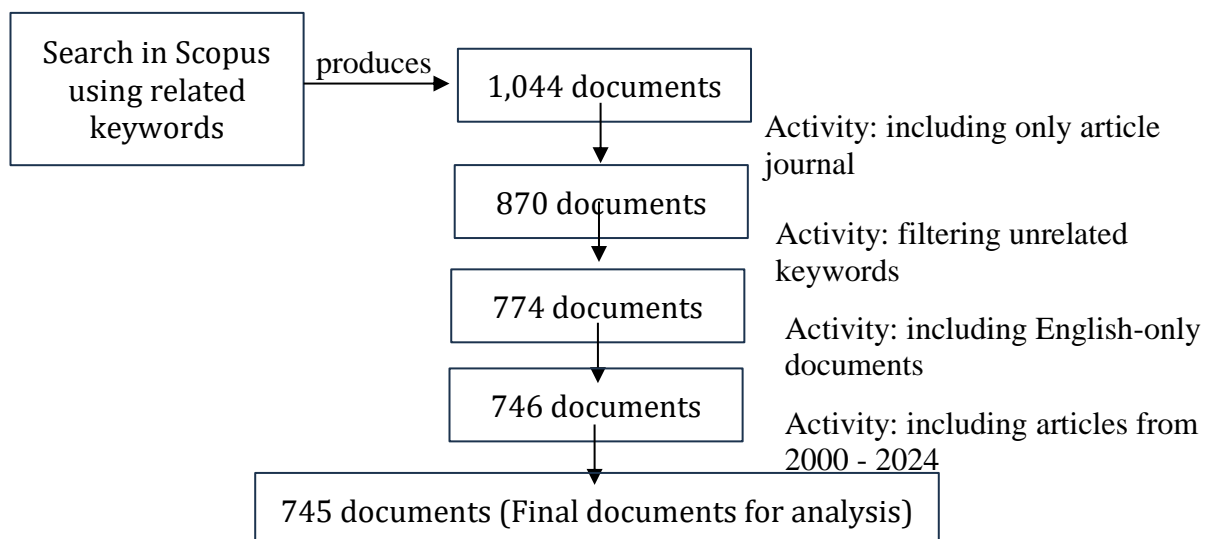

Figure 1. Document Selection

A comprehensive search query was constructed using keywords such as "financial literacy", "financial education", "financial knowledge", "student character", "student attitudes", "money management", "financial behavior". Boolean operators (e.g., AND, OR) were used to refine the search strategy and ensure inclusivity. Initial Dataset is generated then resulted the search yielded 1,044 publications for all time periods. After that, only article journal included and resulted only 870 papers. As the next step, filtering unrelated keywords is then taken, where irrelevant entries and studies that did not align with the focus of this research (e.g., studies on unrelated demographic groups or industries) were excluded manually by screening titles, abstracts, and keywords. This gave total of 774 documents filtered then 746 only-English documents generated. In the time scope, 745 dataset was filtered to include publications from 2000 to 2024. This period was chosen

to align with the generational timeline of currently active students, ensuring the relevance of findings to the target demographic.

After collecting the filtered dataset, the following steps were implemented. Extracting the essential metadata such as title, author(s), year of publication, journal name, citations, and keywords were done. This data was exported from Scopus in .csv format for further analysis. The next step is software utilization which VOSviewer were employed for processing and visualizing the bibliometric data. These tools facilitate co-authorship network analysis, keyword co-occurrence mapping, and citation trends.

The analysis was conducted in two stages, Descriptive Analysis and Relational Analysis. In Descriptive Analysis, publication trends were analyzed to examine the annual growth of research in financial literacy and character-based education. Journals with the highest contributions and most prolific authors were identified. Citation analysis was performed to identify influential papers in the field. For Relational Analysis, the Co-authorship Analysis is used to examine the collaboration networks among authors, institutions, and countries, while, Keyword Co-occurrence Analysis to Identify frequently used keywords and thematic clusters in the research area, revealing key focus areas and knowledge gaps. Furthermore, Thematic Evolution Analysis is also done to investigate how themes related to financial literacy and character-based education have evolved over time.

The validity and reliability of this bibliometric analysis were ensured through the using of Scopus, a highly credible and comprehensive academic database, for data collection. Applying established bibliometric analysis techniques as demonstrated in previous studies e.g., (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021); (van Eck & Waltman, 2014). All data used in this research were obtained from publicly accessible publications within the Scopus database. No proprietary or confidential information was accessed, and proper citation practices were adhered to in the reporting of results.

4. Result and Discussion

The following discussion delves deeply into the findings, highlighting their significance and field applicability in addressing the study issues. Table 1 provides a data summary of the documents used in this investigation study, which forms the basis for the discussion that follows. Total documents throughout year of 2000 to 2024 after filtering resulted of 745 documents with keywords used linked to theme summing to 1,671 words. There are 1,756 researchers in all, and each paper has 20.8 citations.

Table 1. Summary of Main Information of Article Documents

Source	Documents
Documents	745
Author's Keywords	1,671
Period	2000 – 2024
Average citations per documents	20.8
Authors	1,756

Source: Scopus

Publication Trend

The Figure 2 shows the publishing trends demonstrating a notable rise in scholarly contributions over time, suggesting a rise in scholarly interest in the subject under study.

Figure 2. Publication trend for the 745 articles from Scopus from 2000 to 2024.
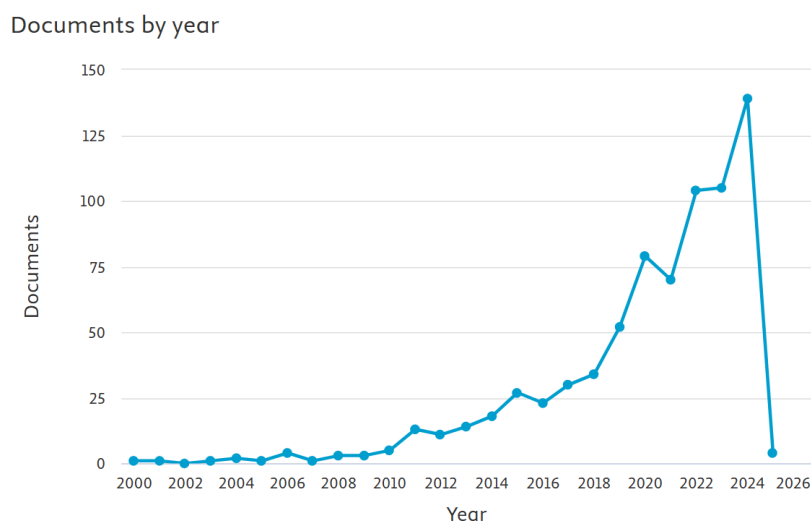
There were very few contributions annually between 2000 and 2010, and the number of publications stayed low. This would suggest that the topic of study was still in its infancy or that the academic community was not giving it enough attention at the time.

A discernible growth starts in 2011, and it continues steadily but gradually until 2018. During this time, the field moves from being a specialty to becoming more widely known among scholars. Early policy measures or rising awareness of the significance of the issue could be important causes. The field exhibits exponential growth beginning in 2019, followed by a slight decrease in 2020 before reaches its peak in 2024, when there are roughly 150 publications. This sharp increase might be as a result of increased interest and funding for academia, conformity to international policy initiatives, such the Sustainable Development Goals, and multidisciplinary research partnerships and the extension of themes. The steep drop in 2025 following the peak in 2024 can be the result of gathering for this year is still happening since 2025 is approaching soon. It is certain that the trend of more studies will continue to grow as a result of heightened interest in this field and better support for research tools.

This trend in publications may be fueled by the expansion is consistent with international educational and socioeconomic policies emphasizing character-based learning, sustainable development, and financial literacy. In addition to increasing awareness of issues like equity, empowerment, and education as means of tackling global concerns, the emergence of digital tools and platforms probably made it easier to share data, collaborate, and access resources.

Prominent Sources and Authors

Table 2 highlights the top fifteen sources of research articles on financial literacy for students with a total citation count of over 95, ranked by citation metrics. The Journal of Financial Counseling and Planning is the most productive journal that published the articles related to this topic, with the most documents (52) that is overall cited 1789 times. In contrast to other journals, its average number of citations per document (34.40) is moderate. On the other hand, the Journal of Family and

Economic Issues has a high average of 68 citations per document, with 1632 citations for 24 articles. A similar concentration of scholarly interest in financial literacy can be seen in the International Journal of Consumer Studies, which has 16 articles with an average of 65.88 citations per document.

Despite only having five publications, the Journal of Economic Psychology has the maximum influence when average citations per document are taken into account, with an astounding 104.40 citations per article. Other noteworthy journals by this metric include Family Relations (83.75) and Social Indicators Research (91.40), both of which stand out for their minor but significant contributions. However, with 24–25 articles each, journals such as the International Journal of Bank Marketing and the Journal of Consumer Affairs have constant but less impressive averages of 43.25 and 38.64, respectively, indicating consistent but moderate influence.

Table 2. Most Prominent Source based on Citation

Source	Documents	Citations	Avg Citation/Doc
Journal of Financial Counseling and Planning	**52**	**1789**	34.40
Journal of Family and Economic Issues	24	1632	68.00
International Journal of Consumer Studies	16	1054	65.88
Journal of Consumer Affairs	24	1038	43.25
International Journal of Bank Marketing	25	966	38.64
Journal of Economic Psychology	5	522	**104.40**
Social Indicators Research	5	457	91.40
Family Relations	4	335	83.75
International Review of Economics Education	4	173	43.25
Sustainability (Switzerland)	10	150	15.00
Journal of Behavioral and Experimental Finance	8	113	14.13
Young Consumers	7	111	15.86
Frontiers In Psychology	8	98	12.25
Journal of Asian Finance, Economics and Business	5	97	19.40
International Journal of Social Economics	10	95	9.50

According to the abovementioned distribution of citations and publications, it indicates that financial literacy is a multidisciplinary field that incorporates ideas from family economics, economic psychology, consumer studies, and education. This diversity emphasizes how crucial interdisciplinary cooperation is to the field's continued advancement.

In term of authors involving in this topic's studies, based on their publication count, total citations, and average citation per document, the important insights into the most well-known authors in the field of financial literacy for students is provided in Table 3. With 20 publications and 1,605 citations, Xiao, Jing Jian stands out as the most productive author, demonstrating a substantial quantitative contribution to the subject. However, despite only having four publications, Grable, John E. has the greatest impact, with an average of 138.25 citations per document, indicating the significant significance of their work. With a high average citation per document (117.00) over 4 publications, Kaiser, Tim also sticks out, highlighting the importance of quality over quantity.

Notable contributors to the field include Serido, Joyce (10 papers, Avg: 88.30) and Menkhoff, Lukas (6 documents, Avg: 100.00), who demonstrate a balance between productivity and impact. The concentration on producing a greater amount

of work with less individual impact is evident in Sabri, Mohamad Fazli, who has a high number of publications (13 documents) but a comparatively low average citation per document (16.38). Authors having steady influence in the field include Shim, Soyeon, Walstad, William B., and Danes, Sharon M. They consistently contribute to the field with good average citations. With four publications apiece, Tinghög, Gustav and Västfjäll, Daniel demonstrate a moderate impact (Avg: 47.25), most likely making contributions in specialized or niche fields.

Table 3. Most Prominent Authors based on Citation

Author	Documents	Citations	Avg Citation/Doc
Xiao, Jing Jian	**20**	**1,605**	80.25
Serido, Joyce	10	883	88.30
Shim, Soyeon	9	669	74.33
Menkhoff, Lukas	6	600	100.00
Grable, John E.	4	553	**138.25**
Kaiser, Tim	4	468	117.00
Walstad, William B.	5	397	79.40
Danes, Sharon M.	5	345	69.00
Porto, Nilton	5	318	63.60
Lyons, Angela C.	4	287	71.75
Ahn, Sun Young	4	270	67.50
Chatterjee, Swarn	5	223	44.60
Sabri, Mohamad Fazli	13	213	16.38
Tinghög, Gustav	4	189	47.25
Västfjäll, Daniel	4	189	47.25

High-impact authors, such as Xiao, Jing Jian (most publications) or Grable, John E. (highest average citations), represent potential collaborators who can amplify the visibility and credibility of joint research. Engaging with such leaders in the field could open doors to impactful studies and wider dissemination. Moreover, authors with great production but low average impact, may point to fields of study that have seen a lot of research but few breakthroughs. This gives scholars a chance to fill in knowledge gaps or offer fresh viewpoints in these fields in the future studies.

Influential Documents

For the intention of analyzing the most influential paper, the top ten of most cited papers are presented in Table 4. However, this sorting yielded only materials before 2017 since the older year of studies the more chances to get more cited.

Table 4. Most Influential Documents

Author(s)	Document Title	Source	Published Year	# of Citation	TC per Year
Joo S.-H.; Grable J.E.	An Exploratory Framework of The Determinants of Financial Satisfaction	Journal of Family and Economic Issues	2004	**427**	21.35
Mandell L.; Klein L.S.	The Impact of Financial Literacy Education on Subsequent Financial Behavior	Journal of Financial Counseling and Planning	2009	342	22.80
Allgood S.; Walstad W.B.	The Effects of Perceived and Actual Financial	Economic Inquiry	2016	309	38.63

	Literacy on Financial Behaviors				
Xiao J.; Chen C.; Chen F.	Consumer Financial Capability and Financial Satisfaction	Social Indicators Research	2014	305	30.50
Norvilitis J.M.; Merwin M.M.; Osberg T.M.; Roehling P.V.; Young P.; Kamas M.M.	Personality Factors, Money Attitudes, Financial Knowledge, and Credit-Card Debt in College Students	Journal of Applied Social Psychology	2006	298	16.56
Robb C.A.; Woodyard A.S.	Financial Knowledge and Best Practice Behavior	Journal of Financial Counseling and Planning	2011	292	22.46
Jorgensen B.L.; Savla J.	Financial Literacy of Young Adults: The Importance of Parental Socialization	Family Relations	2010	275	19.64
Gutter M.; Copur Z.	Financial Behaviors and Financial Well-Being of College Students: Evidence from A National Survey	Journal of Family and Economic Issues	2011	219	16.85
Xiao J.J.; Porto N.	Financial Education and Financial Satisfaction: Financial Literacy, Behavior, and Capability as Mediators	International Journal of Bank Marketing	2017	215	30.71
Borden L.M.; Lee S.-A.; Serido J.; Collins D.	Changing College Students' Financial Knowledge, Attitudes, And Behavior Through Seminar Participation	Journal of Family and Economic Issues	2008	214	13.38

With 427 citations and a high yearly citation rate of 21.35, "An Exploratory Framework of The Determinants of Financial Pleasure" by Joo and Grable (2004) is the most cited work. This study highlights the significance of financial pleasure in financial literacy research and offers a strong framework for comprehending it. A similar critical assessment of the impact of financial education on behavior can be found in Mandell and Klein's (2009) article, "The Impact of Financial Literacy Education on Future Financial Conduct," which has received 342 citations and an impressive annual citation rate of 22.80.

The field is changing, as seen by more recent studies like Allgood and Walstad's (2016) "The Effects of Perceived and Actual Financial Literacy on Financial Behaviors," which has the highest annual citation rate in the dataset at 38.63. This demonstrates the increasing interest in the relationship between perceived and actual financial literacy, which makes it extremely pertinent to current research.

Aspects of financial aptitude and the psychological aspects of financial conduct are examined by Xiao et al. (2014) and Norvilitis et al. (2006). With 305 citations and a noteworthy 30.50 citations year, Xiao et al.'s study, "Consumer Financial Capacity and Financial Satisfaction," explores the relationship between financial capability and satisfaction. In the meantime, Norvilitis et al. focus on the behavioral and

psychological foundations of financial literacy by examining student credit card debt, financial knowledge, and personality traits.

Robb and Woodyard's (2011) study and Jorgensen and Savla's (2010) study concentrate on the importance of parental influence and basic financial understanding, respectively. As seen by their substantial citation counts and yearly rates of 22.46 and 19.64, respectively, these publications highlight the value of early socialization and education in fostering solid financial habits.

All things considered, these studies highlight how financial literacy research is multifaceted, involving behavioral, psychological, and pedagogical viewpoints. They emphasize the value of both fundamental understanding and useful practices in promoting students' financial well-being. These findings can be expanded upon in future studies to address new issues in the teaching of financial literacy.

Co-authorship Analysis

Examining the studies contribution by nation, Figure 3 shows the overlay visualization revealing noteworthy contributions from a number of nations, with the US appearing as the primary and most prominent player. Its wide-ranging ties to nations like China, South Korea, and the UK demonstrate its function in promoting international cooperation. India and Indonesia are among the other noteworthy contributions, demonstrating the increased emphasis on tackling the issues of financial literacy in developing nations. While Europe exhibits steady contributions from nations like Germany, Sweden, and the United Kingdom, regional patterns suggest strong engagement from the Asia-Pacific area, especially from nations like Australia, China, and India. A notable contributor from the African continent, South Africa is probably concentrating on the particular financial literacy requirements of emerging economies.

The visualization's contribution history also illustrates how engagement has changed over time. The United States, India, and Indonesia led early research efforts (2019–2020), laying the groundwork for future studies in this area. Countries like Mexico, Brazil, and Turkey have become more involved in recent years (2021–2022), indicating that interest has expanded to previously underrepresented regions. There is also evidence of a diversification of target areas in financial literacy research from emerging contributors such as Poland, Vietnam, and Thailand. Strong regional partnerships, like those between India and its neighbors Pakistan and Oman, demonstrate common struggles and coordinated financial education initiatives.

The patterns show that the rise of digital banking and the increasing need for financial education among younger populations are correlated with increased global attention to financial literacy. Rapid economic change and the demand for financial inclusion may be the main drivers of contributions from developing nations like Indonesia and India. In order to meet the varied and changing needs of financial literacy education, our findings highlight the significance of utilizing the insights of top contributors, encouraging international cooperation, and extending research to underserved areas.
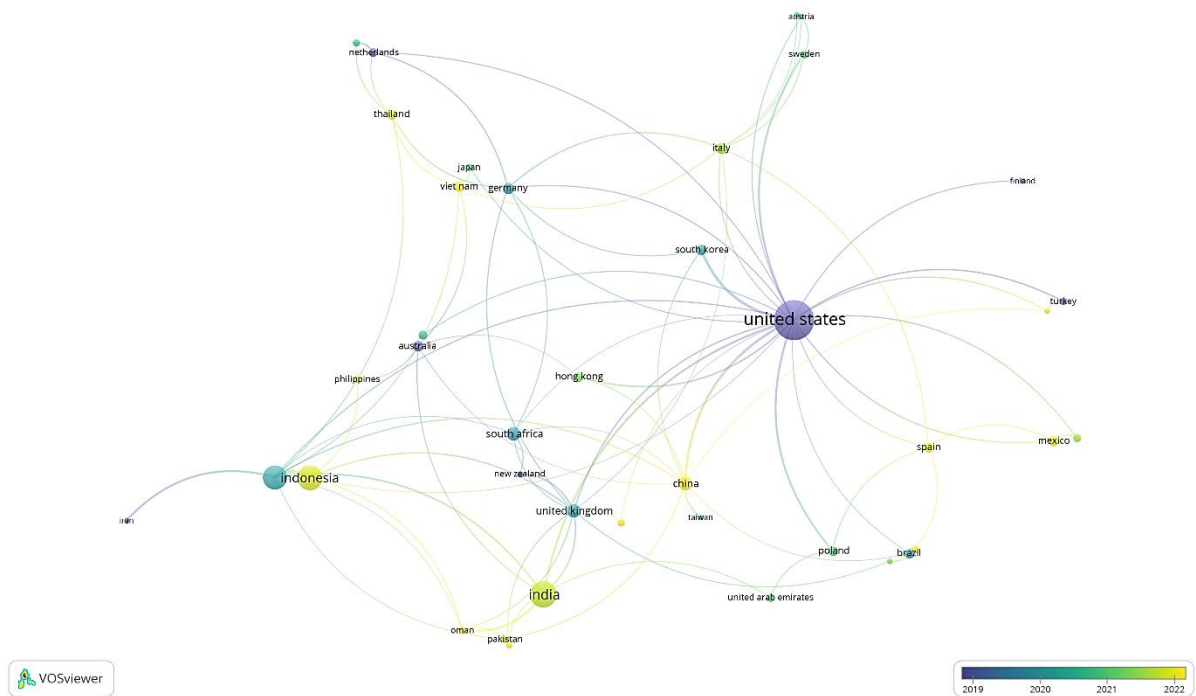
Figure 3. Map of Studies on Financial Literacy for Students

Co-occurrence Analysis

By using VOSviewer to perform the bibliographic coupling, it is generated four main themes related to the topic of study as shown by the Figure 4 below. Based on this mapping, it can be produced the cluster themes as follows:

1. *Financial Literacy and Its Ecosystem (Red)*
   This topic is considered as dominant research theme due to its largest scope of clusters. The focus of this cluster is financial literacy and how it relates to sustainability (OECD, 2020), financial systems (Atkinson & Messy, 2012), and education. The wider ecosystem impacting financial literacy is highlighted by keywords like financial literacy, financial system, financial services, finance, education, and sustainability. It also covers subjects like country-specific circumstances like Malaysia and personal finance (savings, debt, and investments) (Lusardi & Mitchell, 2014).

2. *Financial Knowledge and Development (Green)*
   This group places a strong emphasis on the growth of financial attitudes and knowledge as well as the variables that affect them. The psychological and social aspects of financial development are illustrated by terms like financial knowledge, financial attitudes, financial self-efficacy, and financial satisfaction. The cluster also emphasizes how financial well-being is shaped by financial socialization, financial literacy, and situations such as college students. (Shim , Barber, Card, Xiao , & Serido, 2010)

3. *Financial Behavior and Capability (Blue)*
   This cluster focuses on how financial behavior and capability are related, as well as how stress and wellbeing are related. (Xiao, Chen, & Chen, 2014) Important terms include financial behavior, financial capability, financial stress, and financial welfare. Additionally, it looks at psychological and

demographic aspects like young adults, locus of control, and environments like India.

4. *Financial Decision-Making and Management (Purple)*
   This cluster's keywords (financial management, overconfidence, and financial decision-making) indicate an emphasis on the procedures that underlie sound financial management and financial decision-making (PERRY & MORRIS, 2005). Within this issue, psychological characteristics such as overconfidence are also examined.

5. *Financial Inclusion and Education (Yellow)*
   The paper's focus of this cluster is on financial inclusion and how it relates to education. The significance of easily accessible financial resources and information is emphasized by terms like financial inclusion (Cole, Sampson, & Zia, 2011), financial planning, and money management (Ansong & Gyensare, 2012). It also discusses how educational institutions may encourage financial preparation and literacy, as evidenced by the keyword university students.

To conclude, these groups of study area show how financial ideas are related to one another and how applicable they are to different groups and situations. Researchers and practitioners can more effectively target treatments, legislation, and educational initiatives to improve financial literacy and behavior by identifying these topic areas.
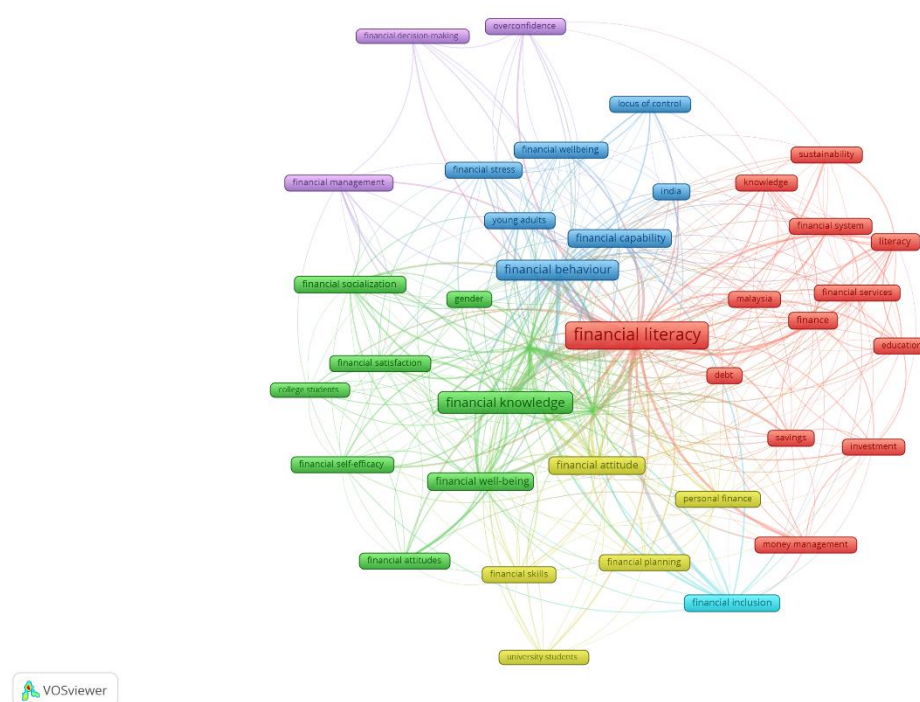

Figure 4. Studies' Keywords Clusters

Future Research Areas

In Figure 5, newer study areas are indicated in lighter hues in the following picture, which shows a visual depiction of co-occurring keywords in financial literacy research over time. The lighter nodes of keywords like "financial decision-making," "overconfidence," "financial well-being," "sustainability," and "university students" suggest new developments and areas of recent interest in the subject.
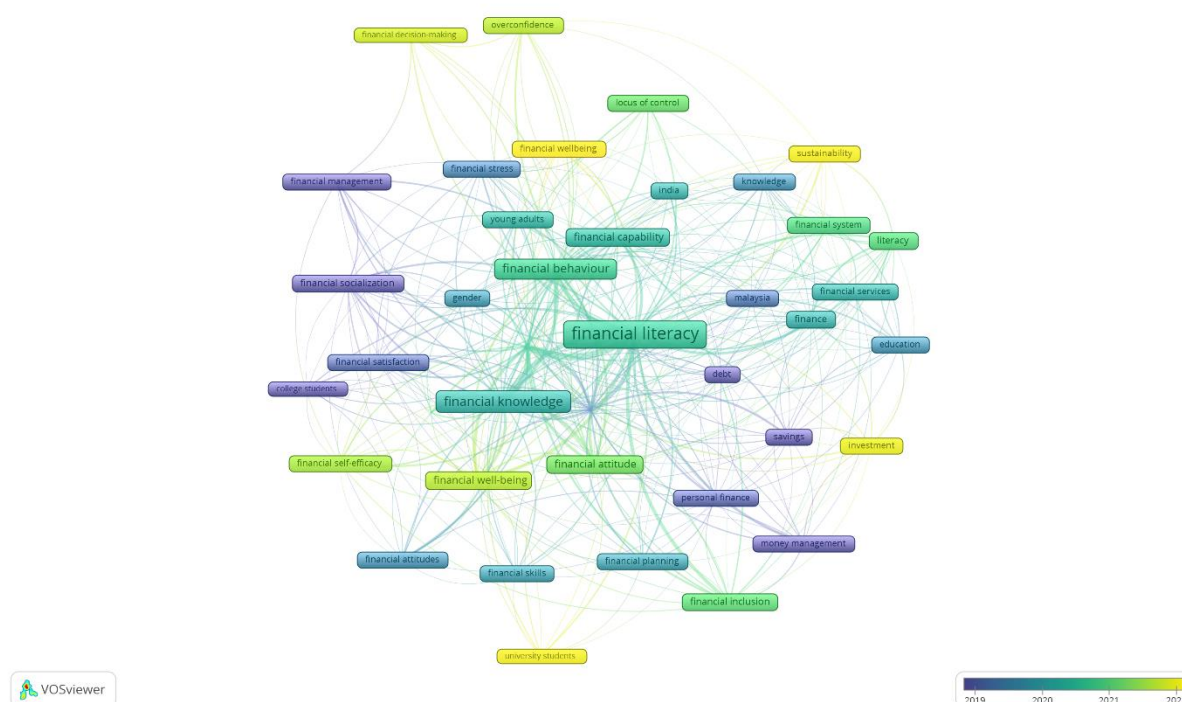
Figure 5. Area of Studies from 2009 to 2022

Future studies could examine the behavioral and psychological facets of financial decision-making, such as the influence of "overconfidence" and "locus of control," which may help clarify how people's cognitive biases affect their financial decisions. Furthermore, the terms "financial well-being" and "sustainability" indicate an increasing interest in the relationship between personal money and social or environmental factors, suggesting a comprehensive approach to financial literacy that takes sustainable behaviors into account.

The fact that "university students" is a more recent phrase highlights the need for studies aimed at younger audiences, especially when it comes to financial education and its long-term impacts on financial behavior. This emphasis is in line with the growing focus on giving young adults the financial literacy they need to successfully negotiate intricate economic systems through character-based education.

In summary, linking emerging areas of financial literacy research with character-based education provides a pathway for developing comprehensive educational models. These models can foster both financial competence and the character traits necessary for responsible and sustainable financial behavior, offering a comprehensive approach to improving financial literacy and well-being.

5. Conclusion

This study examines financial literacy as a part of character-based education for students. With noteworthy contributions from important sources like the Journal of Financial Counseling and Planning and well-known writers like Xiao Jing Jian and Grable John E., an increasing trend in publications was found, indicating a growing understanding of the significance of this topic. The main contributor to this corpus of work was the United States, with China, Indonesia, and India following closely behind. This global engagement highlights how important financial literacy is as a priority in school, especially when it comes to tackling the financial difficulties brought on by quick changes in the economy and technology. Financial literacy and

its ecosystem, financial knowledge and development, financial behavior and competence, financial decision-making and management, and financial inclusion and education are the five main themes that the research also identified as predominating in the literature. These themes show the complexity of financial literacy as a research domain and encompass a range of research fields, including sustainability, personal finance, and educational frameworks.

There are still large gaps in spite of these developments. The lack of research on behavioral and psychological factors, like overconfidence in financial decision-making, and the restricted integration of financial literacy with character-based education are two major problems. However, new fields of study, such as the relationship between financial sustainability and the wellbeing of college students, present encouraging avenues for further research. In order to encourage responsible financial conduct and long-term well-being, this study highlights the transformative potential of integrating financial literacy into character-based education frameworks. Priorities should be set for encouraging interdisciplinary cooperation and looking into the long-term effects of combining character development and financial literacy. In a constantly shifting global environment, these initiatives can help educators and legislators create effective programs to address the way for more inclusive and impactful financial literacy frameworks that prepare students for the complexities of modern financial environments.

However, this study has some limitations that should be noted. First, although bibliometric research is useful for spotting patterns and gaps, it is unable to offer qualitative insights into the results or real-world application of combining financial literacy with character-based education. Furthermore, the study skimps on the psychological and behavioral facets of financial literacy, like cognitive biases and emotional effects on decision-making, which are essential for comprehensive instructional strategies.

Future research opportunities are presented by addressing these constraints. Furthermore, investigating the psychological and behavioral aspects of financial decision-making can improve our comprehension of how financial literacy affects students' morals and life decisions. These guidelines can help create financial literacy frameworks that are more impactful and inclusive while preparing students for the intricacies of today's financial landscapes.

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