

# Mapping the theme Evolution in the Field of Financial Literacy Seen Through Prisma of Biblioshiny

Samridhi Goyal<sup>1</sup>, Dr. Ravneet Kaur<sup>2</sup>

<sup>1</sup>Desh Bhagat College, Bardwal – Dhuri (Punjab)

<sup>2</sup>Desh Bhagat College, Bardwal – Dhuri (Punjab), Corresponding author: [goyal.samridhi1@gmail.com](mailto:goyal.samridhi1@gmail.com)

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**Abstract :** *This study aims to elucidate the outlook of existing literature on the financial literacy in order to appreciate its structure and evolution. We map various pathways for integration of financial literacy with other niche fields for further research perspectives. We conduct a bibliometric analysis of journal publications published between 2016 and 2021 by accessing the WOS database with the main keyword "Financial Literacy" using Biblioshiny software. Based on a qualitative review, we investigate whether the field offers numerous novel perspectives, models, and theories that have the potential to enrich our theoretical understanding of relevant research questions in domains.*

**Keywords:** *Financial literacy, Bibliometric analysis, Visualisation, Thematic mapping*

**JEL classification:** Y910, G53

## INTRODUCTION

According to the ASIC (2003), financial literacy is “the ability to make informed judgments and to take effective decisions regarding the use and management of money. Financial literacy, according to Servon and Kaestner (2008), is described as a person's ability to comprehend and apply financial concepts. Furthermore, according to Remund (2010), financial literacy is a measure of one's understanding of key financial principles as well as his or her skill and trust in managing one's personal finances. Huston (2010) defined financial literacy as a process of understanding and applying financial concepts and developing techniques to effectively manage financial resources.

Over the last two decades, the financial literacy research corpus has expanded significantly, resulting in fragmentation of the information domain and the development of new sub-fields. Many conceptual frameworks, theories, and acclaimed factors related to financial literacy and other fields have been explored and developed. Researchers find it more difficult to keep up with emerging trends as a result of these changes, and the amount of related research in their subject areas likely overwhelm them. A systematic and thorough analysis of scientific progress in a field is quickly becoming a valuable tool for guiding future research. It is important to revisit the literature on a regular basis in order to fully comprehend what is being said and to understanding the diversity of knowledge for a specific academic field (Tranfield et.al., 2003). Such reviews play an important role in consolidating extant research and establishing connections between disparate bodies of literature (Crossan & Apaydin, 2010).

The authors were motivated to establish and address the connection between financial literacy and other untapped fields through relevant theoretical topics for future debate. The study's main goal is to find new problematic areas or aspects that are important to it. Related sub-objectives were specified in conjunction with this goal in the following section of the objectives of the study. In addition, the study will provide prospective researchers with a keyword list, thematic overview, and gaps in the current literature in this area,

allowing them to categorize whether future research will relate to factors such as consumer attitude, influence, decision making, and entrepreneurship in the context of financial literacy. As a result, the research area that follows is significantly expanded. The subsequent research field is described as follows: the successive section of objectives, methodology and result and discussion through initial statistics and bibliometric analysis of the paper are delineated. The methodology portion of the article will list all of the tools, software, and databases used in the current analysis. Furthermore, in the final sections of the paper, discussions are formed on the effects of current study priorities, managerial and theoretical recommendations for future studies, and conclusion is drawn. We plan to define the relationship between financial literacy and trends for various areas related to it, based on a review of relevant literature on the topic. Another primary goal of the research is to complete previous academic accomplishments, with the assumption that there is still enough to be attached to provide an orientation for future studies. Furthermore, we want to research significant developments in the field of financial literacy in this context.

## REVIEW OF LITERATURE

### *Financial literacy: concept and its domains*

According to the United States Treasury's Financial Literacy and Education Commission, "the ability to use knowledge and skills such as personal financial management, budgeting, and investing to manage financial resources effectively for a lifetime of financial wellbeing is called financial literacy". There are five key components of financial literacy earn, spend, save and invest, borrow, and protect. OECD, (2014) stated: "Financial Literacy is Knowledge and understanding of financial concepts and the risks, and the skills, motivation and the confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the

financial well-being of individuals and society, and to enable participation in economic life".

The National Council for Financial Education (NCFE) in India has defined Financial Literacy as financial knowledge and the ability to apply numeracy skills in a financial context. Financial Attitude is defined as that outlook or mental disposition of consumers which, despite their adequate knowledge and ability to act in a particular way, influences their decision whether or not to act that way.

In the UK, the term 'Financial capability' tends to be used, rather than financial literacy. Financial capability comprises three interrelated elements: knowledge, skills and attitude as broader concepts than simply knowledge. Financial literacy is more commonly used in other jurisdictions, such as in the US and Australia, but it is taken to include those broader concepts of financial capability used in the UK. The term 'financial literacy' is also used in some instances (such as in Australia) to refer to financial capability (FSA 2006 a).

The German Institute for Adult Education (DIE) within the framework of the project: 'Debt Counselling as a Starting Point for Basic Education - Curricular Networking and Transitions' (CurVe) developed a model contained therein are six different financial literacy domains sub-divided into the dimensions of knowledge, reading, writing and numeracy including potential requirements for everyday life. Under the domain expenditure and purchases, shopping and spending behaviour are the sub domain which contain numerical skill of calculating and comparing costs.

### *Status of Financial Literacy in India*

The National Centre for Financial Education (NCFE), a non-profit organization, was established under Section 8 of the Companies Act of 2013, with the goal of promoting financial literacy in India. It is supported by the Reserve Bank of India, SEBI, IRDA, and PFRDA, four key financial regulators. In 2015, NCFE conducted

a benchmark study of financial literacy to determine India's level of financial knowledge. It organizes a variety of activities to enhance financial literacy, such as partnering with schools and designing new curricula to incorporate financial management principles. The organisation undertakes massive Financial Education campaign to help people manage money more effectively to achieve financial wellbeing by accessing appropriate financial products and services through regulated entities with fair and transparent machinery for consumer protection and grievance redressal. The Central Board of Secondary Education (CBSE), in consultation with the regulators, has developed a financial education workbook for Classes 6 to 10. As on June 2015, 1,226 financial literacy centres (FLCs) set up across the country by lead banks conduct financial literacy camps. It also holds an annual financial literacy test. Investments, kinds of bank accounts, bank services, Aadhaar card, de-mat account, pan cards, and prepaid cards are among the subjects covered by NCFE in its awareness campaigns.

The second Financial Literacy and Inclusion Survey was conducted in 2018-19 following the first one carried out in 2013-14, to take on board all the initiatives made by the Government and Financial Regulators through education and literacy programmes, that are implemented by NCFE. According to a report, barely 24% Rural and 33% urban respondents are found financially Literate. 21% female and 29% male respondents are financially literate. The 18- to 29-year-old respondents are the most financially literate in the age category. Higher the education level and income higher is the prevalence of financial literacy among the respondents. In the occupation category, the Government employees have the highest prevalence of financial literacy. Respondents in the north zone had a financial literacy rate of 32%, while those in the west zone had highest rate of 37%. The lowest score, 20 %, was given for the east zone.

## OBJECTIVES

1. To review the current flow in publishing.
2. To identify the most dominant country and influential journals and documents.
3. To study the widely studied theme evolving among academics.
4. To identify the research gap from theme evolution mapping.

## METHODOLOGY

To review the literature on financial literacy in relation to various other variables, bibliometric analysis has been adapted with the aid of instruments such as Citation, Keyword Concept structural mapping. The research was limited to the years 2016 to 2021. The research was focused on the WOS database's financial literacy research publications. The research data was retrieved from (<https://apps.webofknowledge.com/Search>.) using the research string TOPIC: ("financial literacy") Refined by: RESEARCH DOMAINS: (SOCIAL SCIENCES) AND Databases: (WOS) AND DOCUMENT TYPES: (ARTICLE) AND RESEARCH DOMAINS: (SOCIAL SCIENCE) AND Databases: (WOS) AND DOCUMENT TYPES: (ARTICLE) AND PUBLICATION YEARS: (2021 OR 2020 OR 2019 OR 2018 OR 2017) Timespan: 2016-2021. Databases: WOS, BIOABS, BCI, CABI, CCC, DRICI, DIIDW, FSTA, KJD, MEDLINE, RSCI, SCIELO, ZOOREC. Search language=Auto, on May 9, 2021. The search strategy yield 132 records which were used for further analysis. The complete bibliographic data was retrieved from WOS database in plaintext file format. Initially, the bibliometrix R package (Version 2.3.2 released on 23/11/2019) was installed and loaded through R Studio. The biblioshiny app was then launched by typing biblioshiny ( ) in the console. The biblioshiny: R Statistical Package's shiny app for bibliometrix was used to conduct the current bibliometric (<https://bibliometrix.org/Biblioshiny>).

html) study. It has a lot of features that help you do in-depth bibliometric analysis. It is an application that provides a web-interface for bibliometrix tool (<https://bibliometrix.org/Biblioshiny.html>). Finally, WOS file in plaintext format uploaded on Biblioshiny interface. Then, as per the objectives of the study, excel files were downloaded and used for data analysis.

## RESULT AND DISCUSSION

### Initial Data Statistics

In order to find the ongoing trend for publication on this topic, 132 papers were backed in response to the research's first two objectives. It was evaluated with the help of publications from different countries and journals. The trend of publication: Table 2 and figure 1 represent the country production. The number of publications in each nation, broken down by area. India is ranked second in the world for the number of publications related to financial literacy in last 5 years.

**TABLE 1**

*Table 1: Bibliometric profile of the financial literacy research*

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2016:2021
Sources (Journals, Books, etc)	87
Documents	132
Average years from publication	2.8
Average citations per documents	1.924
Average citations per year per doc	0.4848
References	5389
DOCUMENT TYPES	
Article	70
article; early access	9
proceedings paper	53
DOCUMENT CONTENTS	
Keywords Plus (ID)	267
Author's Keywords (DE)	439
AUTHORS	
Authors	348

Author Appearances	373
Authors of single-authored documents	19
Authors of multi-authored documents	329
AUTHORS COLLABORATION	
Single-authored documents	19
Documents per Author	0.379
Authors per Document	2.64
Co-Authors per Documents	2.83
Collaboration Index	2.91

**TABLE 2**

*Table 2: Publication Region wise*

Region	Freq
INDONESIA	26
INDIA	23
USA	22
MALAYSIA	19
RUSSIA	16
CZECH REPUBLIC	14
BRAZIL	12
AUSTRALIA	11
ITALY	10
SLOVAKIA	9
CHINA	8
NIGERIA	7
ROMANIA	6
TURKEY	6
NETHERLANDS	5
POLAND	5
UK	5
LATVIA	4
PORTUGAL	4
SOUTH AFRICA	4

**FIGURE 1**

Country Scientific Production



*Figure 1: Publication Region wise*

The most prominent source for the publication on financial literacy is shown in Table 3. As can be shown, Vision 2025 is the journal with the most publications in the specified domain. This will assist researchers in locating high-quality resources in order to publish their work in the same field. Because of inclination of this journal in financial literacy.

### BIBLIOGRAPHIC ANALYSIS

The 'Biblioshiny App' of the 'Bibliometrix' software is used to build the Word Cloud. Author keywords were chosen in the graphical parameters. The main benefit of choosing author keywords is that it gives you insight into the most important topics and study patterns. The maximum number of keywords was set at 50. A circle was chosen as the figure's form. The text color was chosen at random from a dark palette. The most commonly used terms in financial literacy research are behavior, attitude, performance, knowledge, and entrepreneurship. Consequences, decisions, decision-making, college students, and empirical research are the terms that are rarely used in reports on financial literacy published in the last five years.

**TABLE 3**

*Table 3: The Most relevant source with number of papers published.*

Sources	Articles
VISION 2025: EDUCATION EXCELLENCE AND MANAGEMENT OF INNOVATIONS THROUGH SUSTAINABLE ECONOMIC COMPETITIVE ADVANTAGE	11
ASIAN ACADEMY OF MANAGEMENT JOURNAL	3

AUSTRALIAN JOURNAL OF MANAGEMENT	3
EDUCATION EXCELLENCE AND INNOVATION MANAGEMENT THROUGH VISION 2020	3
INNOVATION MANAGEMENT AND EDUCATION EXCELLENCE THROUGH VISION 2020 VOLS I -XI	3
INTERNATIONAL JOURNAL OF EMERGING MARKETS	3
INTERNATIONAL JOURNAL OF ISLAMIC AND MIDDLE EASTERN FINANCE AND MANAGEMENT	3
JIMS8M-THE JOURNAL OF INDIAN MANAGEMENT & STRATEGY	3
MANAGEMENT SCIENCE	3
MARKETING AND MANAGEMENT OF INNOVATIONS	3
POLISH JOURNAL OF MANAGEMENT STUDIES	3
SMALL BUSINESS ECONOMICS	3
13TH INTERNATIONAL DAYS OF STATISTICS AND ECONOMICS	2
IIM KOZHIKODE SOCIETY & MANAGEMENT REVIEW	2
INTERNATIONAL JOURNAL OF MANAGEMENT EDUCATION	2
INTERNATIONAL SMALL BUSINESS JOURNAL-RESEARCHING ENTREPRENEURSHIP	2
JOINT CONFERENCE ISMC 2018-ICLTIBM 2018 - 14TH INTERNATIONAL STRATEGIC MANAGEMENT CONFERENCE & 8TH INTERNATIONAL CONFERENCE ON LEADERSHIP TECHNOLOGY INNOVATION AND BUSINESS MANAGEMENT	2
JOURNAL OF COMPETITIVENESS	2
MANAGEMENT RESEARCH REVIEW	2
PROCEEDINGS OF THE 2016 GLOBAL CONFERENCE ON BUSINESS MANAGEMENT AND ENTREPRENEURSHIP	2

FIGURE 2



Figure 2: World cloud ( Author’s Keyword)

FIGURE 3



Figure 3: Trends in Topic

Figures 3 and 4 show the growth in terms associated with financial literacy as well as the trend in topics investigated by researchers. The most relevant subjects, which emerged as a trend after 2018, but were left behind somewhere, are financial behaviour and the determinants that affect financial literacy. There is a lot of room for more research in this field.

**FIGURE 4**

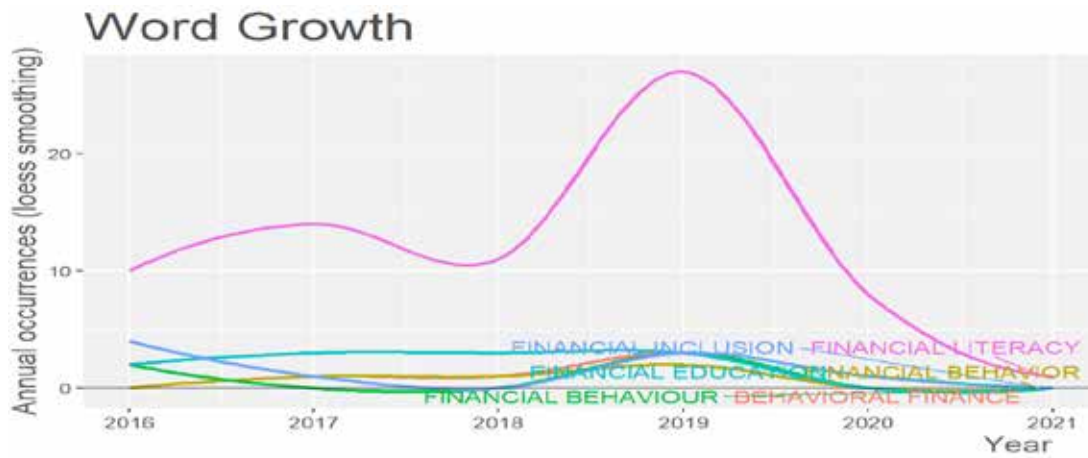


Figure4: Word Growth

Figure 5 illustrates the need for more longitudinal research on financial literacy. The effect of financial literacy on attitudes, especially toward life, preferences and wealth management, when gender differences are taken into account, is a motor theme that has yet to be explored.

**FIGURE 5**

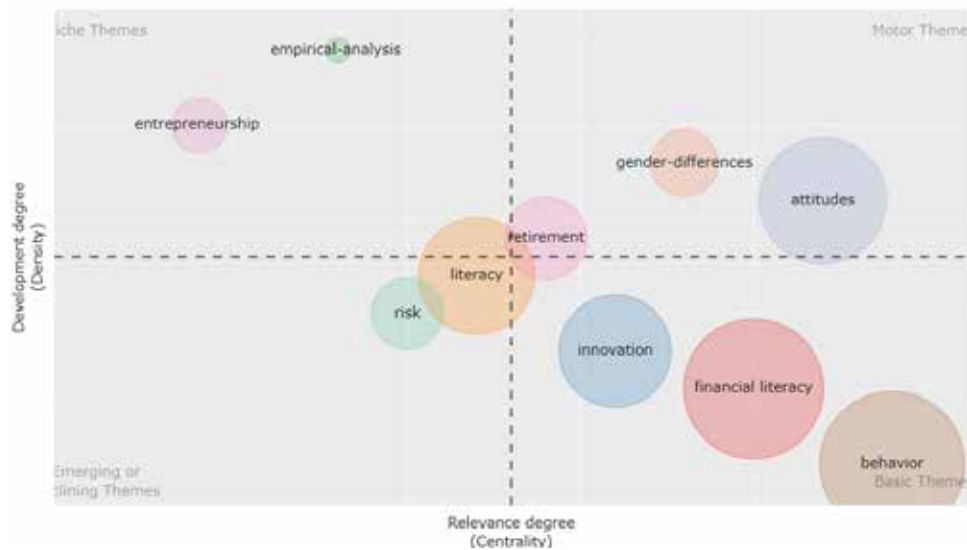


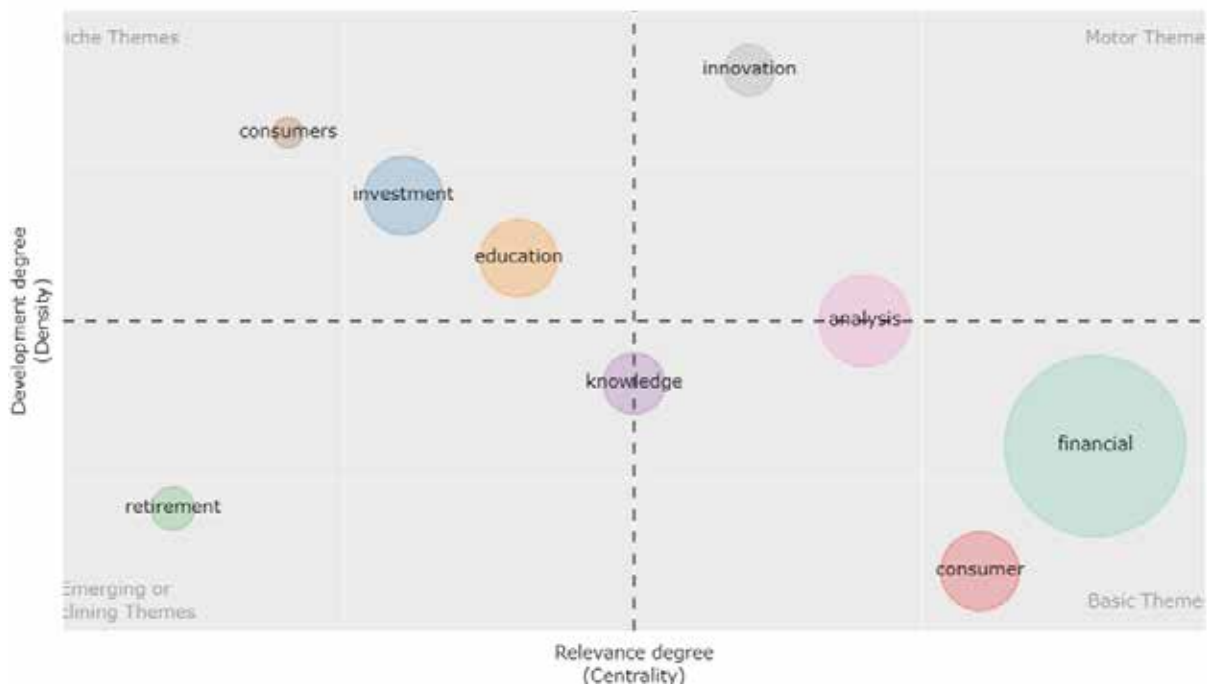
Figure 5: Thematic Mapping

**TABLE 4**

*Table 4: Clustering of Themes according to keywords*

Cluste_Label	Words	Occurrences
gender-differences	gender-differences	3
gender-differences	Consumers	2
gender-differences	Strategies	2
Attitudes	Attitudes	7
Attitudes	Impact	7
Attitudes	Information	5
Attitudes	Aversion	4
Attitudes	decision-making	3
Attitudes	Perceptions	3
Attitudes	planned behaviour	3
Attitudes	Life	2
Attitudes	Model	2
Attitudes	Preferences	2
Attitudes	Wealth	2
Entrepreneurship	Entrepreneurship	5

**FIGURE 6**



*Figure 6: Clustering of themes according to Title*



**TABLE 6**

Table 6: Clustering of themes according to Title

Cluster_Label	Words	Occurrences
Consumer	consumer	6
Consumer	Indonesia	6
Consumer	performance	6
Consumer	banking	4
Consumer	sector	5
Consumer	services	5
Consumer	protection	4
Consumer	capital	3
Consumer	developing	3
Consumer	empirical	3
Consumer	indian	3
Consumer	sustainable	3
Consumer	assessing	2
Consumer	competition	2
Consumer	human	2
Consumer	problems	2
Investment	investment	11
Investment	influence	6
Investment	Risk	5
Investment	individual	4
Investment	investors	4
Investment	business	3
Investment	decision	3

Investment	experience	3
Investment	perception	3
Investment	strategies	3
Investment	behaviour	2
Investment	choice	2
Investment	competencies	2
Investment	decision-making	2
Investment	making	2
Investment	process	2
Investment	Style	2
Retirement	retirement	11
Retirement	planning	6
Retirement	framework	4
Retirement	saving	4
Retirement	based	3
Retirement	decisions	3
Retirement	comparison	2
Retirement	regulation	2
Retirement	structural	2
Knowledge	knowledge	9
Knowledge	pension	5
Knowledge	determinants	5
Knowledge	industry	4
Knowledge	Funds	3
Knowledge	savings	3
Knowledge	actual	2
Knowledge	current	2

According to previous literature, financial literacy research in relation to consumers is a niche theme (Figure 5 and 6). Themes based on Indian consumers in terms of empirically analysing their financial behaviour patterns are untapped areas.

FIGURE 7

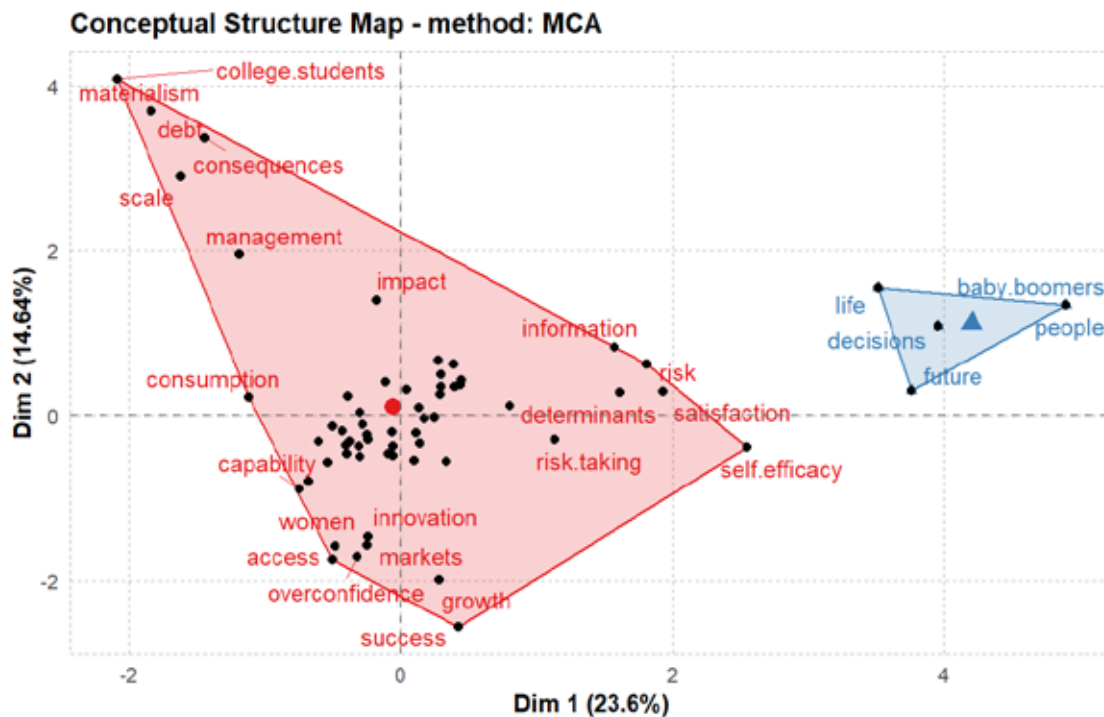


Figure 7: Conceptual Structure Map

Figure 7 depicts the evolution of financial literacy research from 2016 to 2021 through the temporal framework of the words. The terms: capacities, impact, determinants, implications, life decision, and so on are divided into two clusters. In the real world, financial literacy has many applications. Its influence on human behaviour and everyday economic decisions resulted in a plethora of effects.

## CONCLUSION

Bibliometrix is an R-based package for bibliometric analysis. R is an ecosystem app, which means it works in a combined environment that includes open-source libraries, open-source algorithms, and open-source graphics. We used data from WoS to examine the longitudinal development of financial literacy between 2016 and 2021 in order to learn more about the bibliometrix bundle. Financial literacy is on the rise

because of its impact on daily life financial decision of economic agents and their financial well-being. Financial literacy not only an economic phenomenon it has relevancy in business and managements too. There are many more areas those need to explore in relation to financial literacy to develop more understanding. For bibliometric analysis, there are a variety of software tools available. However, they are difficult to use for inexperienced users. One of the benefits of open-source software is that their codes can be studied and updated in a field like bibliometric analysis that is constantly evolving. As a result, more Open-source software applications in bibliometric research are unavoidable.

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