International Journal of Social and Humanities Sciences Research
JSHSR
Uluslararası Sosyal ve Beşeri Bilimler Araştırma Dergisi
Uluslararası Hakemli Dergi- International Refereed Journal
ISSN: 2459-1149

Received-Makale Geliş Tarihi	05.02.2025	*Araştırma Makalesi*
Published-Yayınlanma Tarihi	31.03.2025	10.5281/zenodo.15128127
Volume-Cilt (Issue-Sayı), ss/pp	12 (117), 488-513	

Arş. Gör. Dr. Aydın Bulut
https://orcid.org/0000-0003-3139-4367
Kastamonu Üniversitesi, Eğitim Fakültesi, Kastamonu / TÜRKİYE
ROR Id: https://ror.org/015scty35

Mapping 'Reading Comprehension' from Past to Present: Bibliometric Analysis[1]

Geçmişten Günümüze 'Okuduğunu Anlama'nın Haritalandırılması: Bibliyometrik Analiz

ABSTRACT

Reading is recognised as one of the fundamental language skills. The primary function of reading is to construct meaning. In contemporary society, as has been the case historically, reading comprehension remains the pivotal aspect of learning. The objective of this study is to provide a comprehensive perspective by conducting a detailed analysis of extant studies on 'reading comprehension'. A bibliometric analysis of 11,484 articles published in SSCI-ESCI and SCI-Expanded indexed journals between 1965 and 2025 was conducted from the Web of Science database. The data obtained from the WoS database were analysed with 'R'. This analysis facilitated the identification of concept clusters by providing insights into the overarching structure of concepts across studies.A comprehensive analysis of the most influential studies and researchers in this field was also conducted, thus providing a comprehensive overview of the evolution of studies on 'reading comprehension' from past to present.At the conclusion of the study, the thematic map and thematic evolution created from the titles, keywords and abstracts of the articles published on 'reading comprehension' were evaluated together. It is anticipated that the findings will serve as a catalyst for future research in the domain of reading comprehension and offer a novel perspective for future studies.
Keywords: Reading comprehension, bibliometric analyssis, mapping

ÖZET

Okuma, temel dil becerilerinden biri olarak kabul edilmektedir. Okumanın birincil işlevi anlam inşa etmektir. Tarihsel olarak olduğu gibi çağdaş toplumda da okuduğunu anlama, öğrenmenin en önemli yönü olmaya devam etmektedir. Bu çalışmanın amacı, 'okuduğunu anlama' konusundaki mevcut çalışmaların ayrıntılı bir analizini yaparak kapsamlı bir bakış açısı sağlamaktır.1965-2025 yılları arasında SSCI-ESCI ve SCI-Expanded indeksli dergilerde yayınlanan 11.484 makalenin bibliyometrik analizi Web of Science veri tabanından yapılmıştır. WoS veri tabanından elde edilen veriler 'R' ile analiz edilmiştir. Bu analiz, çalışmalar arasındaki kavramların kapsayıcı yapısına ilişkin içgörüler sağlayarak kavram kümelerinin belirlenmesini kolaylaştırmıştır.Bu alandaki en etkili çalışmaların ve araştırmacıların kapsamlı bir analizi de yapılmış, böylece geçmişten günümüze 'okuduğunu anlama' konusundaki çalışmaların evrimine kapsamlı bir genel bakış sağlanmıştır.Çalışmanın sonunda, 'okuduğunu anlama' konusunda yayınlanan makalelerin başlıklarından, anahtar kelimelerinden ve özetlerinden oluşturulan tematik harita ve tematik evrim birlikte değerlendirilmiştir. Elde edilen bulguların okuduğunu anlama alanında yapılacak araştırmalar için katalizör görevi görmesi ve gelecek çalışmalar için yeni bir bakış açısı sunması beklenmektedir.
Anahtar Kelimeler: Okuduğunu anlama, bibliyometrik analiz, haritalama

1. INTRODUCTION

Reading has been an indispensable part of academic and daily life from past to present. This skill, which has a critical role in the learning process, stands out as one of the cornerstones of academic success. Therefore, it is of great importance to acquire effective and functional reading skills at an early age. Reading involves not only comprehension of written texts but also various cognitive processes such as critical thinking, problem solving and access to information. In this process, a range of teaching strategies should be employed to assist students in developing reading habits and comprehension skills. Specifically, reading aloud, texts supported by visual cues, interactive reading activities and digital reading tools can enhance students' reading skills. Furthermore, taking into account the individual differences of each student, determining methods suitable for their learning speed and style can support the reading process to become more effective and efficient.

[1] This article was presented as an oral presentation at the '8th International Tigris Scientific Research and Innovation Congress' (March, 2025)

The primary objective of reading is not solely the articulation of words, but also the comprehension of their significance and the formation of inferences from the text. Reading comprehension is of paramount importance in both academic and daily life, as it enables individuals to analyse and interpret the information they have acquired and utilise it effectively in problem-solving processes. Reading comprehension is widely regarded as one of the cornerstones of the learning process, facilitating the internalisation of information both superficially and in depth. Within the educational context, students encounter a wide range of written sources, from textbooks to academic articles, which they must interpret correctly in order to utilise their learning effectively and create a meaningful learning process by associating it with new information. Conversely, individuals encountering challenges in reading comprehension tend to process information superficially, encountering difficulties in applying it effectively. The development of reading comprehension skills is of paramount importance not only for academic success but also for cultivating critical thinking, decision-making and problem-solving skills. Hence, the cultivation of reading and comprehension skills from an early age fosters lifelong learning and contributes significantly to academic and personal success. A comprehensive review of extant literature on the subject of reading comprehension provides a valuable perspective for researchers and practitioners alike.

1.1. Reading Comprehension

Reading is widely regarded as a fundamental skill for students, with its primary function being the enhancement of comprehension abilities. Comprehension can be defined as the process of deriving significance from written material. Consequently, it is regarded as a fundamental language skill that should be acquired by students from the primary education level onwards (Rose et al., 2000). Reading comprehension can be defined as an interactive process involving the integration of the reader's prior knowledge and experiences with the content and relationships of the text, thereby constructing meaning (Pardo, 2004). Alternatively, it can be understood as an active process in which the reader interprets the information in the text and identifies the logically structured messages that the author attempts to convey (Radoyevic, 2006). Reading comprehension is recognised as a critical skill for academic success at all levels of the education system (Clinton-Lisell et al., 2022; Meneghetti et al., 2006). The process of reading comprehension is characterised by a complex structure formed by the interaction of many cognitive processes (Oakhill & Cain, 2000; Swanson et al., 2006; van den Broek & Espin, 2012). Reading comprehension involves a range of cognitive activities, including the use of prior knowledge, the taking of notes, prediction, summarisation, the establishment of relationships between paragraphs, and the identification of the main idea. The effectiveness with which these skills are employed is a critical factor in determining the effect size of reading comprehension.

In the act of reading, the sole persistent cognitive endeavour is the identification of words; comprehension is contingent on effective word reading. Skill disparities in comprehension may emanate from skill disparities in word reading (Perfetti, 2007). Consequently, the capacity to recognise words during the reading comprehension process and to read with fluency can exert a favourable influence on the comprehension process. Hence, the prerequisite for enhancing meaning may be to refine reading fluency. Indeed, numerous studies in the extant literature not only confirm this close relationship, but also reveal that fluency significantly predicts comprehension skills (Allington, 1983; Lazich, 2018; Rasinski, 2017).

Children's reading comprehension difficulties are a subject that has attracted increasing attention from researchers and practitioners in the field (Cutting, 2006). A number of additional factors that may contribute to the promotion of reading comprehension have been identified, including verbal memory (Perfetti et al., 2008; Swanson et al., 1989); inference and reasoning skills (Cain et al., 2001; Catts et al., 2006); and attention (Gehlani et al., 2004; McInnes et al., 2003). In order to enhance students' reading comprehension skills from the earliest years of their schooling, it may also be efficacious to augment their general perception and attention levels, memory skills, and cognitive processes based on analysis-synthesis and reasoning.

Reading comprehension is a fundamental and indispensable skill for academic and professional success (Cain et al., 2004; Kendeou & van den Broek, 2012). A significant amount of theoretical and empirical evidence demonstrates that reading comprehension is a sophisticated skill based on a large number of interrelated skills (Kendeou & van den Broek, 2012). It is imperative that all dimensions affecting reading comprehension, which has a complex structure, are addressed and developed separately. The failure to adequately develop reading comprehension can have a significant impact on an individual's academic success, as well as on their psychological and sociological well-being.

1.2. The Focus of Study

The importance of language in facilitating understanding of the world, the exchange of ideas, and the transmission of culture has been constant throughout history. The ability to communicate through language is comprised of four fundamental components: listening, speaking, reading and writing. While listening and speaking skills are acquired informally prior to formal education, reading and writing skills are typically developed through structured education in school. Reading skills are typically acquired systematically within the school environment, distinguishing it from other language skills. The fundamental purpose of reading is to construct meaning, and the development of reading skills is a cornerstone of language courses and other subjects. Consequently, the impact of 'reading comprehension' remains significant in the present day as it has been historically. A substantial body of research, spanning several decades, has consistently demonstrated this phenomenon (Bulut & Yıldız 2024; Bråten et al., 2009; Kieffer et al., 2013).

In light of the aforementioned explanations, it is recommended that researchers publishing on the subject of 'reading comprehension' pay particular attention to cited publications, cited authors, words with the highest frequency and centrality values, and cited words. The rationale behind this recommendation is that these concepts are likely to appear frequently in a short time. Citation analysis is a method that helps to identify important academic articles, leading journals, and commonalities and differences across disciplines (Biehl et al., 2006). Furthermore, citation analysis is recognised as a critical tool for examining the historical development of key study topics in a particular research area and assessing the comparative impact of different studies (Donthu et al., 2021). Citation analysis provides researchers with the opportunity to reveal popular research topics, methods used, and research trends, while at the same time allowing them to better understand the components of core topics (Chen et al., 2021). A review of studies on 'reading comprehension' reveals the prevalence of national and international studies that evaluate published articles, books and papers. This underscores the necessity for contemporary bibliometric studies in the domain of 'reading comprehension'. The present study aspires to analyse the extant literature on 'reading comprehension' from a bibliometric perspective, with the objective of creating a bibliometric map of studies on its utilisation in education. In this framework, the following research questions were investigated:

1. Who are the most influential authors on ‘reading comprehension’?
2. Which universities and countries are the most influential in ‘reading comprehension’?
3. What is the status of citations related to ‘reading comprehension’ in education?
4. What are the keywords and trending topics related to ‘reading comprehension’?
5. How do clusters emerge according to author matching in ‘reading comprehension’ related journal research?

Garfield (2006) emphasises that bibliometric mapping offers the opportunity to analyse the history of a field, its structure, the flow of information, the influence of journals and the long-term citation status of publications. When used in conjunction with bibliometric mapping, it is possible to visualise the most prolific authors, institutions and countries in a given discipline and thus identify trends in literature production over time. This process plays an important role in ranking academic fields and providing an overview (Garfield, 2006).

2. METHOD

In this study, an analytical investigation was conducted into the structure and transformation of articles published in the field of 'reading comprehension'. A range of analytical methods were employed, including publication co-citation analysis, author co-citation analysis and word frequency analysis. Descriptive data on the distribution of studies in the field categorised by country, institution and time were obtained from the Web of Science (WoS) database. The analysis was conducted using 'R version 12.0 software' (R Development Core Team, 2021) and various libraries including 'bibliometrix', 'wordcloud' and 'ggplot2'.

2.1. Data Collection Tool

The 'Web of Science (WoS)' database was utilised to obtain the bibliometric data analysed in this study. WoS is recognised as one of the world's leading academic databases due to the wide scope and diversity of the publications it searches (Pranckutė, 2021). In addition, it provides a comprehensive distribution of bibliometric data of the publications it scans by classifying them according to countries, scientific fields and journals. It is important to note that, by providing basic statistical data, it functions as a significant resource for researchers engaged in data analysis.

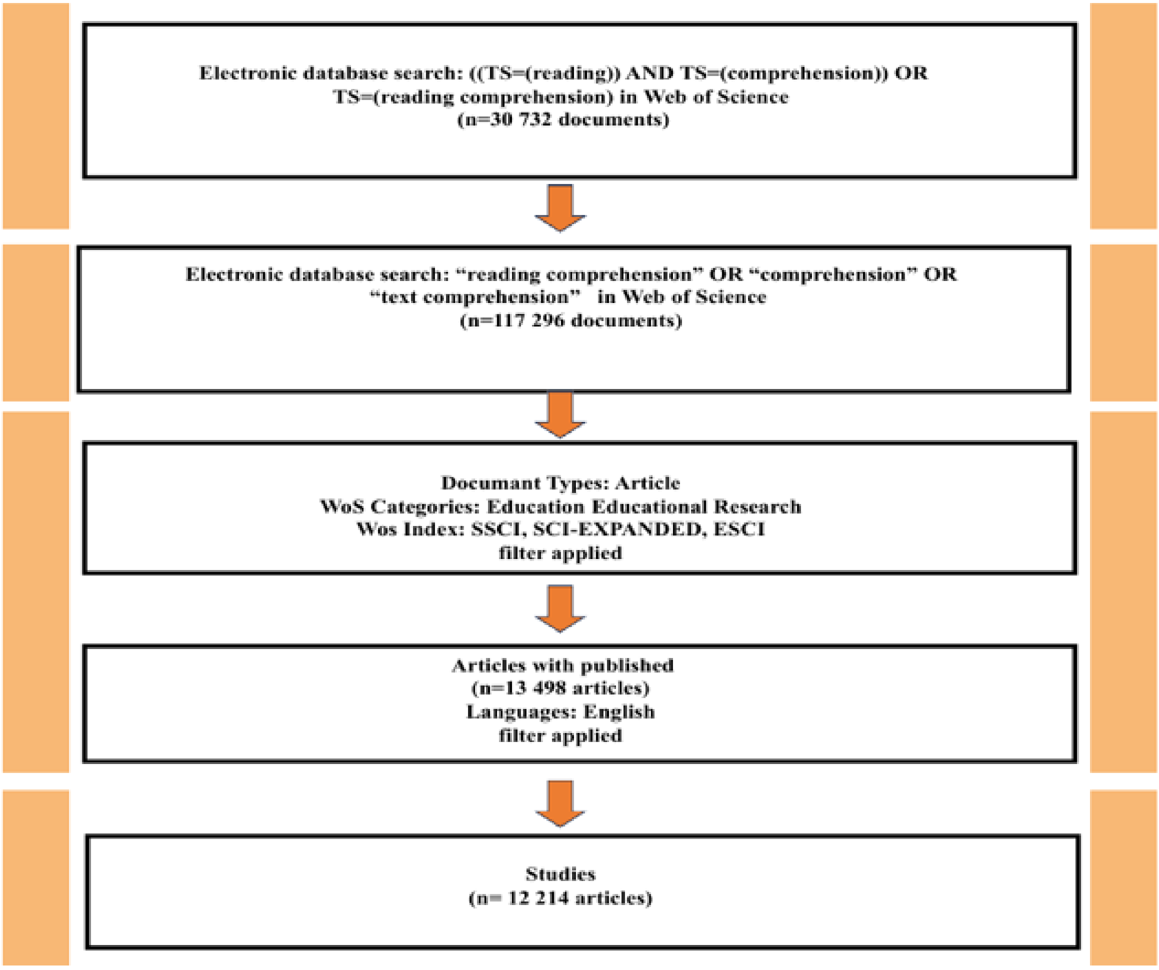

Figure. 1. Data Screening Stages

As illustrated in Figure 1, the data on 'reading comprehension' was retrieved from the Web of Science (WoS) database as of February 2025. The electronic database search was conducted using the following keywords: ((TS=(reading)) AND TS=(comprehension)) OR TS= (reading comprehension)), yielding a total of 30 732 documents. Subsequently, keyword clouds related to the subject were generated on the WoS platform. The search was further expanded using keywords obtained from the word cloud related to fluent reading. Electronic database search: 'reading comprehension' OR 'comprehension' OR 'text comprehension in Web of Science (n=117 296 documents) were obtained. Then Document Types: The WoS categories assigned to this article are Education and Educational Research. The WoS index used was SSCI, SCI-EXPANDED and ESCI. Following the application of the filter, 13,498 articles were obtained. Subsequently, a filter was applied for articles in English, and 12 214 articles were obtained.

During the analysis process in R, 'book chapter, early Access, proceeding paper, retracted publications' were excluded, leaving *11484* papers to be evaluated. As WoS allows the download of up to 500 results in 'BibTeX' format, the metadata set consists of 23 independent 'BibTeX' files, which were then combined into a single file using Visual Studio Code Editor. Table 1 provides a comprehensive summary of the descriptive data for the studies retrieved:

Table 1. Descriptive data of obtained studies

Description	Results
Timespan	1965:2025
Sources	659
Documents	11 484
Annual average number of publications	191.4
Average citations per doc	20.44
Total references	286 011
Keywords Plus (ID)	6 083
Author's Keywords (DE)	16 502
Authors	21 273
Authors of single-authored docs	2 420
Authors of multi-authored docs	18 853
Multi-authored documents	8 597
Single-authored docs	2 887
Co-Authors per Doc	2.67
International co-authorships	% 13.63

A thorough analysis of Table 1 reveals that 11,484 articles from 659 sources on reading comprehension were published between 1965 and 2025, with an average of 191.4 articles published per year. The average number of citations per document for these articles is 20.44, and the total number of references is 286,011. The number of keywords for these articles is 6083, while the number of author's keywords is 16502. The number of authors of single-author documents is 2420, and the number of authors of multi-author documents is 18853. The number of single-authored documents is 2887, and the number of multi-authored articles is 8597. The average number of co-authors per article is 2.67, and the proportion of international co-authorship is 13.3%.

2.2. Data Analysis

Mathematical correlations were identified through the use of visualisation approaches based on metadata and bibliometric data obtained from the articles included in the study. These data were collected using R Studio software and a bibliometric package, and analyses were performed using co-authorship, bibliographic linking, keyword co-occurrence and citation. A threshold was used to create more meaningful maps, and these were produced using the R Studio software and bibliometric package. The relationship between elements (e.g. publication, journal, author) is determined by the number of sources they share in the bibliographic link; that is, two separate references to the same publication is called a bibliographic match. The analysis of keyword co-occurrence shows the evolution of the field of study over time (Donthu et al., 2021) and is a useful tool for identifying hotspots in various disciplines (Ahmi, 2022).

3. FINDINGS

The The annual scientific production related to the study is illustrated in Figure 1, which demonstrates a consistent increase in the number of publications on reading comprehension from 1965 to 1985, with an average of 24.09 articles published annually. This trend continued until 2005, when the average increased to 63.35 articles per year. From 2005 to 2025, the average annual publication rate increased to 485.55 articles, with a notable peak in 2024, when 966 articles were published. The number of citations received by the articles per year is displayed in Figure 3.

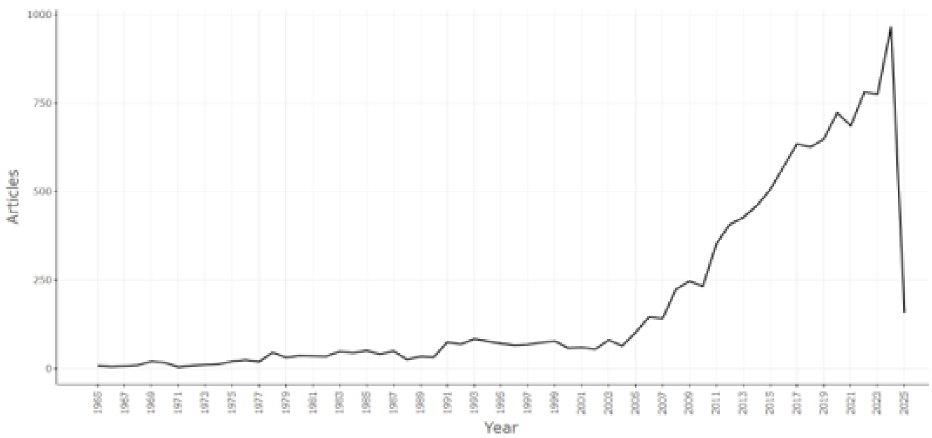

Figure 2. Annual Scientific Production

As demonstrated in Figure 3, the number of citations of 11,484 articles published on reading comprehension from 1965 to 2025 has been documented. It is evident that there has been a significant increase, particularly between 2001 and 2007. Figure 4 presents the three-field plot (author-keyword-affiliation).

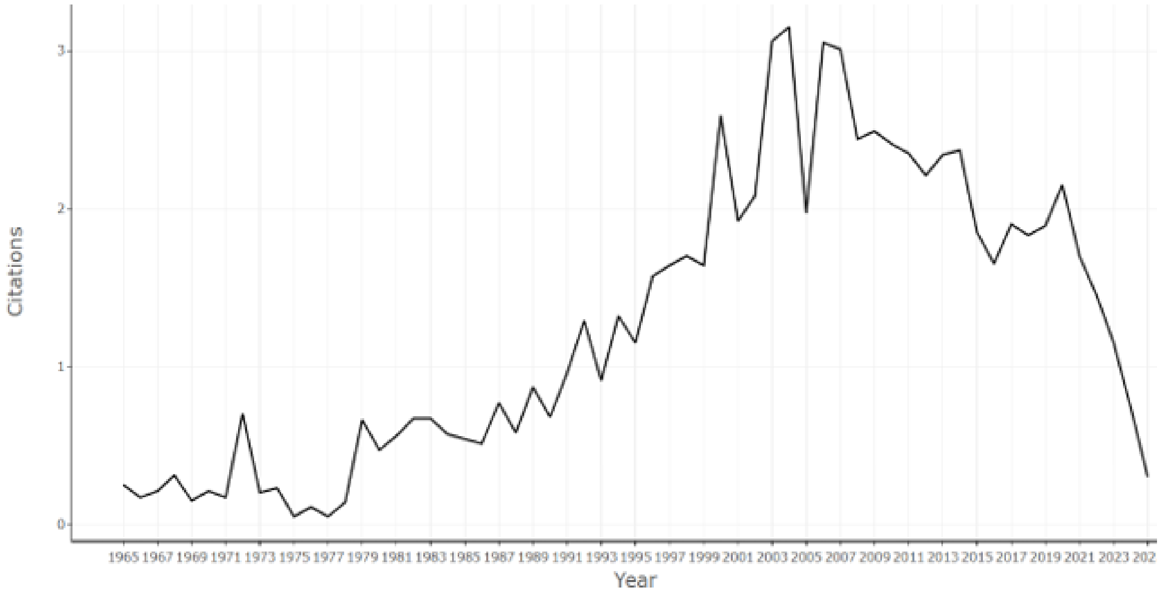

Figure 3. Annual Citaions Production

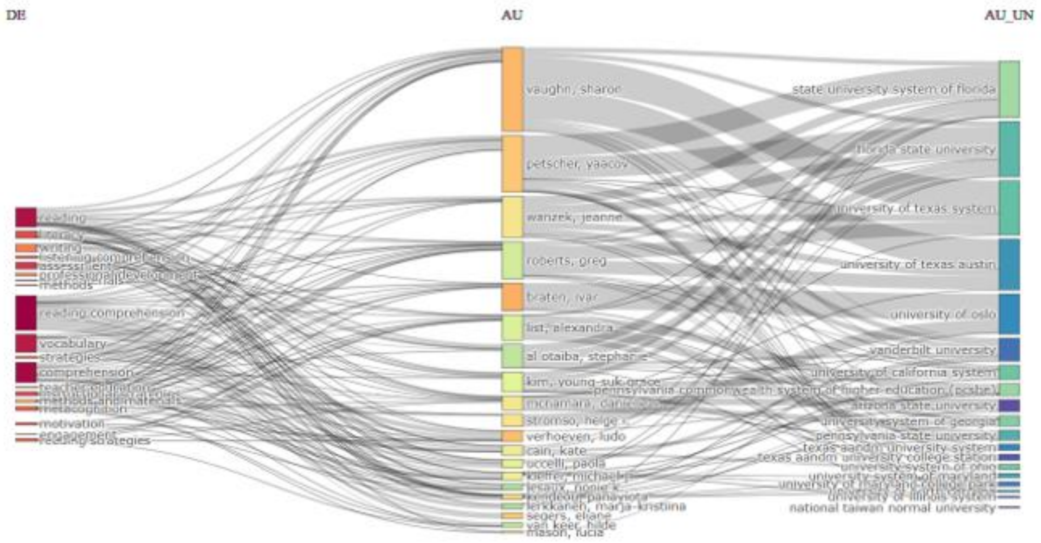

Figure 4. Three-Field Plot (Keyword-Author-Affiliation)

3.1. Authors

A total of 21,273 researchers who published on reading comprehension were identified in the Web of Science database. The 10 authors who published the most in the journal are presented in Figure 5. An analysis of Figure 5 reveals that Braten, Ivar ranks first with 53 studies, Vaughn, Sharon ranks second with 49 studies and Verhoeven, Ludo ranks third with 46 studies.

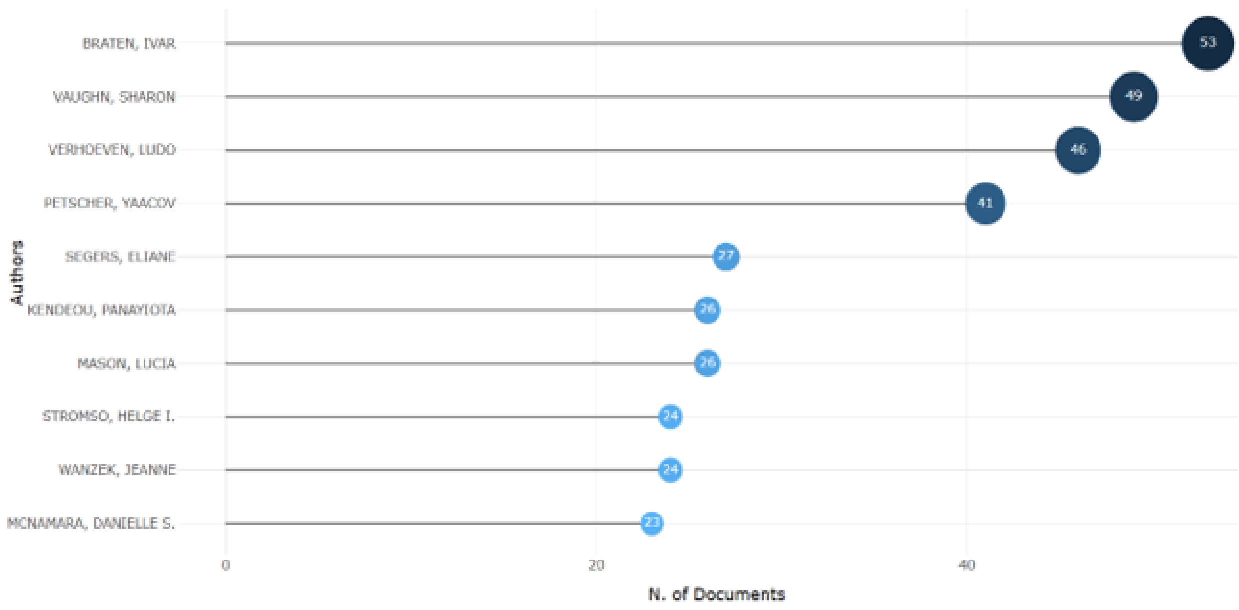

Figure 5. Most Relevant Authors

As illustrated in Figure 6, an analysis of the Web of Science database reveals the researchers who have received the highest number of local citations for their work on reading comprehension. The figure demonstrates that Braten, Ivar has received 879 citations, placing him in the top position. Stromso, Helge I. follows closely behind, with 568 citations, while Vaughn, Sharon holds the third position, having received 549 citations.

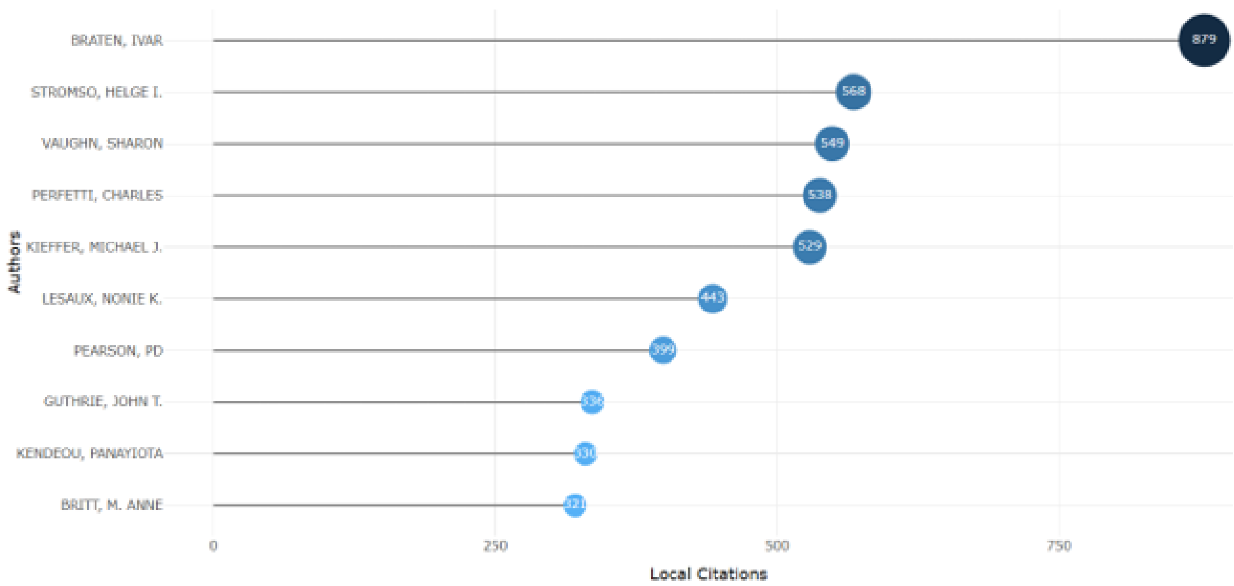

Figure 6. Most Local Cited Authors

The following section presents an analysis of the studies published by the authors on reading comprehension, categorised according to the years in which they were published (see Figure 7).A close analysis of Figure 7 reveals that Braten, Ivar, who published the most, was particularly active between 2002 and 2025, with a notable peak in 2022, when he published seven articles. It is evident that, among the most prolific authors, Vaughn, Sharon, who ranks second, focused her efforts predominantly between 2002 and 2025, while Verhoeven, Ludo, concentrated between 2005 and 2024.

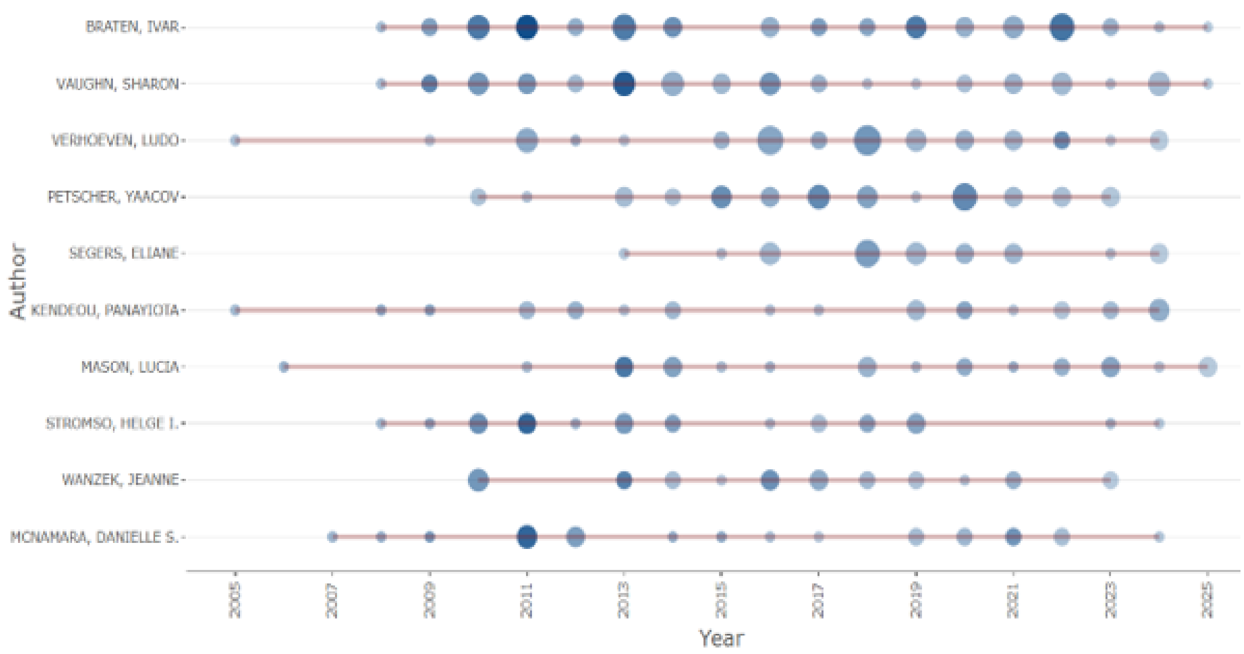

Figure 7. Authors' Production Over Time

As illustrated in Figure 8, an analysis of the authors with the highest local impact among 21,273 researchers who published on reading comprehension in the Web of Science database reveals the following ranking: Braten, Ivar (h_=28) in first place, Vaughn, Sharon (h_=23) in second place, and Stromso, Helge I. (h_=20) in third place.

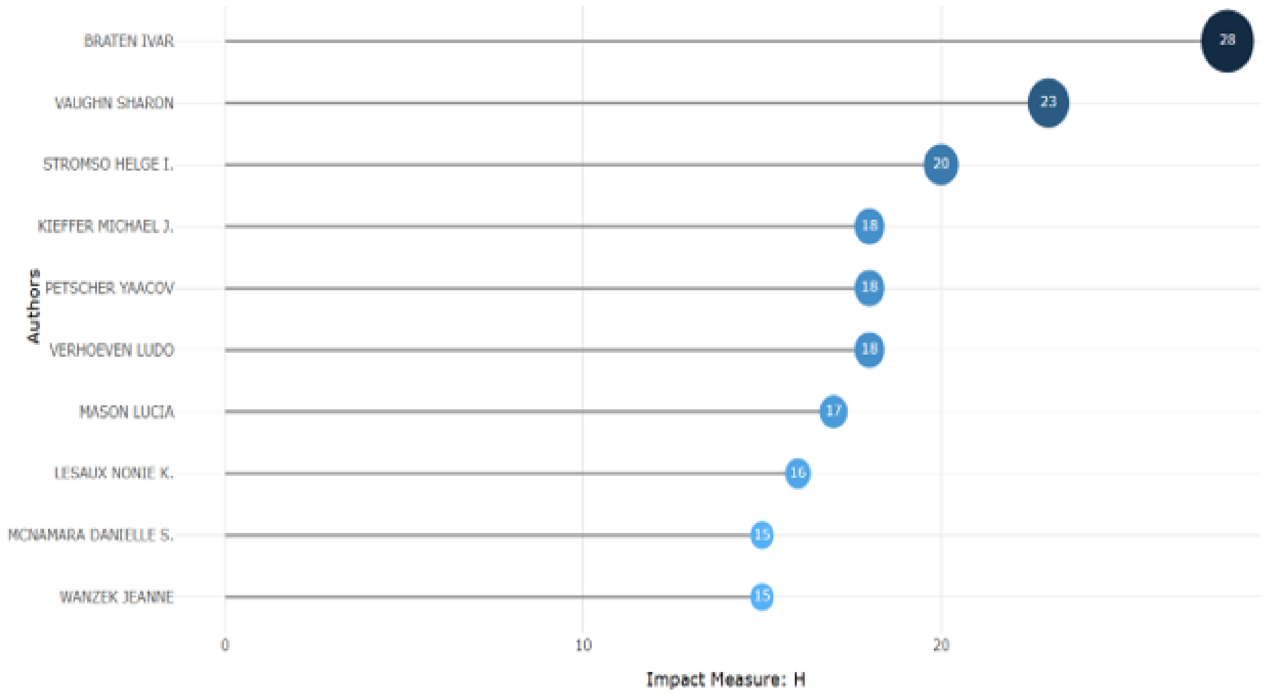

Figure 8. Authors' Local Impact

3.2. Affiliations

As illustrated in Figure 9, the majority of publications originate from the State University System of Florida, with 419 studies recorded. The Pennsylvania Commonwealth System of Higher Education (PCSHE) follows closely behind, with 375 studies, while the Islamic Azad University ranks third with 284 studies.

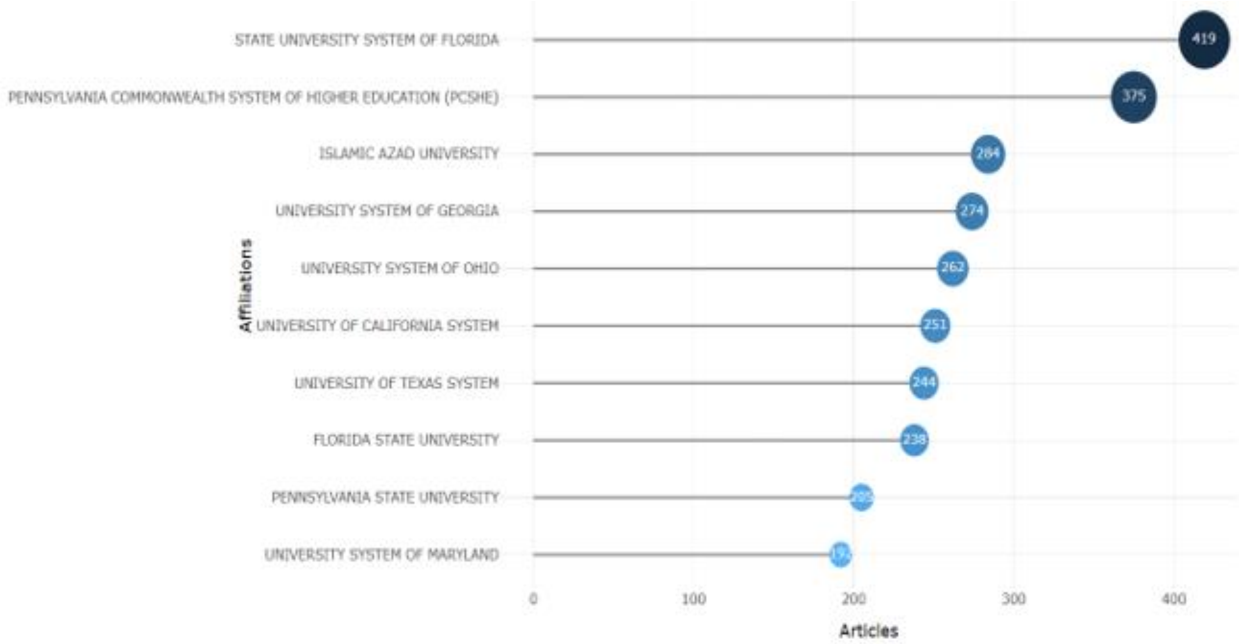

Figure 9. Top 10 Universities with the Most Articles

The temporal dynamics of production in organisations specialising in broadcasting on reading comprehension are delineated in Figure 10.

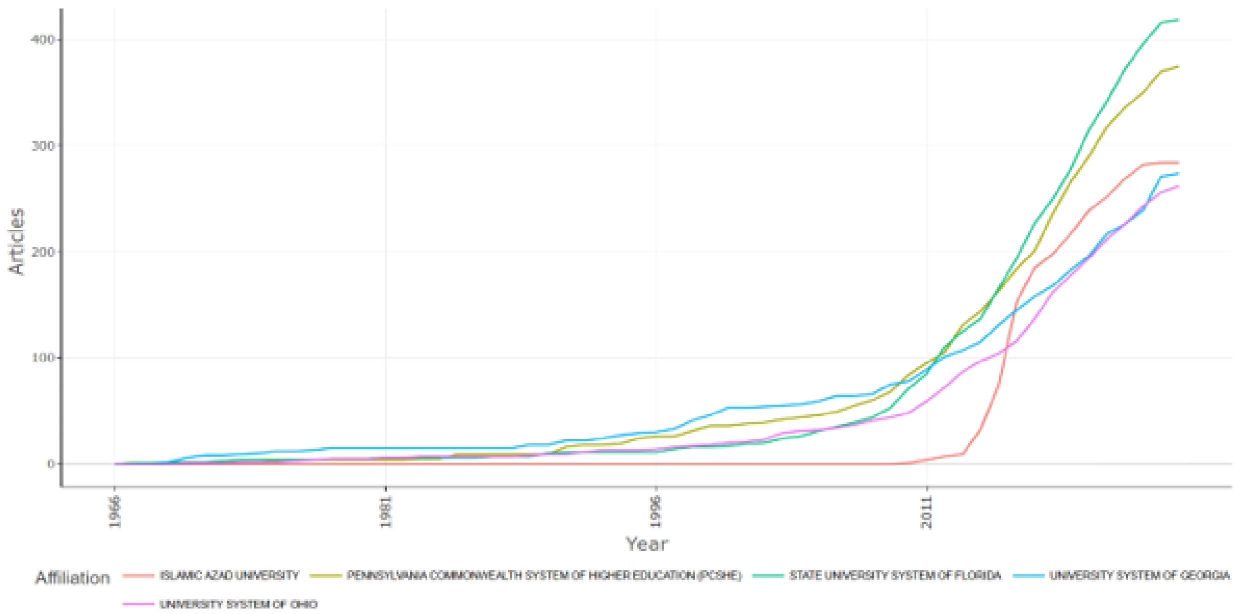

Figure 10. Affiliations' Production Over Time

3.3. Countries

As illustrated in Figure 11, the countries of the responsible authors who published on reading comprehension are enumerated as follows: the USA is ranked first with 4321 articles, China is ranked second with 1012 articles, and Iran is ranked third with 463 articles.

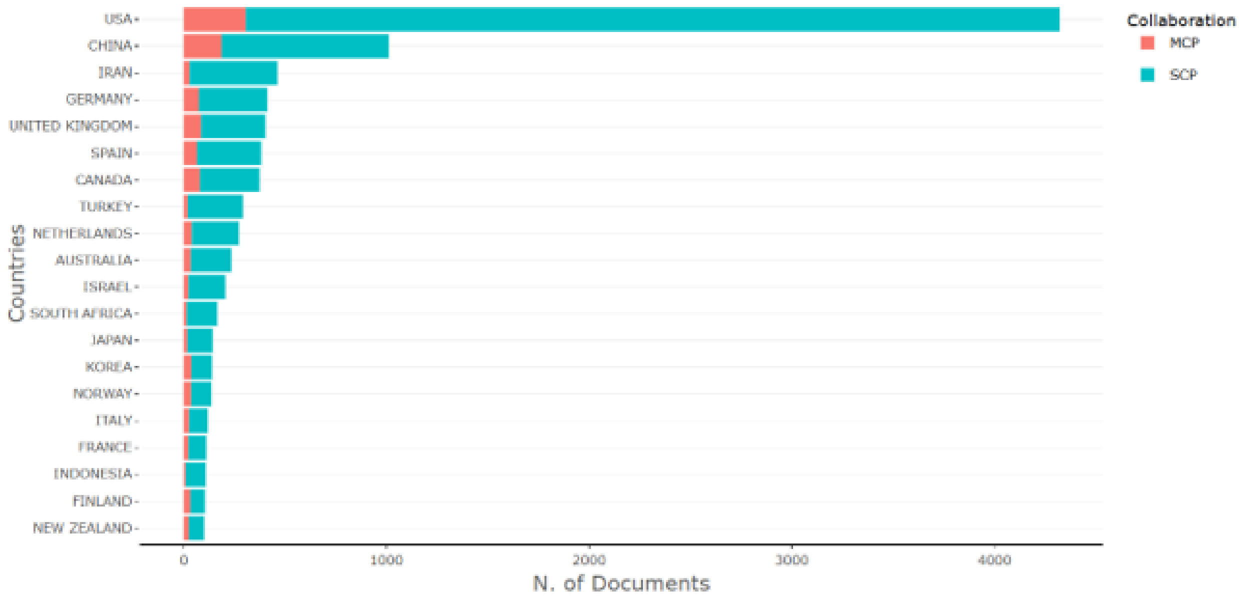

Figure 11. Corresponding Author's Countries

Notes: MCP=Multiple Country Publications; SCP = Single Country Publications. China and Taiwan are merged into (China) as the software used treats both the Republic of China (Taiwan) and People's Republic of China (Mainland China) as one country.

As illustrated in Figure 12, the distribution of the number of citations of articles published on reading comprehension according to countries is presented. An analysis of Figure 12 reveals the top 10 countries. The USA ranks first with 119,218 citations, China ranks second with 16,102 citations, and Canada ranks third with 11,404 citations.

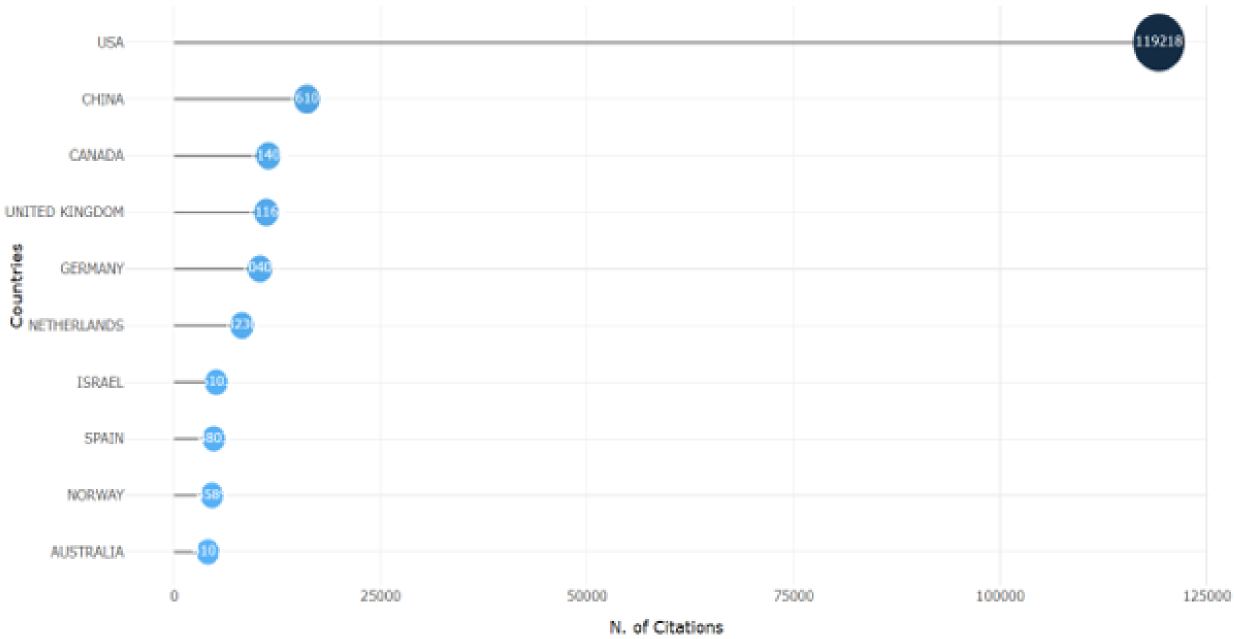

Figure 12. Top 10 Countries with the Most Articles

3.4. Documents

The most globally cited articles on reading comprehension are presented in Table 2. The first article is 'Reading Ability: Lexical Quality to Comprehension' by Perfetti C., 2007, with 1311 citations. In second place is the article titled 'The ICAP Framework: Linking Cognitive Engagement to Active Learning Outcomes?' by Chi, M. T. H., & Wylie, R. in 2014, with 1253 citations. The third most frequently cited article is the study titled 'DeFT: A conceptual framework for considering learning with multiple representations' conducted by Ainsworth, S. in 2006, with 885 citations.

Tablo 2. Most Global Cited Documents

Document	DOI	Total Citations	T C Per Year
Perfetti C, 2007, Scı Stud Read	10.1080/10888430701530730	1311	69.00
Chi Mth, 2014, Educ Psychol-Us	10.1080/00461520.2014.965823	1253	104.42
Ainsworth S, 2006, Learn Instr	10.1016/J.Learninstruc.2006.03.001	885	44.25
Shanahan T, 2008, Harvard Educ Rev	10.17763/Haer.78.1.V62444321p602101	747	41.50
Perfetti C, 2014, Scı Stud Read	10.1080/10888438.2013.827687	739	61.58
Carlısle Jf, 2000, Read Wrıt	10.1023/A:1008131926604	671	25.81
Norris Sp, 2003, Scı Educ	10.1002/Sce.10066	645	28.04
Dignath C, 2008, Metacogn Learn	10.1007/S11409-008-9029-X	568	31.56
Boekaerts M, 1997, Learn Instr	10.1016/S0959-4752(96)00015-1	564	19.45
Senechal M, 1998, Read Res Quart	10.1598/RRQ.33.1.5	544	19.43

The most locally cited articles related to the articles published on reading comprehension are given in Table 3. The first article is 'Reading Ability: Lexical Quality to Comprehension' by Perfetti, C., 2007, with 285 citations. In second place is the article titled 'Word Knowledge in a Theory of Reading Comprehension' by Perfetti, C., & Stafura, J., 2001, with 248 citations. The study 'Prediction of Reading Comprehension: Relative Contributions of Word Recognition, Language Proficiency, and Other Cognitive Skills Can Depend on How Comprehension Is Measured' by Cutting, L. E. and Scarborough, H. S. in 2006 follows with 168 citations.

Table 3. Most Local Cited Documents

Document	**DOI**	**Year**	**Local Citations**
Perfetti C, 2007, Sci Stud Read	10.1080/10888430701530730	2007	285
Perfetti C, 2014, Sci Stud Read	10.1080/10888438.2013.827687	2014	248
Cutting Le, 2006, Sci Stud Read	10.1207/s1532799xssr1003_5	2006	168
Keenan Jm, 2008, Sci Stud Read	10.1080/10888430802132279	2008	149
Carlisle Jf, 2000, Read Writ	10.1023/A:1008131926604	2000	134
Shanahan T, 2008, Harvard Educ Rev	10.17763/haer.78.1.v62444321p602101	2008	133
Wang Jhy, 2004, Read Res Quart	10.1598/RRQ.39.2.2	2004	132
Cain K, 1999, Read Wrıt	10.1023/A:1008084120205	1999	125
Meyer Bjf, 1980, Read Res Quart	10.2307/747349	1980	124
Oakhill Jv, 2012, Sci Stud Read	10.1080/10888438.2010.529219	2012	123
Carlo Ms, 2004, Read Res Quart	10.1598/RRQ.39.2.3	2004	106
Droop M, 2003, Read Res Quart	10.1598/RRQ.38.1.4	2003	103
Vellutino Fr, 2007, Sci Stud Read	10.1207/s1532799xssr1101_2	2007	101
Ozuru Y, 2009, Learn Instr	10.1016/j.learninstruc.2008.04.003	2009	101
Mckeown Mg, 2009, Read Res Quart	10.1598/RRQ.44.3.1	2009	99
Chun Dm, 1996, Mod Lang J	10.2307/328635	1996	98
Edmonds Ms, 2009, Rev Educ Res	10.3102/0034654308325998	2009	97

The word cloud obtained from the articles published on reading comprehension is given in Figure 13. When Figure 13 is analysed, the most common words are found to be those relating to comprehension (3129), students (1465), knowledge (1211), instruction (1121), language (984), children (980), reading-comprehension (939), skills (816), acquisition (727) and English (640).

Figure 13. WordCloud

The TreeMap obtained from the articles published on reading comprehension is given in Figure 14.

Figure 14. TreeMap

The alteration of terminology employed in articles pertaining to reading comprehension as a function of time is illustrated in Figure 15.

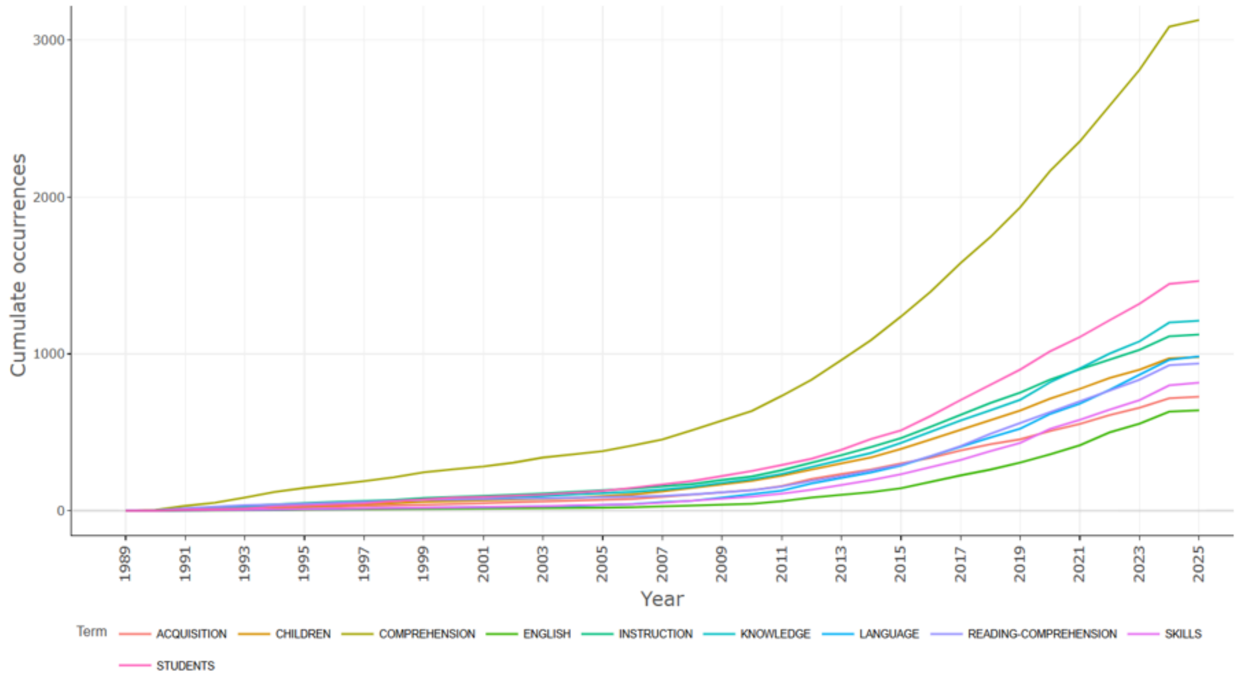

Figure 15. Words' Frequency Over Time

Figure 16 presents a visual representation of the trend topics of the articles published on reading comprehension according to year. A subsequent analysis of Figure 16 reveals that, between 1992 and 2008, the trending topics included recall (172), second language (73), expository text (65), and poor readers (57). In the subsequent period between 2009 and 2025, the most prevalent trending topics were identified as being comprehension (3129), students (1465), knowledge (1211), instruction (1121), language (984) and children (980).

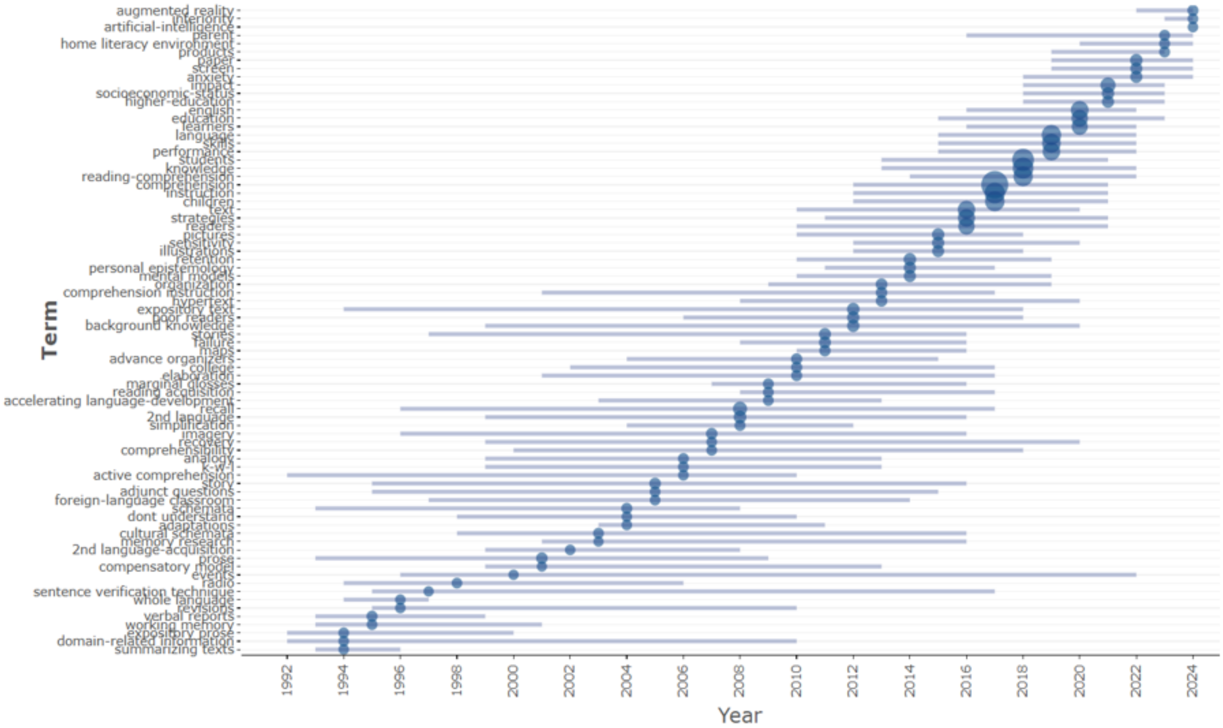

Figure 16. Trend Topics (Keywords)

3.5. Clustering by Coupling

The analysis of the clustering of articles published on reading comprehension according to documents over the years is presented in Figure 17. The analysis of Figure 17 indicates the presence of two clusters. The first group consists of 'students- conf 66.7% knowledge- conf 50% instruction - conf 63.6%'. The second group is characterised by 'individual-differences- conf 75% simple view- conf 89.7% children - conf 80.4%'.

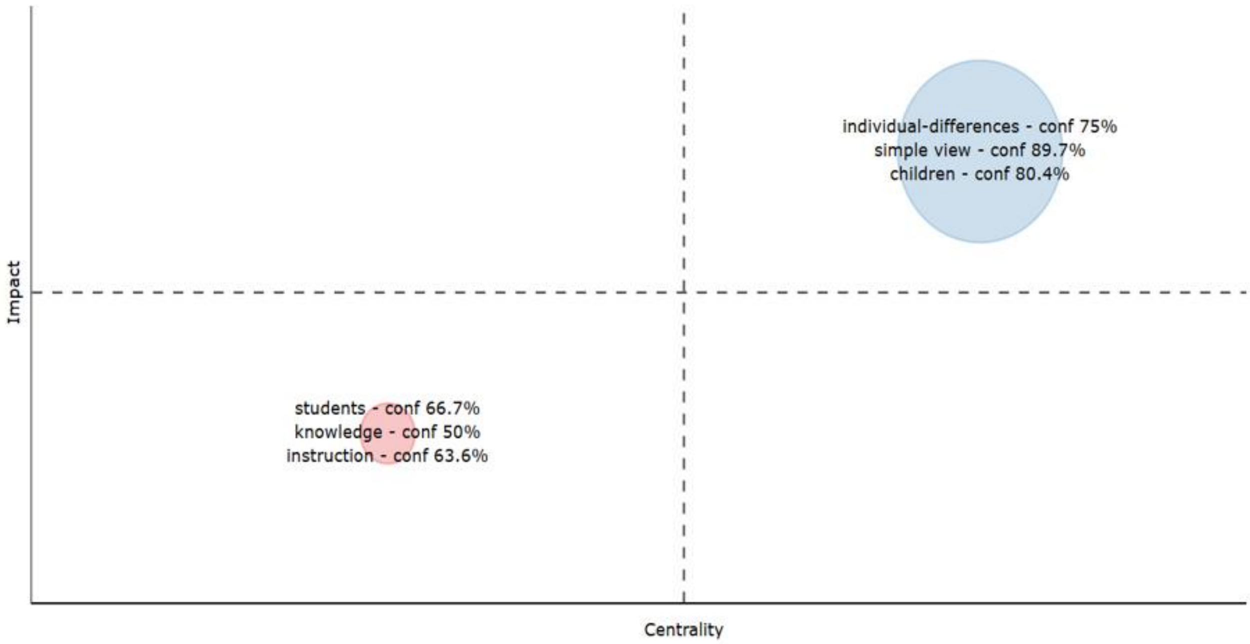

Figure 17. Clustering According To Documentation

The analysis of the clustering of articles published on reading comprehension according to authors over the years is presented in Figure 18.

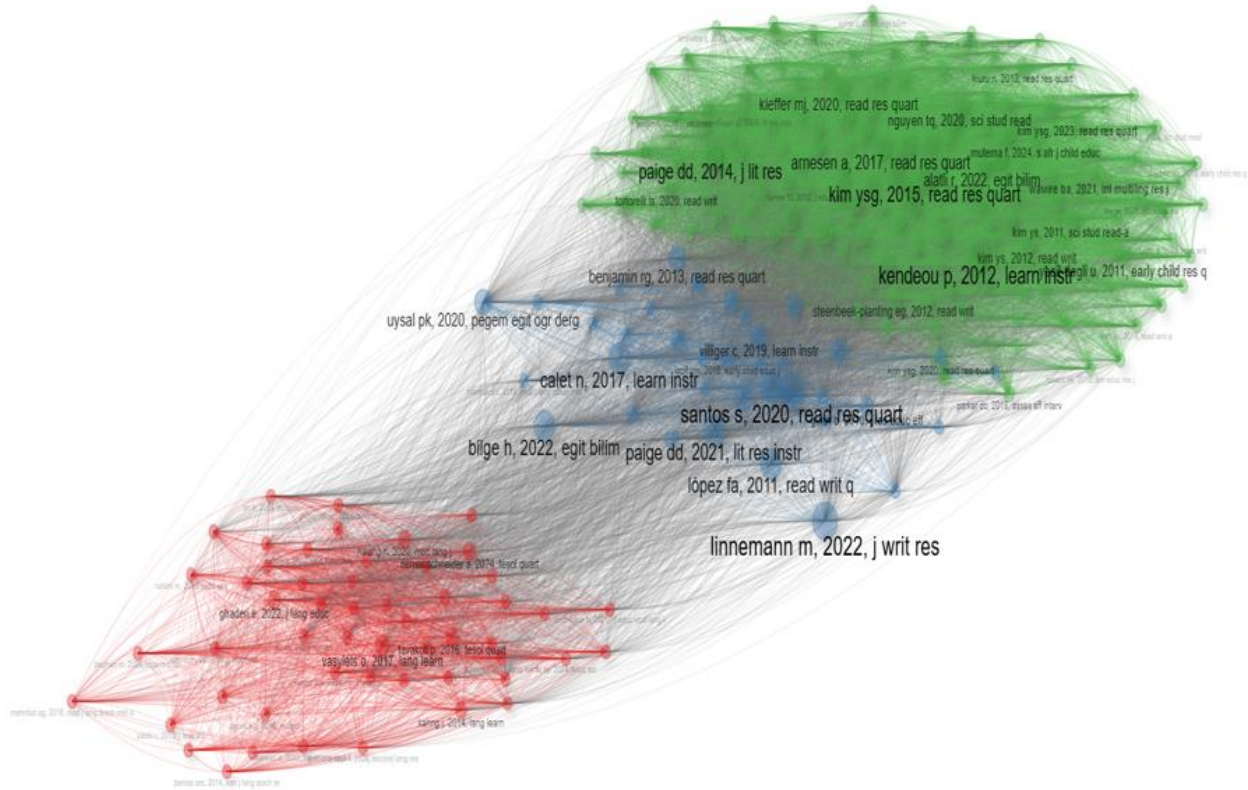

Figure 18. Clustering According Documents

3.6. Co-occurrence network

The co-occurrence network formed by the articles published on reading comprehension according to keywords over the years was analysed and presented in Figure 19. When Figure 19 was analysed, it was found that 'comprehension, students, knowledge, instruction' formed a network together. Similarly, 'children, language, reading-comprehension, skills' formed a network together.

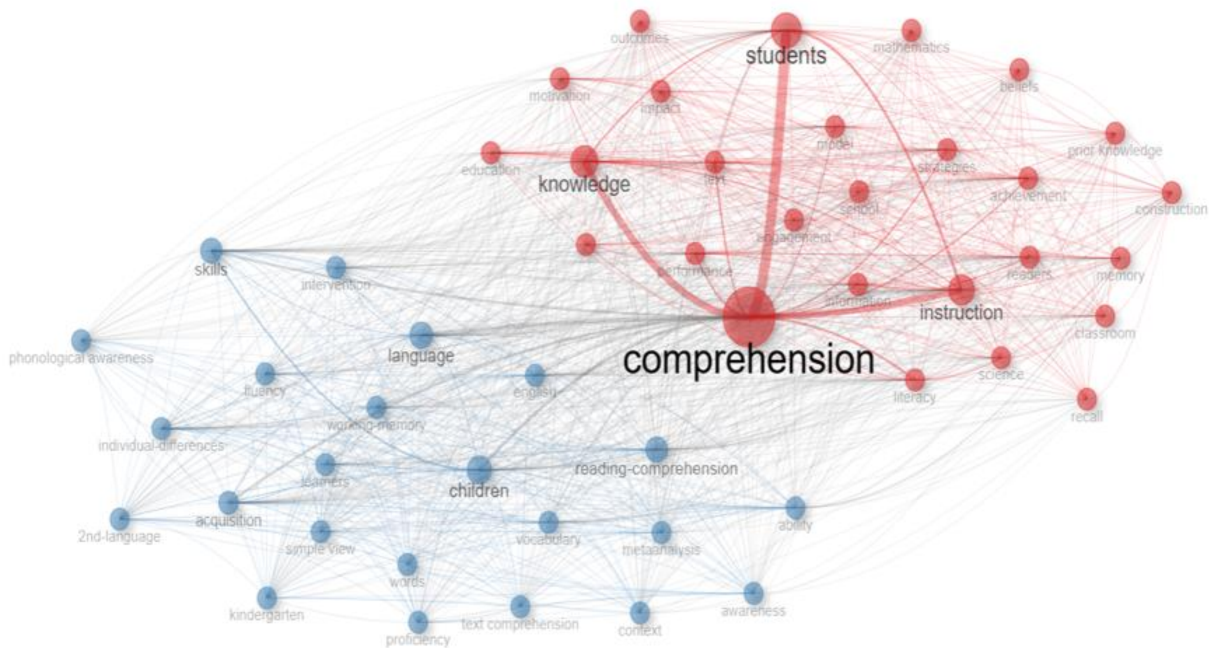

Figure 19. Co-Occurrence Network by Keywords

The co-occurrence network formed by articles published on reading comprehension according to their titles over the years was analysed and presented in Figure 20. When Figure 20 was analysed, it was found that the following networks were formed: one comprising the terms 'reading comprehension, learning, language, grade, effects' and another comprising the terms 'students, literacy, education, analysis'.

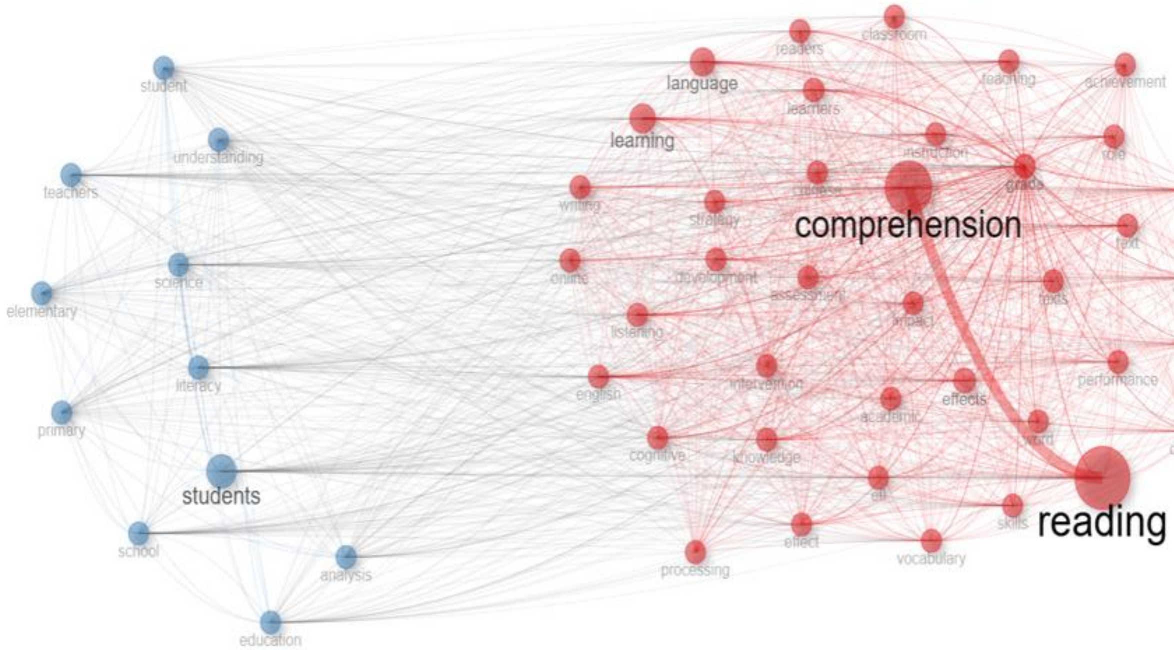

Figure 20. Co-Occurrence Network by Titles

The thematic map of articles published on reading comprehension according to keywords over the years was analysed and presented in Figure 21. When Figure 21 was analysed, two different themes were identified. In the first group, the thematic map was formed around the words 'comprehension, knowledge, information, students, instruction'. In the second group, the thematic map was formed around the words 'reading-comprehension, language, skills, acquisition, ability'.

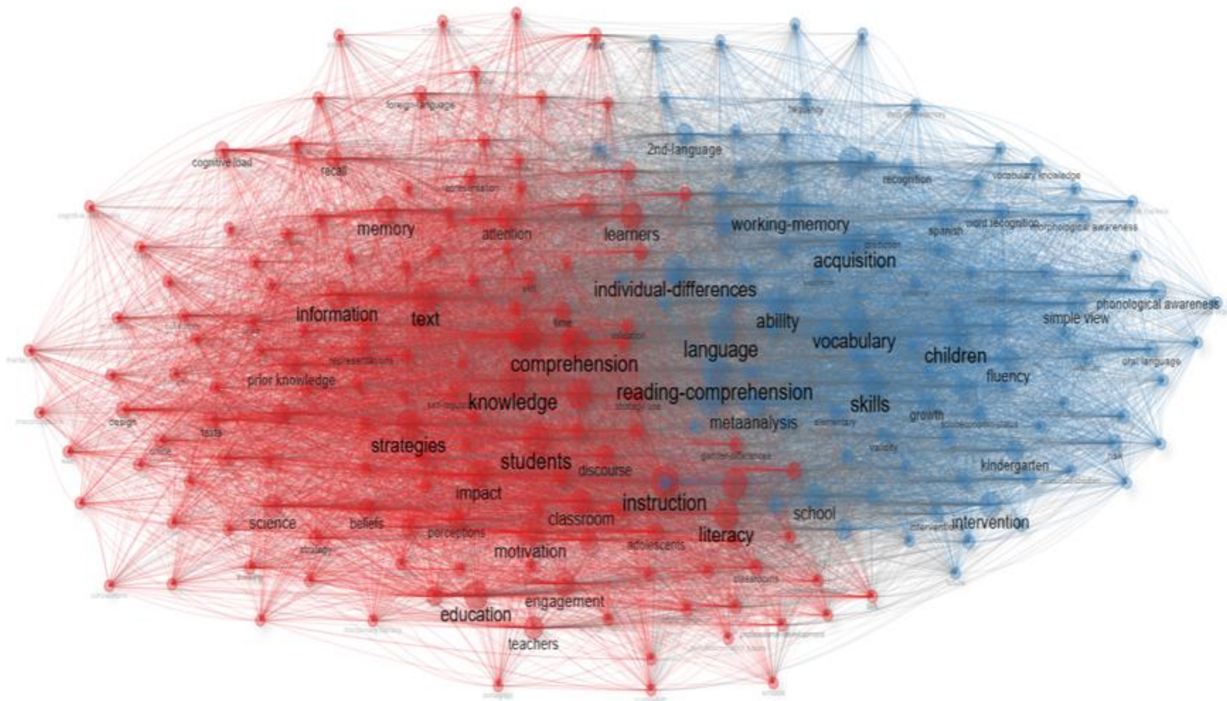

Figure 21. Thematic Map by Keywords

The thematic map of articles published on reading comprehension according to titles over the years was analysed and presented in Figure 22. This analysis revealed two themes. In the first group, the thematic map was formed around the words 'comprehension, reading, effects, study, vocabulary, learners, English, assessment'. The second group, meanwhile, was characterised by terms such as 'literacy', 'teachers', 'students' and 'learning' in conjunction with 'school'.

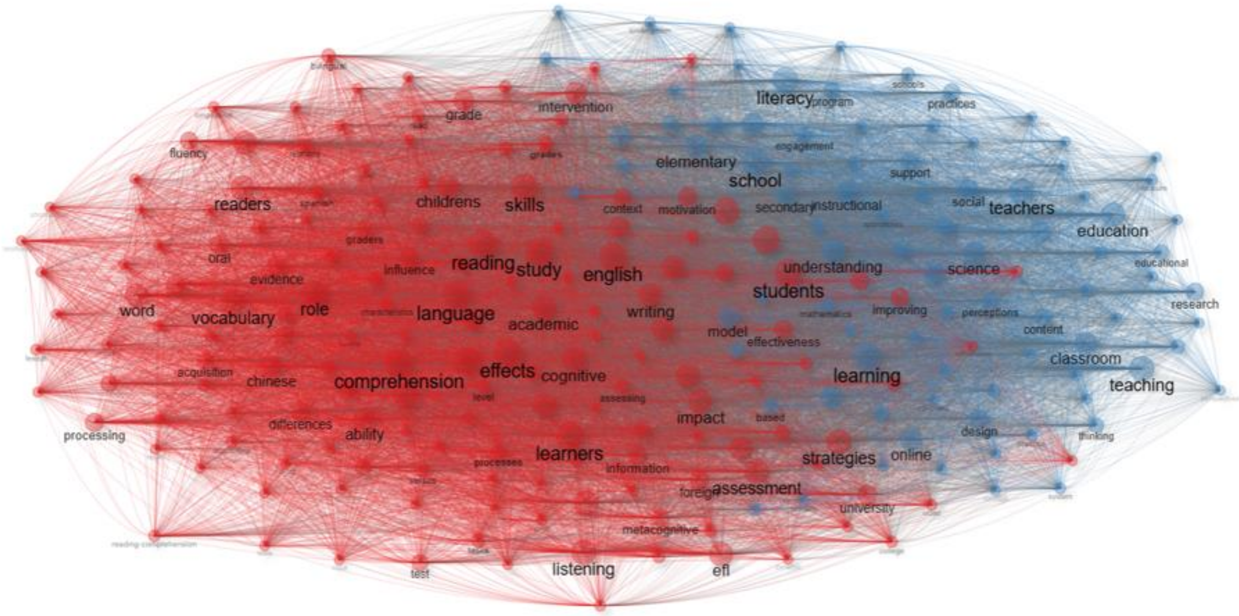

Figure 22. Thematic Map by Titles

The thematic map of articles published on reading comprehension according to author keywords over time was analysed and presented in Figure 23. This analysis revealed three distinct themes: in the first group, the thematic map was formed around the words 'reading comprehension, reading, literacy'; in the second group, the thematic map was formed around the words 'comprehension, vocabulary, strategies, professional development, phonological awareness'. The third group is characterised by the presence of terms such as 'interactive learning environments', 'improving classroom teaching' and 'pedagogical issues'.

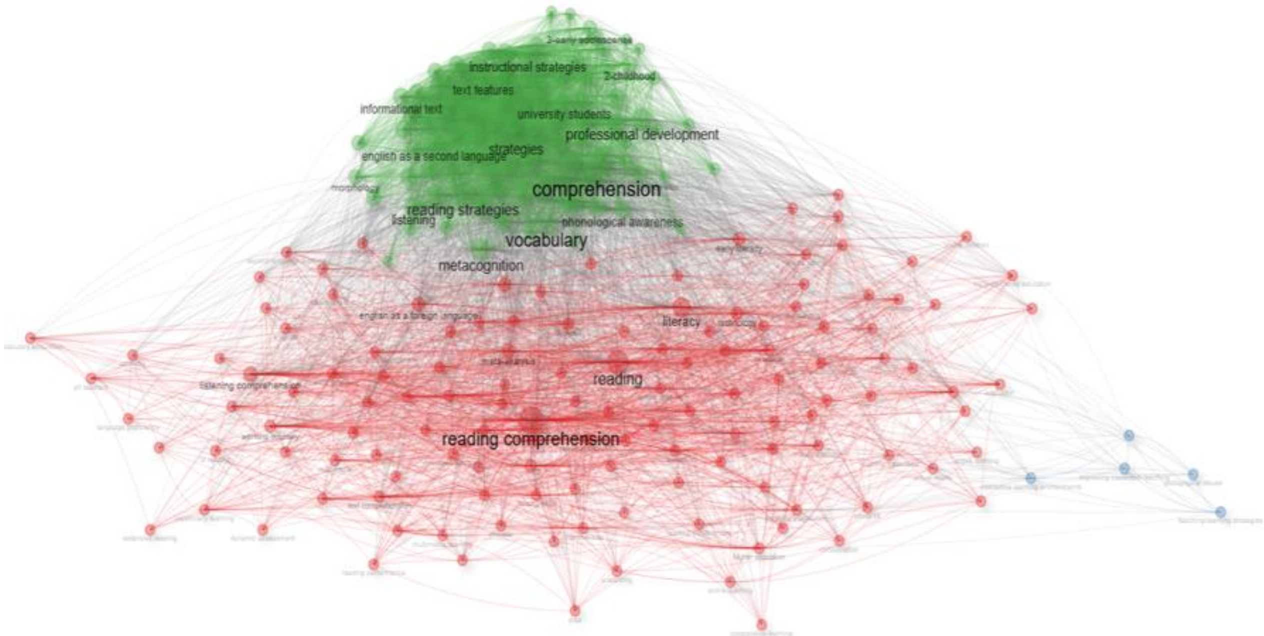

Figure 23. Thematic Map by Authors's Keywords

The thematic evolution of articles published on reading comprehension according to keywords over time was analysed and presented in Figure 24. The analysis of Figure 24 reveals that, while the keywords 'comprehension, children, acquisition, skills, individual-differences' were predominant between 1965-2000, the keywords 'children, comprehension, text, context' emerged as dominant between 2001-2012. A similar trend was observed in the keywords 'comprehension, language', which became more prominent between 2013 and 2024.

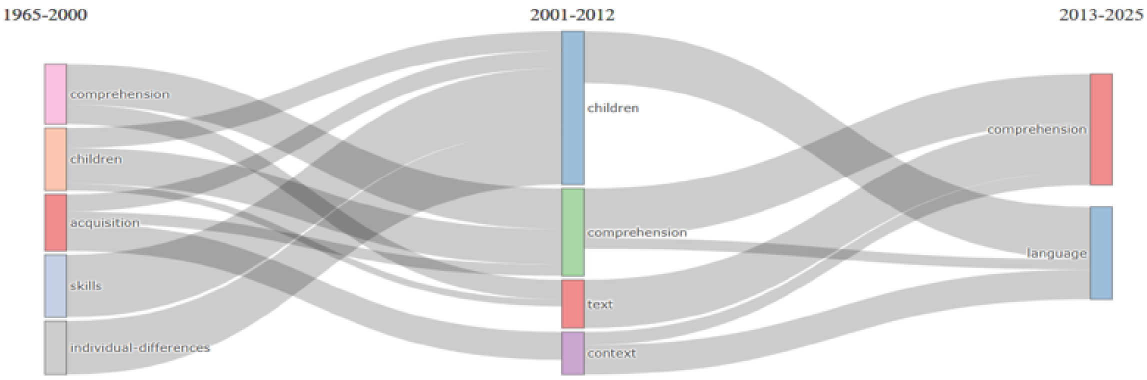

Figure 24. Thematic Evolution by Keywords

The thematic evolution of articles published on reading comprehension according to their titles over time was analysed and presented in Figure 25. When Figure 25 is analysed, it is evident that the keywords 'comprehension, test, video, reading-comprehension, students, text, monitoring, word, literacy, social, teachers, theory' were predominant between 1965-2000, while the terms 'reading, literacy, text' emerged as the primary focus between 2001-2012. A similar phenomenon was observed in the years 2013-2025, with the terms 'reading' and 'students' assuming a prominent role.

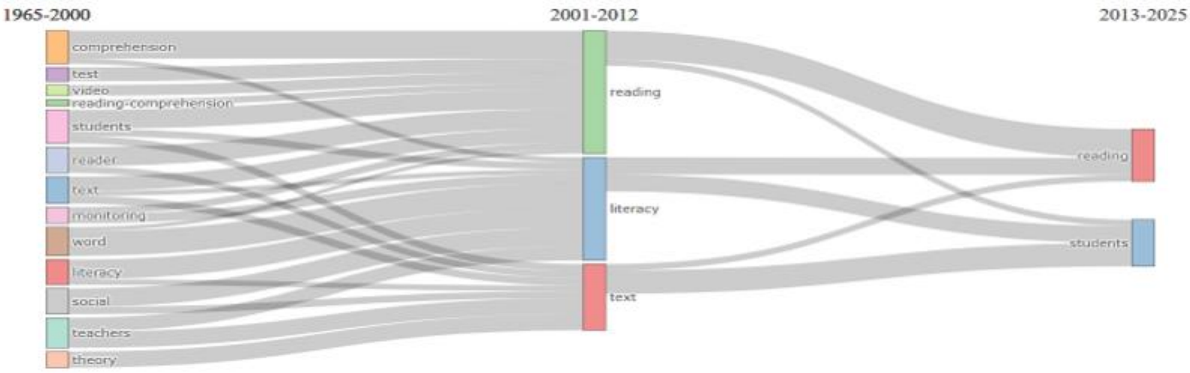

Figure 25. Thematic Evolution by Tittles

3.7. Co-Citation Network

The co-citation networks formed by the articles published on reading comprehension over the years were analysed according to the documents and presented in Figure 26. When Figure 26 is analysed, the co-citation networks according to the documents are as follows: Gough P.B. 1986 (cluster = 2; betweenness = 21.573; closeness = 0.014; pagerank = 0.056); Kintsch W. 1998 (cluster = 1; betweenness = 40.132; closeness = 0.016; pagerank = 0.042); Laberge D 1974 (cluster = 2; betweenness = 10.992; closeness = 0.014; pagerank = 0.035); Cain K 2004 (cluster = 3 ; betweenness = 94.786; closeness = 0.017; pagerank = 0.022); Perfetti C 2014 (cluster = 3; betweenness = 52.523; closeness = 0.017; pagerank = 0.019). Finally, Cohen J. (2013) also used a cluster of 3, with betweenness set at 32.530, closeness at 0.017 and pagerank at 0.015.

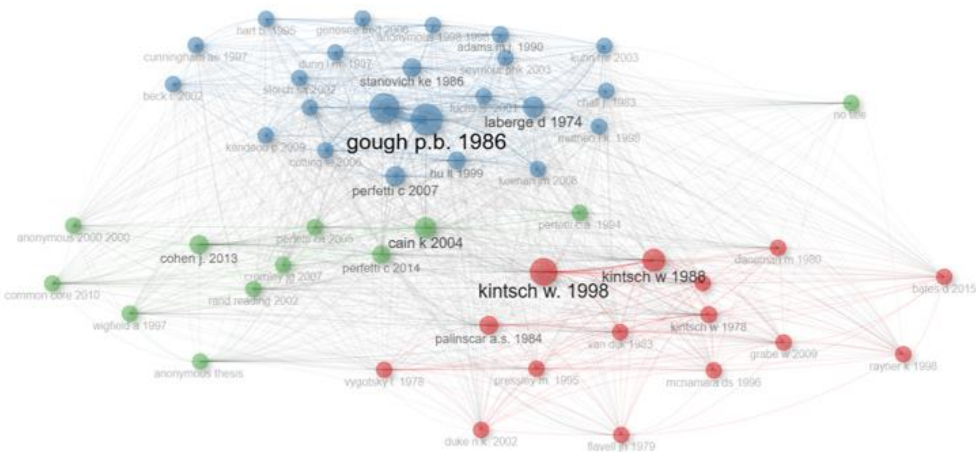

Figure 26. Co-Citation Network Doc

The co-citation networks formed by the articles published on reading comprehension over the years were analysed according to the authors and presented in Figure 27. Figure 27 shows the following co-citation networks according to authors: Anonymous (cluster = 1; betweenness = 166.465; closeness = 0.013; pagerank = 0.017); Perfetti Ca (cluster = 2; betweenness = 77.720; closeness = 0.01 4; pagerank = 0.031); Stanovich Ke (cluster = 2; betweenness = 69.547; closeness = 0.014; pagerank = 0.023); Cain K (cluster = 2; betweenness = 4 7.239; closeness = 0.014; pagerank = 0.029); Kendeou P (cluster = 2; betweenness = 35.618; closeness = 0.014; pagerank = 0.018). The same applies to Nagy We (cluster = 2; betweenness = 22.099; closeness = 0.014; pagerank = 0.015).

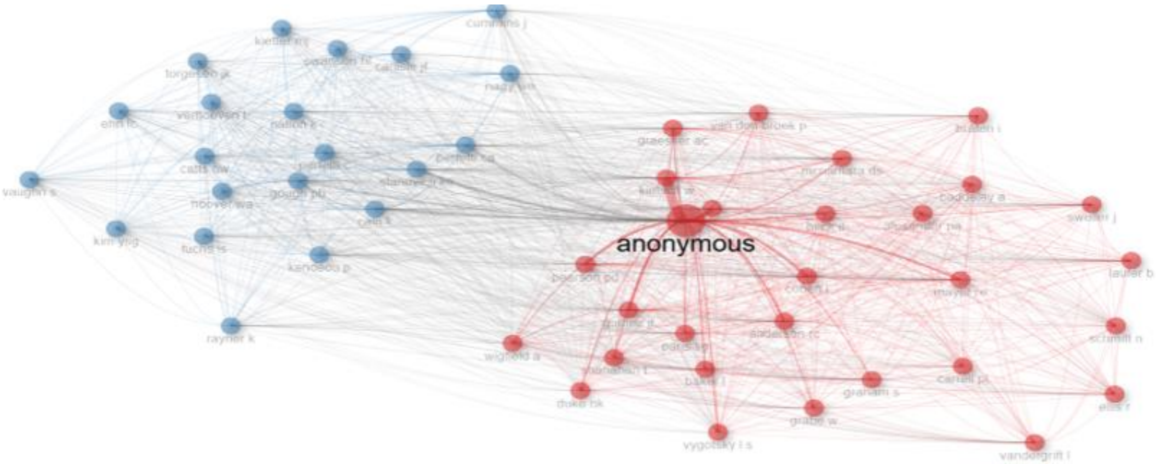

Figure 27. Co-Citation Network Author

3.8. Collaboration Network

The collaboration network formed by the articles published on reading comprehension was analysed and presented in Figure 28 Figure 28shows the collaboration network according to the authors: Braten, Ivar (cluster = 8; betweenness = 179.668; closeness = 0.007; pagerank = 0.074); Vaughn, Sharon (cluster = 6; betweenness = 17.174; closeness = 0. 08; pagerank = 0.040); Petscher, Yaacov (cluster = 6; betweenness = 156.236; closeness = 0.010; pagerank = 0.047); Verhoeven, Ludo (cluster = 2; bet weenness = 0.000; closeness = 1.000; pagerank = 0.023); Stromso, Helge I (cluster = 5; betweenness = 0.972; closeness = 0.006; pagerank = 0.052).

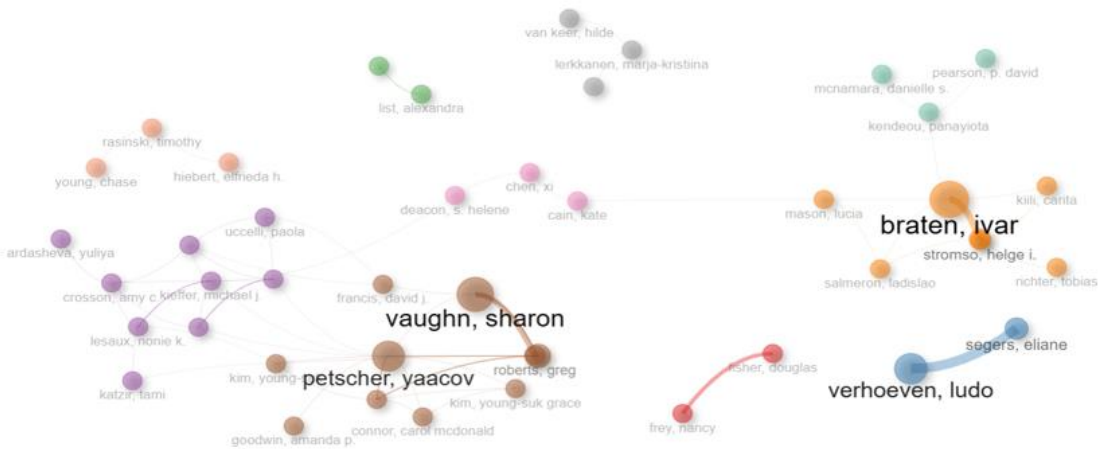

Figure 28. Author-Collaboration Network

The collaboration network of organisations formed by the published articles related to reading comprehension was examined and presented in Figure 29 Figure 29 shows the collaboration network according to the institutions: Commonwealth of Pennsylvania System of Higher Education (cluster = 7; betweenness = 47.521; closeness = 0.018; pagerank = 0.053); State University System of Florida (cluster = 8; betweenness = 52.218; closeness = 0 .017; pagerank = 0.047); University of Texas System (cluster = 2; betweenness = 17.232; closeness = 0.016; pagerank = 0.038); Florida State University (cluster = 8; betweenness = 7.555; closeness = 0.016; pagerank = 0.037); University System of Georgia (cluster = 10; betweenness = 23.819; closeness = 0.017; pagerank = 0.037).

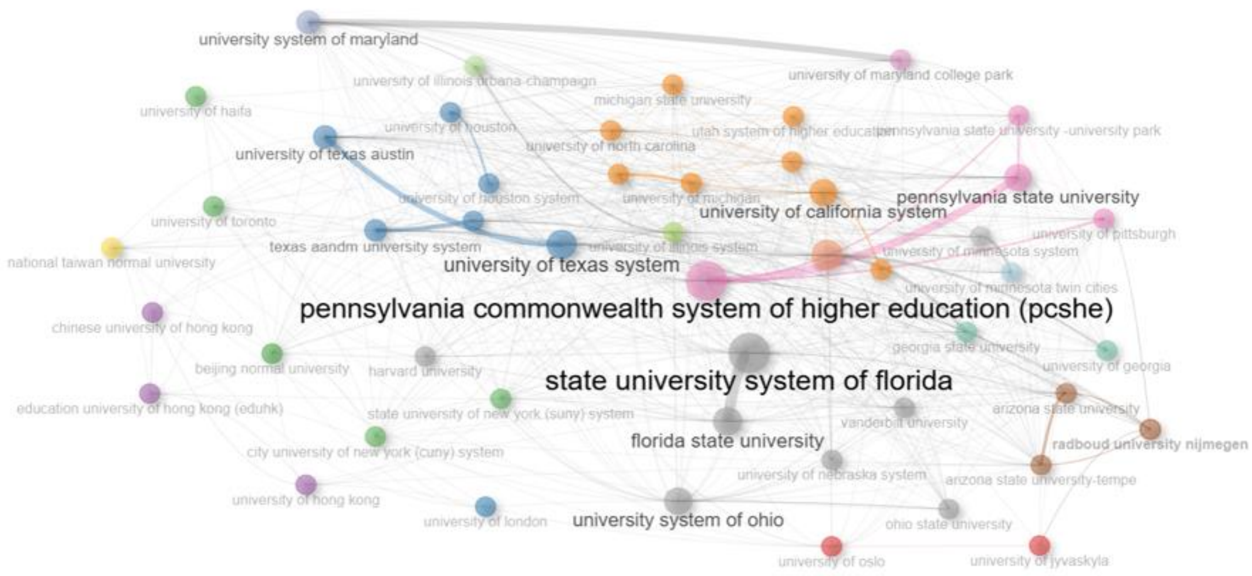

Figure 29. Institutions-Collaboration Network

The collaboration network of countries formed by the published articles related to reading comprehension was analysed and presented in Figure 30. Figure 30 shows the collaboration network according to the countries: The USA (cluster = 3; betweenness = 383.704; closeness = 0.020; pagerank = 0.054); China (cluster = 3; betweenness = 56.249; closeness = 0.01 6; pagerank = 0.080); United Kingdom (cluster = 3; betweenness = 98.471; closeness = 0.018; pagerank = 0.070); Canada (cluster = 3; betweenness = 19.418; closeness = 0.015; pagerank = 0.051); Germany (cluster = 3; betweenness = 33.001; closeness = 0.016; pagerank = 0.047).

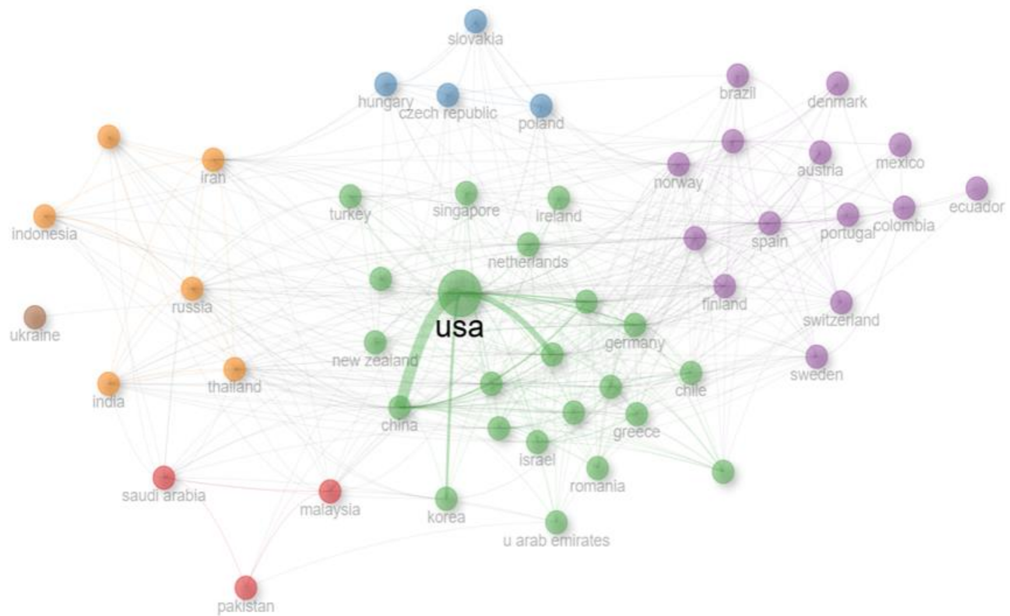

Figure 30. Countries-Collaboration Network

A thorough analysis was conducted on the 'Countries' collaboration world map', which was created by the countries that have published on 'reading fluency' over the years (see Figure 31). The analysis revealed cooperation relations between the USA and China (135), the USA and Canada (96), the USA and Korea (66), the USA and Germany (48), and the USA and the United Kingdom (46).

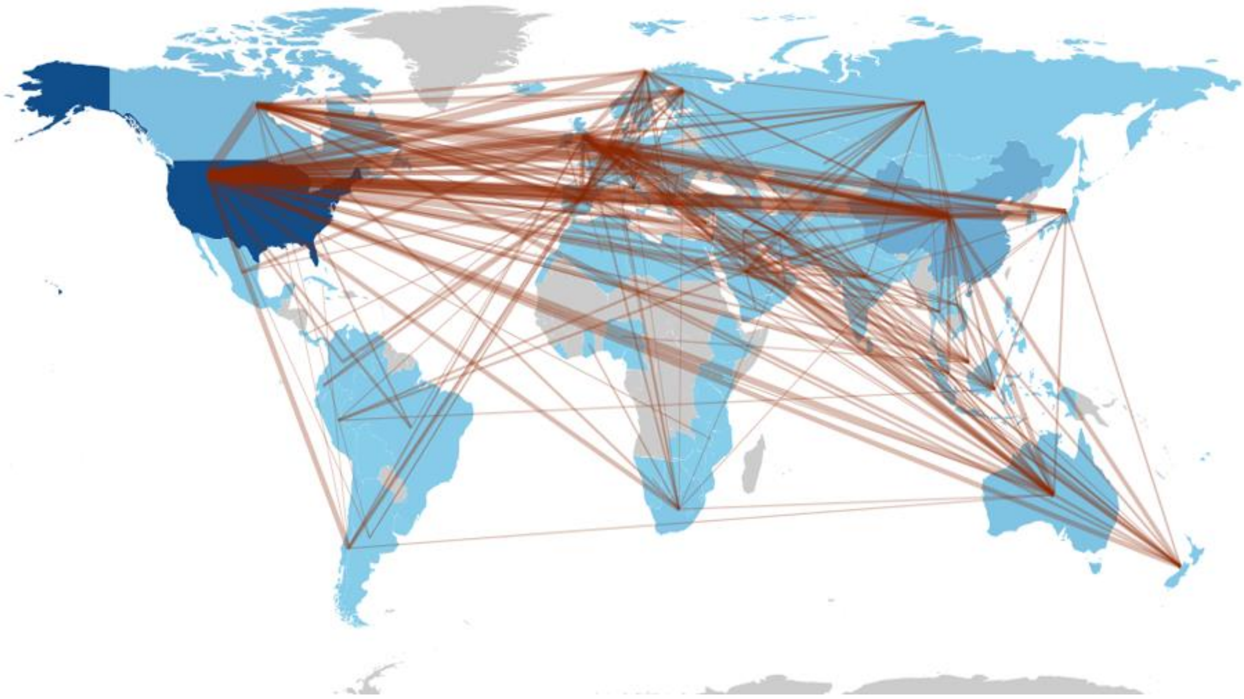

Figure 31. Countries' Collaboration World Map

4. RESULT and DISCUSSION

A bibliometric analysis of 11,484 articles on 'reading comprehension' published in the Web of Science (WoS) database since 1965 was conducted, and the results obtained are presented in all aspects. Between 1965 and 2025, 11,484 articles on reading comprehension were published from 659 sources, with an average of 191.4 articles published per year. The average number of citations per document for these articles is 20.44, and the total number of references is 286,011. The number of Keywords Plus for these articles is 6,083, and the number of Author's Keywords is 16,502. The number of authors of single-author documents is 2,420. The number of authors of multi-authored documents is 18,853, while the number of single-authored documents is 2,887, and the number of multi-authored articles is 8,597. The average number of co-authors per article is 2.67, and the percentage of international co-authorship is 13.3%.

A thorough analysis of the annual scientific production of published articles on 'reading comprehension' reveals a consistent trend from 1965 to 2025, with an average annual output of 191.4 articles. The period from 1965 to 1985 witnessed a steady increase in the number of publications on reading comprehension, with an average of 24.09 articles published per year. This trend persisted until 2005, when the average increased to 63.35 articles per year. From 2005 to 2025, the average annual publication rate increased to 485.55 articles, reaching a remarkable peak in 2024 with the publication of 966 articles. The substantial increase in publications on 'reading comprehension' in recent years is indicative of the subject's continued importance (Al-Adeimi, 2025; Cheng et al., 2025; Cubillos et al., 2025; Dong et al., 2025; Hódi et al., 2025; Johnson et al., 2025; Nash, et al., 2025; Saiegh-Haddad & Schiff, 2025; Share, 2025; Yu & Cai, 2025;

The keyword analysis reflects the primary subjects on which the research is concentrated, and when the thematic evolution of the articles according to keywords over time is analysed, the following keywords are identified: 'comprehension' (Crosson & Silverman, 2022; Perfetti, 2007; Strasser & Rio, 2014), 'children' (Bittmann, 2025; Gersten & Dimino, 2006; Kabuto, 2016) ‘acquisition' (Chilton & Ehri, 2015; Sharp et al., 2008; Wright, 2011), 'skills' (Perry, 2009; Tortorelli et al., 2022; Yi et al., 2019), 'individual-differences' (Elbro et al., 1998; Hoover & Tunmer, 2022; Lepola et al., 2012), 'text' (De Jong & Bus, 2004; Leu et al., 2015; Uccelli et al., 2015), 'language' (Lewis & Fabos, 2005; García, & Kleifgen, 2020; Moje et al., 2014).

A comprehensive evaluation of the thematic map and thematic evolution, formed by the title, keywords and abstracts of articles published on 'reading comprehension' between 1965 and 2025, reveals a significant increase in research activity, particularly in recent years. Following 2020, the impact of technology has become evident in studies on reading comprehension (Coiro, 2021; Hong & Lee, 2023; Kaplan-Rakowski & Gruber, 2023; Li et al., 2024; Sobers et al., 2023; Sun et al., 2025; Şimşek & Direkçi, 2023; Yueh et al., 2021; Qiao et al., 2023). The predominant reason for this phenomenon is likely the global experience of the COVD-

19 pandemic. Additionally, the influence of the digital age in which we currently reside is a significant contributing factor.

The utilisation of 'digital stories' in the context of 'reading comprehension' has been a subject of considerable interest in recent research (Golenko et al., 2024; Huang, 2023; Vretudaki et al., 2024). Indeed, digital storytelling has been identified as a contemporary and efficacious medium for individuals to articulate themselves, disseminate information and fortify social bonds. The potential of this approach is increasingly being embraced across diverse disciplines, largely due to the digital landscape's affordances. It is important to note that interactive texts related to reading comprehension are being used effectively (Hudson-Smith et al., 2023; Lee et al., 2024). Interactive texts offer a flexible, dynamic and rich experience shaped by the active participation of the reader. These features make it possible to use them in both entertainment and educational content, presenting a different and innovative alternative to traditional texts. Consequently, there is a strong case for their increased utilisation in forthcoming years. Another technological tool related to 'reading comprehension' is 'mobile devices'. A review of the literature reveals that mobile supported devices have been used in reading (Hou et al., 2024; Shahipanah et al., 2025). These devices are considered significant tools that support and develop modern reading habits, thanks to their portability, personalisation, access to rich content, technological integration and environmental-digital advantages. It is therefore hypothesised that they will be used frequently in the field of reading in the future.

A review of the extant literature reveals numerous bibliometric studies on reading. These include studies on reading and speed reading (Hermansyah et al., 2024); digital reading (Zhang, 2024); online reading (Tang et al., 2023); the role of reading motivation and online reading activities; and the evaluation of online reading literacy (Lan & Yu, 2022). Other studies have examined the factors affecting reading culture (Aslam et al., 2024). The present study has analysed articles on 'reading comprehension' published in the WoS database from the past to the present in a broad perspective, and the results have been presented in a holistic manner. It is expected that the results obtained from this study will inspire further research.

REFERENCES

Ahmi, A. (2022). Bibliometric Analysis using R for Non-Coders: A practical handbook in conducting bibliometric analysis studies using Biblioshiny for Bibliometrix R package.

Al-Adeimi, S. (2025). Questions and Answers: Investigating the Role of Student Talk Moves in Persuasive Writing. *Reading Research Quarterly*, *60*(1), e596. https://doi.org/10.1002/rrq.596

Allington, R. L. (1983). The reading instruction provided readers of differing reading abilities. *The Elementary School Journal*, *83*(5), 548-559. https://www.jstor.org/stable/1001078

Aslam, S., Qutab, S., & Ali, N. (2024). Components of reading culture: Insights from bibliometric analysis of 1991–2020 research. *Journal of Information Science*, *50*(5), 1277-1290. https://doi.org/10.1177/01655515221118667

Biehl, M., Kim, H., & Wade, M. (2006). Relationships among the academic business disciplines: A multi-method citation analysis. *Omega, 34(4),* 359-371. https://doi.org/10.1016/j.omega.2004.12.002

Biemiller, A., & Boote, C. (2006). An effective method for building meaning vocabulary in primary grades. *Journal of Educational Psychology*, *98*(1), 44–62. https://doi.org/10.1037/0022-0663.98.1.44

Bittmann, F. (2025). Reading Begets Reading? Disentangling the Dynamic Interplay Between Reading Competence and Reading Exposure with a Special Focus on Gender Differences. *Reading Research Quarterly*, *60*(1), e566. https://doi.org/10.1002/rrq.566

Bulut, A., & Yıldız, M. (2024). The impact of computer-assisted and direct strategy teaching on reading comprehension. *Journal of Computer Assisted Learning*, *40*(6), 3369-3389. https://dx.doi.org/10.1111/jcal.13068

Bråten, I., Strømsø, H. I., & Britt, M. A. (2009). Trust matters: Examining the role of source evaluation in students' construction of meaning within and across multiple texts. *Reading Research Quarterly*, *44*(1), 6-28. https://doi.org/10.1598/RRQ.44.1.1

Cain, K., Oakhill, J. V., Barnes, M. A., & Bryant, P. E. (2001). Comprehension skill, inference-making ability, and their relation to knowledge. *Memory & cognition*, *29*(6), 850-859.

Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading.

Chen, M. R. A., Hwang, G. J., Majumdar, R., Toyokawa, Y., & Ogata, H. (2021a). Research trends in the use of E-books in English as a foreign language (EFL) education from 2011 to 2020: A bibliometric and content analysis. *Interactive Learning Environments, 1–17*. https://doi.org/10.1080/10494820.2021.1888755

Cheng, Y., Li, Y., Zhang, W., & Jia, K. (2025). The Reciprocal Relation Between Vocabulary Knowledge and Compound Structure Awareness and Their Contributions to Reading Comprehension in Chinese Children: A Longitudinal Study From Grades 3 to 6. *Reading Research Quarterly*, *60*(1), e606. https://doi.org/10.1002/rrq.606

Chilton, M. W., & Ehri, L. C. (2015). Vocabulary learning: Sentence contexts linked by events in scenarios facilitate third graders' memory for verb meanings. *Reading Research Quarterly*, *50*(4), 439-458. https://doi.org/10.1002/rrq.106

Clinton-Lisell, V., Taylor, T., Carlson, S. E., Davison, M. L., & Seipel, B. (2022). Performance on reading comprehension assessments and college achievement: a meta-analysis. *Journal of College Reading and Learning*, *52*(3), 191-211. https://doi.org/10.1080/10790195.2022.2062626

Coiro, J. (2021). Toward a multifaceted heuristic of digital reading to inform assessment, research, practice, and policy. *Reading Research Quarterly*, *56*(1), 9-31. https://doi.org/10.1002/rrq.302

Crosson, A. C., & Silverman, R. D. (2022). Impact of COVID-19 on early literacy instruction for emergent bilinguals. *Reading Research Quarterly*, *57*(1), 5-14. https://doi.org/10.1002/rrq.456

Cubillos, M., Zegers, M., & Inciarte, H. (2025). Examining Adolescent Reading Engagement: Design and Validation of the Teacher-Reported Reading Engagement Survey (TRRES). *Reading Research Quarterly*, *60*(2), e611. https://doi.org/10.1002/rrq.611

De Jong, M. T., & Bus, A. G. (2004). The efficacy of electronic books in fostering kindergarten children's emergent story understanding. Reading research quarterly, 39(4), 378-393. https://doi.org/10.1598/RRQ.39.4.2

Dong, Y., Chow, B. W. Y., Xia, G., Mo, J., & Dong, H. (2025). Contribution of Topic Background Knowledge to Language Learning Outcomes through Parent–child Dialogic Reading. *Reading Research Quarterly*, *60*(1), e608. https://doi.org/10.1002/rrq.608

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285-296. https://doi.org/10.1016/j.jbusres.2021.04.070

Elbro, C., Borstrøm, I., & Petersen, D. K. (1998). Predicting dyslexia from kindergarten: The importance of distinctness of phonological representations of lexical items. *Reading research quarterly*, *33*(1), 36-60. https://doi.org/10.1598/RRQ.33.1.3

García, O., & Kleifgen, J. A. (2020). Translanguaging and literacies. *Reading research quarterly*, *55*(4), 553-571. https://doi.org/10.1002/rrq.286

Garfield, E. (2006). Commentary: Fifty years of citation indexing. International Journal of Epidemiology, 35(5), 1127-1128. https://doi.org/10.1093/ije/dyl190

Gersten, R., & Dimino, J. A. (2006). RTI (Response to Intervention): Rethinking special education for students with reading difficulties (yet again). *Reading Research Quarterly*, *41*(1), 99-108. https://doi.org/10.1598/RRQ.41.1.5

Ghelani, K., Sidhu, R., Jain, U., & Tannock, R. (2004). Reading comprehension and reading related abilities in adolescents with reading disabilities and attention-deficit/hyperactivity disorder. *Dyslexia*, *10*(4), 364-384. doi: 10.1002/dys.285

Golenko, X., Manchha, A., Fowke, A., Johnstone, G., & Lowthian, J. A. (2024). Reading Between the Lines: An Exploratory Pilot Study of a Co-creation Approach to Life Story Work in Aged Care in Australia. *Journal of Applied Gerontology*, 07334648241274545. https://doi.org/10.1177/07334648241274545

Hermansyah, A. K., Wangid, M. N., Kusmaryani, R. E., & Mustadi, A. (2024). Bibliometric analysis: Reading and speed-reading learning in elementary school. *Journal of Language and Cultural Education*, *12*(1). doi: 10.2478/jolace-2024-0001

Hódi, Á., Tóth, E., & Nikolov, M. (2025). Interactions Among Text Formats and Reading Processes in Young Learners' L1 Reading Literacy. *Reading Research Quarterly*, *60*(1), e595. https://doi.org/10.1002/rrq.595

Hong, H. Y., & Lee, Y. H. (2023). Computer-supported knowledge building to enhance reading motivation and comprehension. *British Journal of Educational Technology, 54(*1), 375-393. https://doi.org/10.1111/bjet.13248

Hoover, W. A., & Tunmer, W. E. (2022). The primacy of science in communicating advances in the science of reading. *Reading Research Quarterly*, *57*(2), 399-408. https://doi.org/10.1002/rrq.446

Hou, J., Lee, J. F., & Doherty, S. (2024). Attentional differences in L2 learners' word learning strategies between mobile-assisted and in-print reading: An eye tracking study. *Computer Assisted Language Learning*, 1–36. https://doi.org/10.1080/09588221.2024.2434104

Huang, H.-T.D. (2023), Examining the Effect of Digital Storytelling on English Speaking Proficiency, Willingness to Communicate, and Group Cohesion. *TESOL J*, *57*: 242-269. https://doi.org/10.1002/tesq.3147

Hudson-Smith, N. V., Alvarez-Reyes, W., Yao, X., He, J., Rodriguez, R. S., Mitchell, S., ... & Haynes, C. L. (2023). NanoAdventure: Development of a Text-Based Adventure Game in English, Spanish, and Chinese for Communicating about Nanotechnology and the Nanoscale. *Journal of chemical education*, *100*(6), 2269-2280. doi:10.1021/acs.jchemed.3c00042.

Johnson, W. F., Vlach, S. K., & Leija, M. (2025). Enacting Reading Comprehension: Using Diverse Literature to Engage Children's Critical, Sociopolitical Knowledge. *Reading research quarterly*, *60*(1), e584. https://doi.org/10.1002/rrq.584

Kabuto, B. (2016). The social construction of a reading (dis) ability. *Reading Research Quarterly*, *51*(3), 289-304. https://doi.org/10.1002/rrq.135

Kaplan-Rakowski, R., & Gruber, A. (2024). An experimental study on reading in high-immersion virtual reality. *British Journal of Educational Technology*, *55*, 541–559. https://doi.org/10.1111/bjet.13392

Kendeou, P., & Trevors, G. (2012). Quality learning from texts we read: What does it take? In J. R. Kirby & M. J. Lawson (Eds.), *Enhancing the quality of learning: Dispositions, instruction, and learning processes* (pp. 251–275). Cambridge University Press. https://doi.org/10.1017/cbo9781139048224.016

Kieffer, M. J., Vukovic, R. K., & Berry, D. (2013). Roles of attention shifting and inhibitory control in fourth‐grade reading comprehension. *Reading Research Quarterly*, *48*(4), 333-348. https://doi.org/10.1002/rrq.54

Lan, X., & Yu, Z. (2022). A bibliometric review study on reading literacy over fourteen years. *Education Sciences*, *13*(1), 27. https://doi.org/10.3390/educsci13010027

Lazich, S. (2018). *An Examination of Teachers' Disciplinary Knowledge of Early Literacy Instruction*. DePaul University. https://core.ac.uk/download/pdf/232979209.pdf

Lee, J.Y., Lee, S.J., Xu, A. *et al.* (2024). Development, Acceptability, and Initial Implementation of an Interactive Text-Messaging Program for Fathers with Low Income. *Matern Child Health J* 28, 1920–1932. https://doi.org/10.1007/s10995-024-03983-7

Lepola, J., Lynch, J., Laakkonen, E., Silvén, M., & Niemi, P. (2012). The role of inference making and other language skills in the development of narrative listening comprehension in 4–6‐year‐old children. *Reading Research Quarterly*, *47*(3), 259-282. https://doi.org/10.1002/rrq.020

Leu, D. J., Forzani, E., Rhoads, C., Maykel, C., Kennedy, C., & Timbrell, N. (2015). The new literacies of online research and comprehension: Rethinking the reading achievement gap. *Reading Research Quarterly*, *50*(1), 37-59. https://doi.org/10.1002/rrq.85

Lewis, C., & Fabos, B. (2005). Instant messaging, literacies, and social identities. *Reading research quarterly*, *40*(4), 470-501. https://doi.org/10.1598/RRQ.40.4.5

Li, H., Xing, W., Li, C., Zhu, W., & Oh, H. (2024). Are simpler math stories better? Automatic readability assessment of GAI‐generated multimodal mathematical stories validated by engagement. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.13554

McInnes, A., Humphries, T., Hogg-Johnson, S., & Tannock, R. (2003). Listening comprehension and working memory are impaired in attention-deficit hyperactivity disorder irrespective of language impairment. *Journal of abnormal child psychology*, *31*, 427-443.

Meneghetti, C., Carretti, B., & De Beni, R. (2006). Components of reading comprehension and scholastic achievement. *Learning and Individual Differences, 16(4),* 291–301. doi:10.1016/j.lindif.2006.11.001

Oakhill & Cain, 2000

Moje, E. B., Ciechanowski, K. M., Kramer, K., Ellis, L., Carrillo, R., & Collazo, T. (2004). Working toward third space in content area literacy: An examination of everyday funds of knowledge and discourse. *Reading research quarterly*, *39*(1), 38-70. https://doi.org/10.1598/RRQ.39.1.4

Nagy, W., Berninger, V. W., & Abbott, R. D. (2006). Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. *Journal of Educational Psychology*, *98*(1), 134–147. https://doi.org/10.1037/0022-0663.98.1.134

Nash, K. T., Peele, R., Elson, K., Arce, A., Sumner, E., & Polson, B. (2025). Toward a Cultural Sustenance View of Reading. *Reading Research Quarterly*, *60*(1), e583. https://doi.org/10.1002/rrq.583

Pardo, L. S. (2004). What every teacher needs to know about comprehension. *The Reading Teacher, 58(3),* 272-280. https://doi.org/10.1598/RT.58.3.5

Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific studies of reading*, *11*(4), 357-383. https://doi.org/10.1080/10888430701530730

Perfetti, C., Yang, C. L., & Schmalhofer, F. (2008). Comprehension skill and word-to-text integration processes. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *22*(3), 303-318. doi: 10.1002/acp.1419

Perry, K. H. (2009). Genres, contexts, and literacy practices: Literacy brokering among Sudanese refugee families. *Reading Research Quarterly*, *44*(3), 256-276. https://doi.org/10.1598/RRQ.44.3.2

Pranckutė, R. (2021). Web of Science (WoS) and Scopus: The titans of bibliographic information in today's academic world. *Publications*, *9*(1), 12. https://doi.org/10.3390/publications9010012

Radoyevic, N. (2006). Exploring The Use Of Effective Learning Strategies to Increase Students' Reading Comprehension and Test Taking Skills (Yükseklisans Tezi). *The Brock University, St. Catharines. Ontario http://dr. library. brocku. ca/handle/10464/1466*.

Rasinski, T. V., Chang, S. C., Edmondson, E., Nageldinger, J., Nigh, J., Remark, L., ... & Rupley, W. H. (2017). Reading fluency and college readiness. *Journal of Adolescent & Adult Literacy*, *60*(4), 453-460. doi: 10.1002/jaal.559 https://ila.onlinelibrary.wiley.com/doi/pdfdirect/10.1002/jaal.559

Rose, D. S., Parks, M., Androea, K., & McMahon, S. D. (2000). Imagery-based learning: improvıng elementary students' reading comprehension with drama techniques. *The Journal of Educational Research, 94(1)*, 54-63. https://doi.org/10.1080/00220670009598742

Saiegh-Haddad, E., & Schiff, R. (2025). Diglossic and Orthographic Features of Reading Comprehension in Standard Arabic: The Primacy of the Spoken Language. *Reading Research Quarterly*, *60*(1), e598. https://doi.org/10.1002/rrq.598

Shahipanah, A., Khajavy, G. H., & Elahi Shirvan, M. (2025). The effect of textual and textual-pictorial glosses on incidental vocabulary learning in mobile-assisted listening. *ReCALL*, *37*(1), 79–95. https://doi.org/10.1017/S0958344024000193

Share, D. L. (2025). Blueprint for a universal theory of learning to read: The Combinatorial Model. *Reading Research Quarterly*, *60*(2), e603.https://doi.org/10.1002/rrq.603

Sharp, A. C., Sinatra, G. M., & Reynolds, R. E. (2008). The development of children's orthographic knowledge: A microgenetic perspective. *Reading Research Quarterly*, *43*(3), 206-226. https://doi.org/10.1598/RRQ.43.3.1

Strasser, K., & Río, F. D. (2014). The role of comprehension monitoring, theory of mind, and vocabulary depth in predicting story comprehension and recall of kindergarten children. *Reading Research Quarterly*, *49*(2), 169-187. https://doi.org/10.1002/rrq.68

Sobers, S. M., Whitehead, H. L., N'Goh, K. N. A., Ball, M. C., Tanoh, F., Akpé, H., & Jasińska, K. K. (2023). Is a phone-based language and literacy assessment a reliable and valid measure of children's reading skills in low-resource settings?. *Reading Research Quarterly*, *58*(4), 733-754. https://doi.org/10.1002/rrq.511

Sun, D., Looi, C. K., Yang, Y., & Jia, F. (2025). Exploring students' learning performance in computer-supported collaborative learning environment during and after pandemic: Cognition and interaction. *British Journal of Educational Technology*, *56*(1), 128-149. https://doi.org/10.1111/bjet.13492

Swanson, P., Bernard, M., Nozaki, M., Suzuki, K., Kawauchi, H., & Dickhoff, W. W. (1989). Gonadotropins I and II in juvenile coho salmon. *Fish Physiology and Biochemistry*, *7*, 169-176. https://link.springer.com/content/pdf/10.1007/BF00004704.pdf

Swanson, H. L., Sáez, L., & Gerber, M. (2006). Growth in literacy and cognition in bilingual children at risk or not at risk for reading disabilities. *Journal of Educational Psychology*, *98*(2), 247. doi: 10.1037/0022-0663.98.2.247

Swanson, E., Wanzek, J., McCulley, L., Stillman-Spisak, S., Vaughn, S., Simmons, D., … Hairrell, A. (2015). Literacy and Text Reading in Middle and High School Social Studies and English Language Arts Classrooms. *Reading & Writing Quarterly*, *32*(3), 199–222. https://doi.org/10.1080/10573569.2014.910718

Şimşek, B., & Direkçi, B. (2023). The effects of augmented reality storybooks on student's reading comprehension. *British Journal of Educational Technology*, *54*(3), 754-772. https://doi.org/10.1111/bjet.13293

Tang, K., Tseng, Y. H., & Tu, Y. F. (2023). Identifying mainstreams of contemporary digital reading research: insights from a co-citation network analysis and systematic review. *Interactive Learning Environments*, *32*(7), 3913–3930. https://doi.org/10.1080/10494820.2023.2192757

Team, R. C. (2019). R: a language and environment for statistical computing, version 3.0. 2. Vienna, Austria: R Foundation for Statistical Computing, 2013.

Tortorelli, L. S., Gerde, H. K., Rohloff, R., & Bingham, G. E. (2022). Ready, set, write: Early learning standards for writing in the Common Core era. *Reading Research Quarterly*, *57*(2), 729-752. https://doi.org/10.1002/rrq.436

Uccelli, P., Galloway, E. P., Barr, C. D., Meneses, A., & Dobbs, C. L. (2015). Beyond vocabulary: Exploring cross-disciplinary academic-language proficiency and its association with reading comprehension. *Reading research quarterly*, *50*(3), 337-356. https://doi.org/10.1002/rrq.104

Van den Broek, P., & Espin, CA. (2012). Connecting cognitive theory and assessment: measuring individual differences in reading comprehension. *School Psychology Review*, *41(3)*, 315-325. https://doi.org/10.1080/02796015.2012.12087512

Vretudaki, H., Angeli, A., Alexiou, P., & Diamantaki, E. (2024). Reading and creating books: Bridging the distance from stories to e-stories. *Journal of Early Childhood Research*, *22*(1), 136-148. https://doi.org/10.1177/1476718X231186616

Wright, T. S. (2011). *What classroom observations reveal about oral vocabulary instruction in kindergarten* (Doctoral dissertation, University of Michigan). https://doi.org/10.1002/RRQ.026

Yi, H., Mo, D., Wang, H., Gao, Q., Shi, Y., Wu, P., ... & Rozelle, S. (2019). Do resources matter? Effects of an in-class library project on student independent reading habits in primary schools in rural China. *Reading Research Quarterly*, *54*(3), 383-411. https://doi.org/10.1002/rrq.238

Yu, L., & Cai, L. (2025). Contemporary American Literature in Distance Learning: Creating Reading Motivation and Student Engagement. *Reading Research Quarterly*, *60*(2), e609. https://doi.org/10.1002/rrq.609

Yueh, H. P., Lin, W., Wang, S. C., & Fu, L. C. (2020). Reading with robot and human companions in library literacy activities: A comparison study. *British Journal of Educational Technology*, *51*(5), 1884-1900. https://doi.org/10.1111/bjet.13016

Zhang, P. (2024). Effects of highlights and annotations on EFL learners' Reading comprehension: an application of computer-assisted interactive reading model. *Computer Assisted Language Learning*, 1–33. https://doi.org/10.1080/09588221.2024.2410166

Qiao, S., Yeung, S. S. S., Zainuddin, Z., Ng, D. T. K., & Chu, S. K. W. (2023). Examining the effects of mixed and non-digital gamification on students' learning performance, cognitive engagement and course satisfaction. *British Journal of Educational Technology*, *54*(1), 394-413. https://doi.org/10.1111/bjet.13249