

Analysing ‘qualitative survey’ researches in the field of education with bibliometric methods

Hatice Turan Bora* 

Başkent University, Educational Sciences, Ankara, Türkiye, haticeturan@baskent.edu.tr

Sadegül Akbaba Altun 

Başkent University, Educational Science Ankara, Türkiye, akbabasl@gmail.com



*Corresponding Author

ABSTRACT Inspired by the evolving nature of qualitative research, this study aims to examine the use of “qualitative survey”, a newer technique in qualitative data collection methods than interviews and observation. In addition to trends in research capacity, collaborations and research topics, the extent to which this data collection method has become widespread or accepted among researchers can provide insight into the future of this method. In this study, 743 studies published in the field of education between 1992 and 2024 from the Web of Science database were analysed. Web of Science database was searched with the keywords qualitative survey, qualitative questionnaire, open-ended questionnaire and open-ended survey. The results indicate a steady increase in the use of qualitative surveys as a data collection tool in educational research. After 2005, the number of publications has increased significantly. The countries with the highest number of publications and international co-operation are the USA, Türkiye and Australia. The most common keywords were higher education and teacher education. The analysis also revealed findings such as the most published authors, journals, publishers, most cited authors and articles.

Keywords: *Bibliometric analysis, Open-ended questionnaire, Qualitative survey, VOSviewer, Web of Science (WoS)*

Eğitim alanındaki 'nitel anket' araştırmalarının bibliyometrik yöntemlerle analizi

ÖZ Nitel araştırmanın gelişen doğasından esinlenen bu çalışma, nitel veri toplama yöntemlerinde görüşme ve gözleme göre daha yeni bir teknik olan “nitel anket” kullanımını incelemeyi amaçlamaktadır. Araştırma kapasitesi, işbirlikleri ve araştırma konularındaki eğilimlerin yanı sıra bu veri toplama yönteminin araştırmacılar arasında ne ölçüde yaygınlaştığı veya kabul gördüğüne bakmak, bu yöntemin geleceği hakkında fikir verebilecektir. Araştırmada Web of Science veri tabanından 1992-2024 yılları arasında eğitim alanında yayınlanmış 743 çalışma analiz edilmiştir. Web of Science veri tabanında nitel anket, açık uçlu anket ve açık uçlu soru formu anahtar kelimeleri ile arama yapılmıştır. Sonuçlar, nitel anketlerin eğitim araştırmalarında veri toplama aracı olarak kullanımında istikrarlı bir artış olduğuna dikkat çekmektedir. Özellikle 2005 yılından sonra yayın sayısı belirgin şekilde artmıştır. En çok yayın yapan ve uluslararası işbirliği kuran ülkeler ABD, Türkiye ve Avustralya’dır. En yaygın anahtar kelimeler yükseköğretim ve öğretmen eğitimi olmuştur. Analiz ayrıca en çok yayın yapan yazarlar, dergiler, yayıncılar, en çok atıf alan yazarlar ve makaleler gibi bulguları da ortaya koymuştur.

Anahtar Sözcükler:

Açık uçlu anket, Bibliyometrik analiz, Nitel anket, Web of Science (WoS), VOSviewer

Citation: Turan Bora, H., & Akbaba Altun, S. (2025). Analysing ‘qualitative survey’ researches in the field of education with bibliometric methods. *Turkish Journal of Education*, 14(2), 193-212.
<https://doi.org/10.19128/turje.1583238>

INTRODUCTION

Although qualitative research has existed for over a century, it was not until the late 1960s that the first text attempting to define its methodology appeared. The *Discovery of Grounded Theory: Strategies for Qualitative Research* by Glaser and Strauss (1967) is considered the first contribution to qualitative methodology. Qualitative data is valued in fields such as history, anthropology, and politics for finding meaning in words rather than numbers. In the last 15 years, it has also attracted researchers from disciplines such as psychology, sociology, education, and organizational studies (Miles & Huberman, 1994). Since the 1980s, the number of qualitative studies has increased considerably. The number of books, articles and academic publications reviewed in the second edition of Miles and Huberman's (1984) book on qualitative data analysis has more than tripled since the first edition (Miles & Huberman, 1994), indicating a rapid change. The field of qualitative research is expanding and enriching every day, as evidenced by the increase in the number and quality of books dedicated to the subject and their constant updates with each new edition (e.g. Creswell, 1998; Denzin & Lincoln, 1994; Maxwell, 2005; Merriam, 2009; Patton, 2002; Strauss, & Corbin, 1990). In addition, there are journals dedicated to qualitative research (e.g. *Qualitative Research*, *Qualitative Report*, *Qualitative Inquiry*). The number of qualitative studies in the WoS database in the last decade (2014-2024) is almost four times higher than in the previous decade (2003-2013) (Web of Science [WOS], 2024).

One of the strengths of qualitative research is the diversity of perspectives of researchers using the method or theorists making methodological contributions to the field, leading to a variety of data collection methods. These methods comprise interviews, observations, and document analysis (Merriam, 2009; Miles & Huberman, 1994; Patton, 2002). According to different perspectives, qualitative data collection methods can be divided into five categories: collaborative, interview, naturalistic, observational and structured (Madill & Gough, 2008). Qualitative questionnaires are a form of structured data collection and have been widely used in recent years. Yet there are also traditional qualitative theorists who, when they see the words 'qualitative' and 'survey' side by side, criticise this as being contrary to the nature of qualitative work. These theorists are reminiscent of traditional quantitative theorists who see quantitative research as the only scientific method.

History of Qualitative Method

The positivist paradigm has had a major impact on the development of the scientific world since the 19th century. The positivists sought to formalise science with the concepts of reliability, validity and generalisability. The impact of the continued dominance of positivist epistemology on the methodology of the social sciences has been particularly evident in the use of 'quantitative' research techniques. Quantitative research aims to analyse data numerically in order to test theory, causality and generalisation.

There are paradigmatic approaches that are critical of the positivist paradigm. Guba and Lincoln (1994) categorised them as post-positivism, critical theory and constructionism. Glesne (2016) proposes the use of interpretivist, critical, and post-structuralist approaches. Similarly, Miles and Huberman recommend three approaches: Interpretivism, social anthropology and collaborative social research (1994). Ontology and epistemology are important perspectives in revealing the differences between scientific paradigms. Ontology refers to the nature of reality and beliefs about reality, while epistemology refers to the nature of knowledge and knowing. Whereas the ontological perspective of post-positivist paradigms states that 'reality cannot be fully understood' or 'there is more than one reality', the epistemological perspective states that 'reality can be approached' and 'knowledge can be constructed'. (Hatch, 2002). Qualitative methodology has emerged as the research method from these post-paradigms. Qualitative researchers seek answers to questions that emphasise how social experience is created and made meaningful (Kuş, 2007).

Over the last thirty years in particular, the shift from the quantitative to the qualitative research tradition in the social sciences can be seen as a 'paradigmatic shift' from the positivist paradigm to alternative

paradigms. In qualitative research, social phenomena can be understood in depth with an experiential way of thinking. As Denzin and Lincoln (1994) note, the term 'qualitative' focuses on meanings and processes that cannot be precisely tested or measured in terms of quantity, range, intensity or frequency. Qualitative research, like quantitative research, deals with data, and Table 1 provides a categorisation of qualitative data collection techniques. The validity/reliability of data in qualitative research has always been at the centre of debate. In addition to observation and interviews, documents have been and continue to be seen as the most appropriate types of data for the researcher to explore in depth the experiences of participants and the meanings they attach to situations. However, the evolving nature of qualitative research allows for a diversity of data. According to Glesne (2016);

There are laws or theories should be tested, verified and corrected in order for us to understand the world. Therefore, researchers start their studies with a theory, collect data to support or disprove the theory, make the necessary corrections and develop additional tests if necessary.

Table 1.
Methods of Collecting Qualitative Data

Procedural Categorisation	Qualitative Method
Interview	Biographical
	Ethnographic
	Focus group
	Narrative
	Semi-structured
	Telephone
Observational	Unstructured
	Field notes
	Observation
Structured	Participant observation
	Open-ended questionnaires
	Protocols
	Repertory grids

Adapted from Madill & Gough (2016)

Qualitative Survey

Qualitative questionnaires, also known as qualitative surveys, consist of a set of open-ended questions that are prepared by a researcher and focused on a specific topic. Participants reveal their experiences, narratives, practices and discourses subjectively in their own words, and these responses provide researchers with a rich and intensive data pool. (Braun & Clarke, 2013). This qualitative data captures the participants' priorities and uses their language and terminology in the context of the researcher's interests, thereby creating two important advantages of qualitative research (Frith & Gleeson, 2011). Open-ended questionnaires enable qualitative responses rather than quantitative ones, but with little or no change in format to allow the researcher or respondent to take unexpected paths or challenge the way questions are asked (Madill and Gough, 2008).

In his Survey Handbook, Fink (2003, p. 61) recommends using qualitative surveys to explore meanings and experiences. Qualitative surveys, such as the interview method commonly used in phenomenological studies, seek to collect data from individuals who participate in the research due to their experiences. While quantitative surveys aim for statistical representativeness, data quality and accuracy of estimates, qualitative surveys aim to identify the diversity of particular interests within a given population, revealing the meaningful variation of people with the same characteristics within that population (Jansen, 2010). An important advantage of qualitative surveys, which are also suitable for online use, is that they offer openness and flexibility to address a wide range of research questions of interest to researchers. This is because they allow access to data at various intervals. However, qualitative surveys may be appropriate in certain situations, such as when seeking respondents' views on sensitive issues, reaching people who are dispersed or difficult to engage, taking a broad view of the

topic (Braun et al., 2021), or when time constraints exist for the research. During the COVID-19 pandemic, there has been an increase in the use of qualitative surveys when face-to-face interviews are not possible (e.g. Ahmad et al, 2023). Researchers tend to see qualitative surveys as a workaround when interviews cannot be conducted. However, when the above advantages of the qualitative questionnaire are evaluated, they can be seen as a reliable qualitative data collection method rather than a mandatory method to be used when interviews cannot be conducted.

Purpose and Importance

It is crucial to have detailed information about the studies that used qualitative questionnaires in order to understand the place of this data collection method in the field and to give us an idea of its future use. This is because scientific and technological developments have the potential to alter researchers' perspectives. With the post positivist paradigm, more flexible practices are seen in research methods. Especially the qualitative method, with its nature that allows different data collection and analysis methods, allows researchers to reveal their creativity. Showing educational researchers and readers in the field the use of a data collection method that can be seen as partially new in qualitative research in articles published in qualified journals can draw attention to diversity and innovation, as well as make them see this method as an option.

This study aims to examine the use of qualitative surveys as a data collection tool by researchers. Publication and citation trends are two performance indicators of a discipline. The following questions will be answered in examining the articles in which the qualitative survey was used:

1. What is the distribution of studies by years?
2. What is the distribution of studies according to countries?
3. What are the top 15 journals by total number of publications from 1992 to 2024?
4. What are the main publishers of journals?
5. What are WoS Journal Indexes?
6. What is the distribution of author affiliations?
7. What is the citation graph of the articles?
8. What are the most cited articles?
9. What are the most used keywords?
10. Who are the most cited authors (co-citation analysis)?
11. How is the research's topical structure?
12. How is the co-authorship of countries?

METHODOLOGY

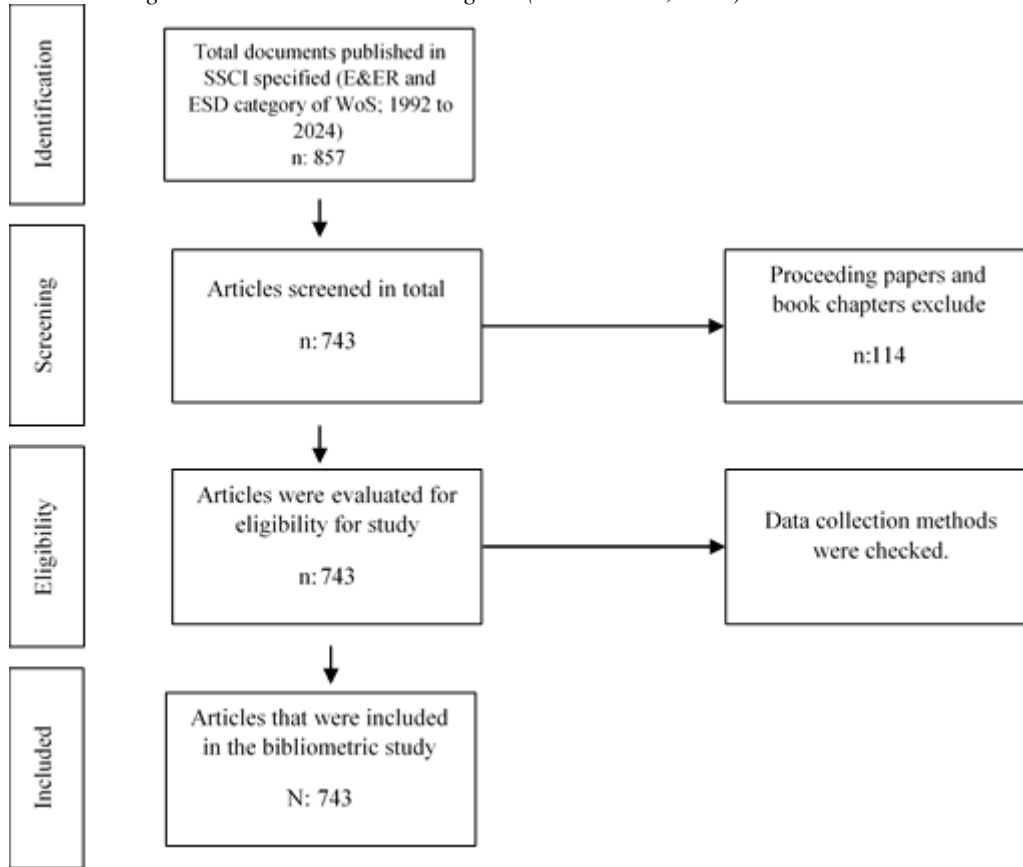
The bibliometric method is a quantitative approach that helps to identify and analyse published research in the field. This method provides clear and systematic review procedures, enabling more holistic and clear reviews, as well as value in mapping the research field (Zupic & Cater, 2015, p. 429). Undoubtedly, one of the most important indicators for comparing scientific productivity across countries and cultures is scientific publications. Scientific publication indexes constitute a large and qualified pool for bibliometric analysis. This text-mining application utilised the WoS database, which is recognised as one of the most significant international indexes for high-impact journals.

The WoS database was searched for articles in the field of education (Education & Educational Research and Education Science). The keywords "qualitative questionnaire", "qualitative survey", "open-ended survey", and "open-ended questionnaire" were searched in the WOS database by selecting the "topic" field. The methodological sections of the articles were examined to determine if any of the terms 'qualitative questionnaire', 'open-ended questionnaire' or 'open-ended survey' were used as a data collection tool. Articles that did not use any of these terms were excluded. The initial search yielded a

total of 857 articles. After reviewing the data collection instruments, the number of articles was reduced to 743. Figure 1 summarises the selection of articles from the WoS database.

Figure 1.

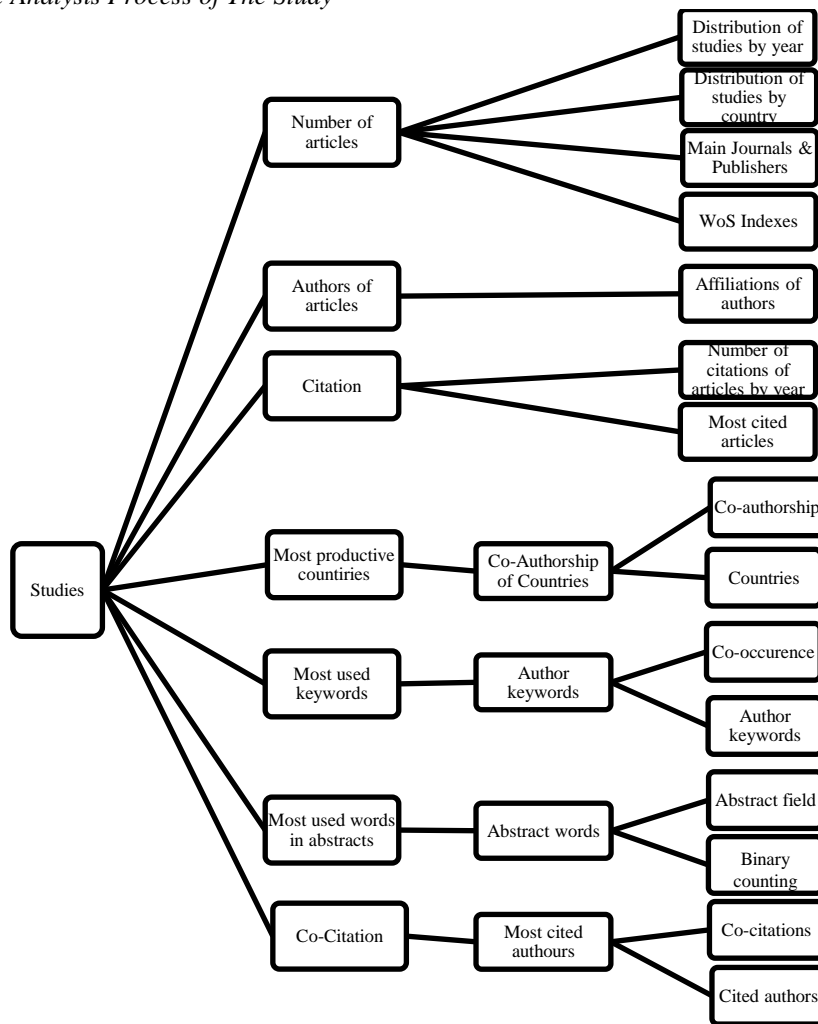
Article Selection Progress with PRISMA Flow Diagram (Moher et al., 2009)



Data Analysis

The articles from WoS were stored in plain text format. The year of publication and the authors' countries were included, along with the most cited articles from the WoS analyses. VOSviewer was used to identify co-authorship and co-occurrence of author keywords. The use of mapping techniques in bibliometric analysis is common (Van Eck & Waltman, 2014). According to Van Eck et al. (2008), the VOS technique shows the best performance for distance-based mapping. This bibliometric analysis study reveals the number of articles published over the years, the most used keywords, the most productive authors and countries, the most published journals and publishers, and the most cited authors. The bibliometric analysis process is summarised in Figure 2.

Figure 2.
Bibliometric Analysis Process of The Study

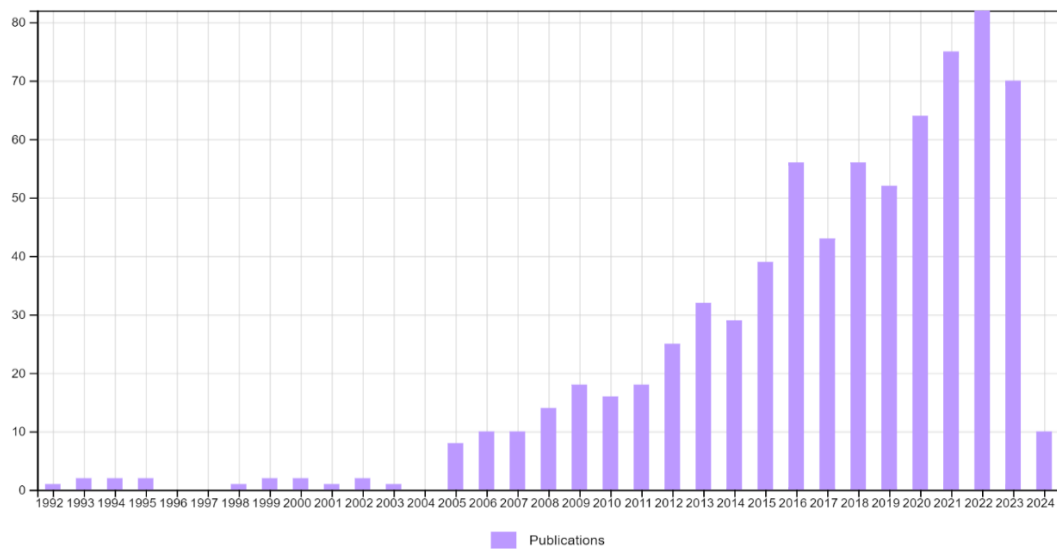


The analysis of the number of articles (year, country, journals, publishers, indexes), author affiliations and article citations were carried out using Excel, while those of country co-authorship, author keywords and abstract words, and co-citation were analysed using VOSviewer.

RESULTS

Figure 3, which illustrates the frequency of articles by year, indicates that the number of articles has increased since 2005. This increase may be attributed to the widespread use of qualitative research methods.

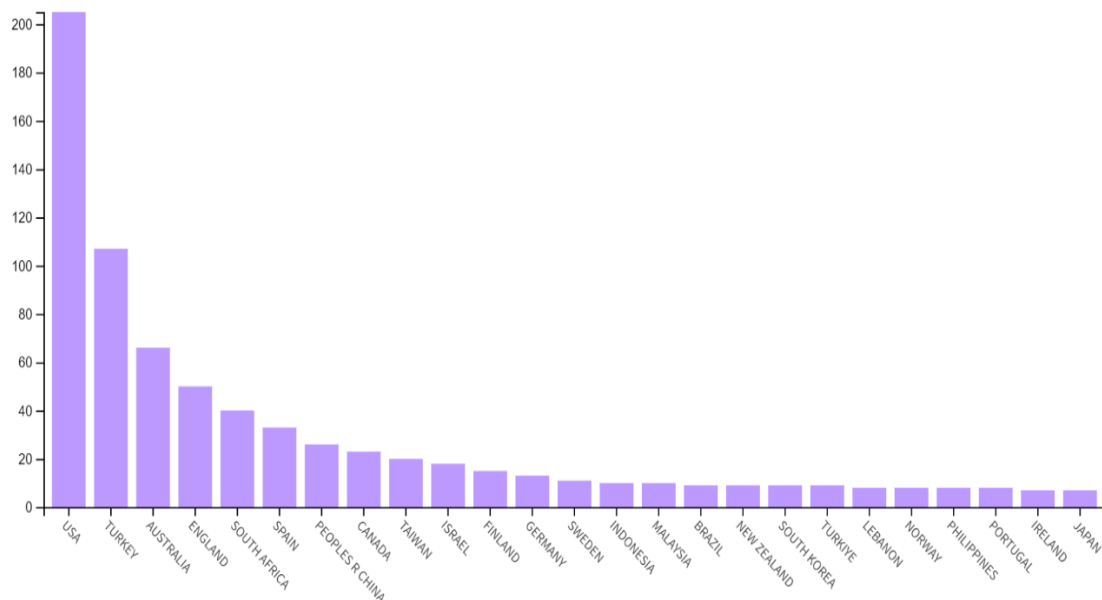
Figure 3.
Distribution of Studies by Year



Geographical Distribution

743 articles originate from 81 countries. The United States of America is the most productive country ($n = 205$, 27%), followed by Türkiye ($n = 107$, 14%), Australia ($n = 66$, 9%), the United Kingdom ($n = 50$, 7%), and South Africa ($n = 40$, 5%).

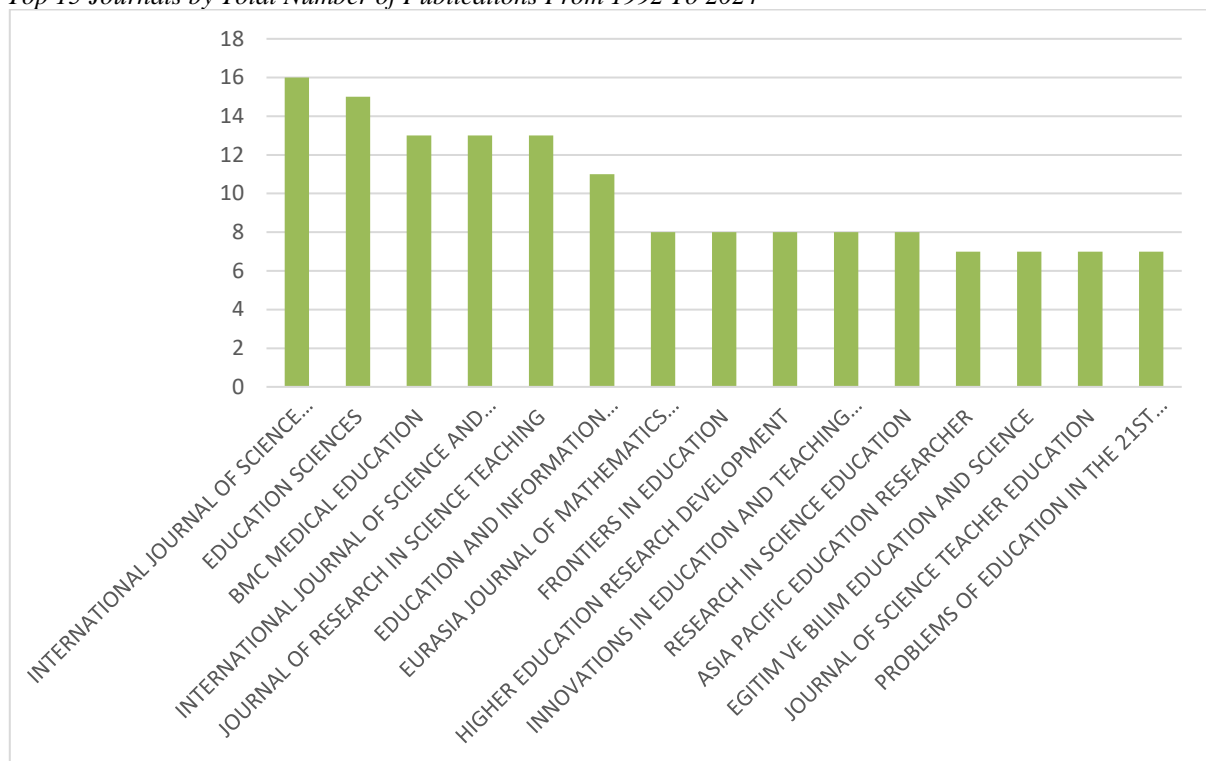
Figure 4.
Distribution of Studies by Country



Main Journals

Figure 5 presents the journals in which the articles were published between 1992 and 2024. The figure illustrates the journals with the highest number of publications. The following journals were included within this group: International Journal of Science Education ($n=16$), Education Sciences ($n=15$), BMC Medical Education ($n=13$), International Journal of Science and Mathematics Education ($n=13$), Journal of Research in Science Teaching ($n=13$), Education and Information Technologies ($n=10$), Frontiers in Education ($n=8$), and Higher Education Research Development ($n=8$).

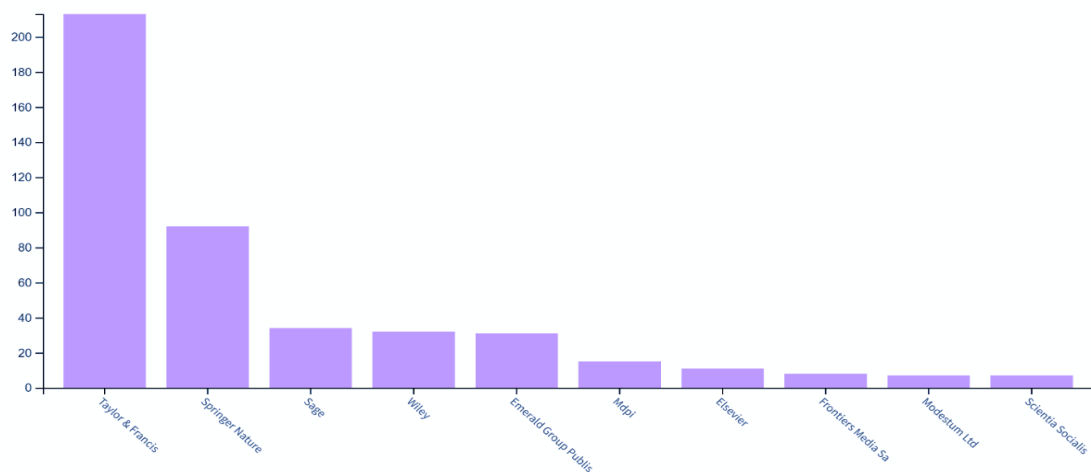
Figure 5.
Top 15 Journals by Total Number of Publications From 1992 To 2024



Main Publishers

Figure 6 shows the publisher distribution of the journals in which the articles were published. Overall, Taylor & Francis (n=213, 28%), Springer Nature (n=92, 12%), Sage (n=34, 4%), Wiley (n=32, 4%) and Emerald Group (n=31, 4%) are the publishers of the journals with the most publications.

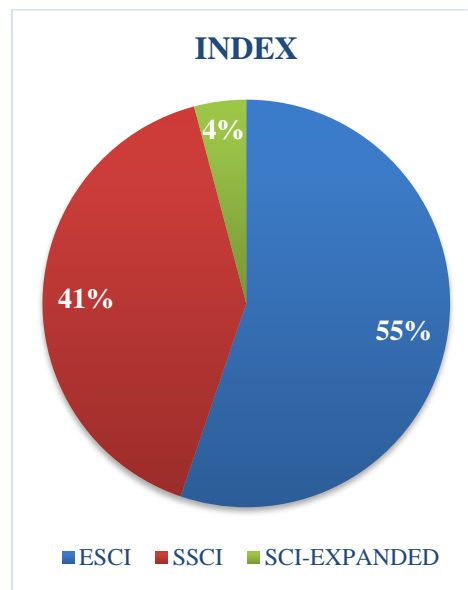
Figure 6.
Main Publishers of Journals



WoS Index

Figure 7 shows the distribution of journals based on WoS indexes. The majority of journals were indexed in Emerging Sources Citation Index (ESCI) (n=428, 58%), followed by Social Sciences Citation Index (SSCI) (n=315, 43%) and Science Citation Index Expanded (SCI-EXPANDED) (n=32, 4%).

Figure 7.
WoS Indexes of Journals



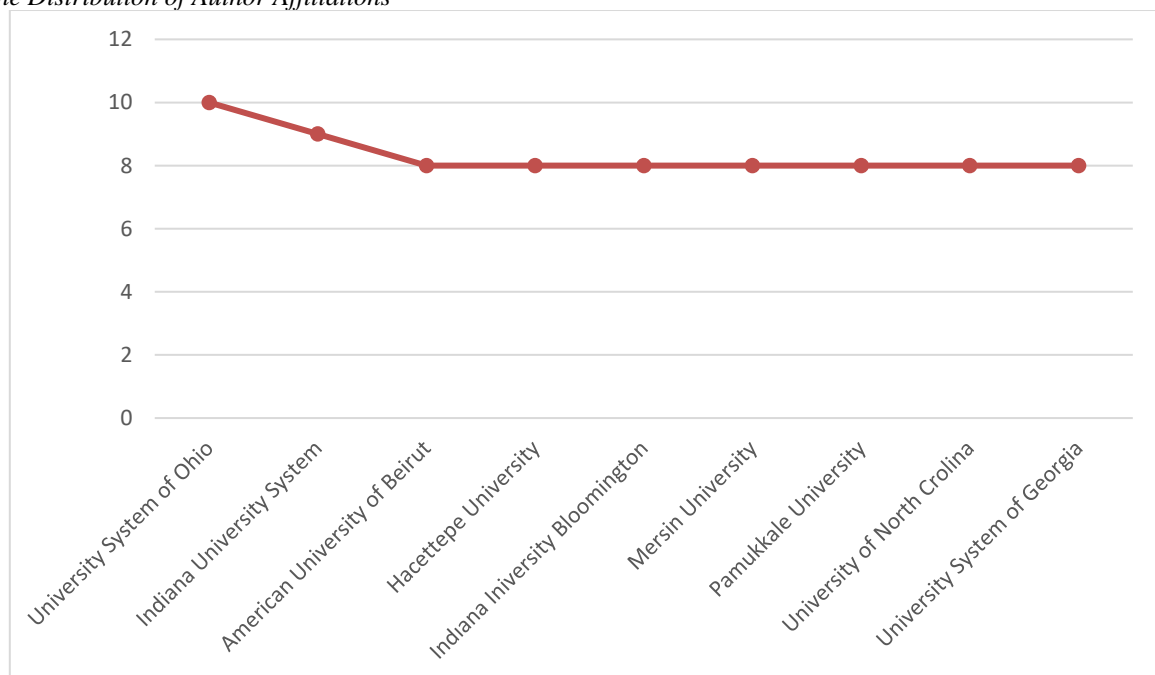
Affiliations

Figure 8 depicts the distribution of author affiliations: University System of Ohio (n=10); Indiana University System (n=9); American University of Beirut, Hacettepe University, Indiana University Bloomington, Mersin University, Pamukkale University, University of North Carolina, University System of Georgia (n=8).

Figure 8

The distribution of author affiliations

Figure 8.
The Distribution of Author Affiliations



Citation

Figure 9 presents the citation graph for articles. It is notable that although the number of citations increased along with the number of publications, the number of citations increased more significantly after 2019.

Figure 9.
The Citation Graph of The Articles

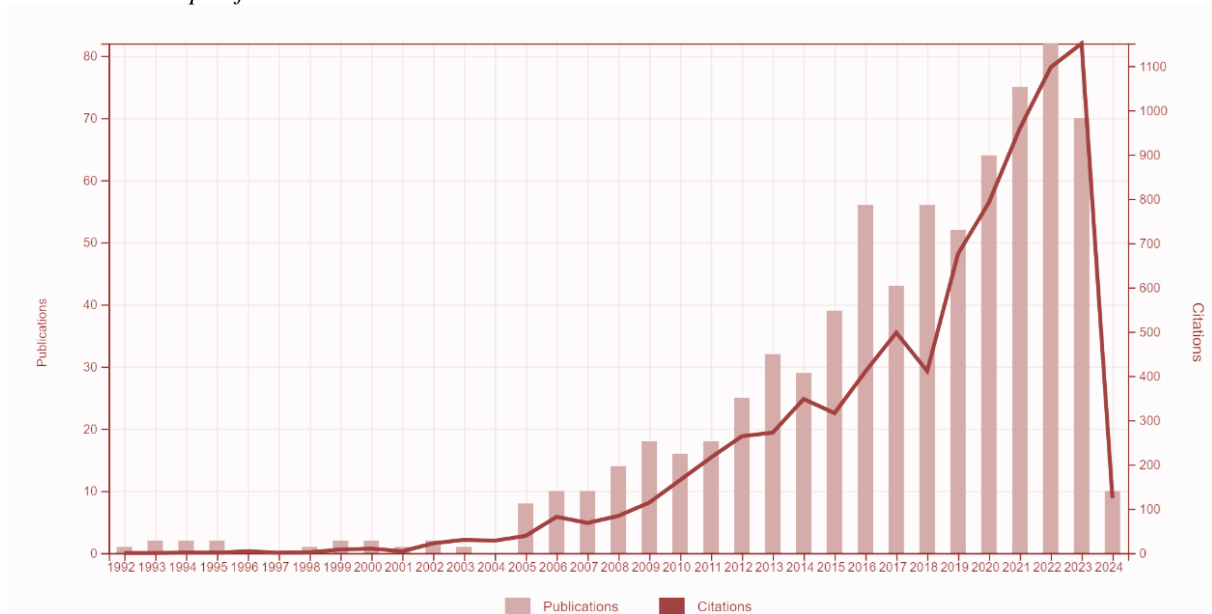


Table 2 shows the most frequently cited articles. The most cited article published by Science Education is the article on the nature of science and teaching practices by Abd-El Khalick et al. (1998). The second most cited article is the one by Khishfe & Khalick (2002) on evaluating the effect of explicit and reflective teaching on the formation of students' views about the nature of science. The third most cited article is by Khalick & Lederman (2000) on the impact of the history of science courses. Following this, the fourth most cited article is on teaching the nature of science by Khishfe & Lederman (2006), and the fifth most cited article is by Blase & Blase (1999) on school leadership and teacher development.

Table 2.
Most Cited Articles

Rank	Title	Author and Year	Journal	Total of citations	Citation average
1	The nature of science and instructional practice: Making the unnatural natural	Abd-El-Khalick, F.; Bell, RL; & Lederman, N.G. (1998)	Science Education	483	17.89
2	Influence of explicit and reflective versus implicit inquiry-oriented instruction on sixth graders' views of the nature of science	Khishfe, R.; & Abd-El-Khalick, F. (2002)	Journal of Research in Science Teaching	414	18
3	The influence of the history of science courses on students' views of the nature of science	Abd-El-Khalick, F., & Lederman, N.G. (2000)	Journal of Research in Science Teaching	290	11.6
4	Teaching nature of science within a controversial topic: Integrated versus nonintegrated	Khishfe, R. & Lederman, N. (2006)	Journal of Research in Science Teaching	163	8.58

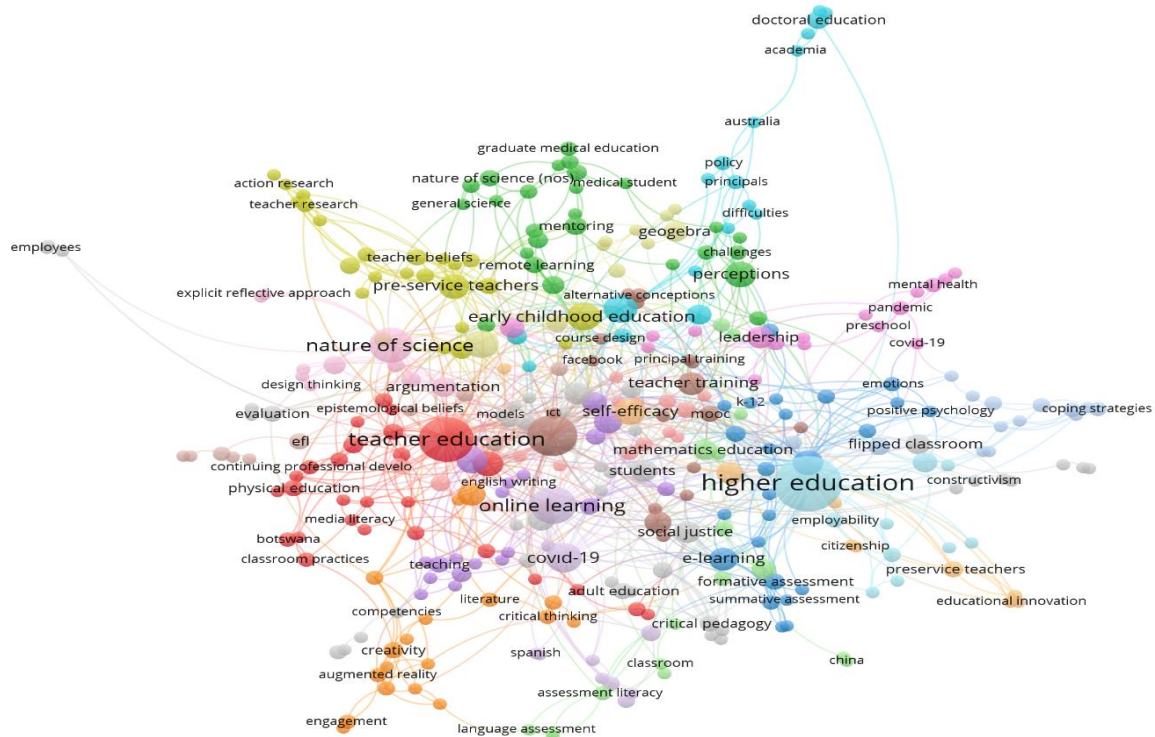
Table 2. (Continued)
Most Cited Articles

Rank	Title	Author and Year	Journal	Total of citations	Citation average
5	Principals' instructional leadership and teacher development: Teachers' perspectives	Blase, J., & Blase, J. (1999)	Educational Administration Quarterly	163	6.27
6	From the Horse's Mouth: What Scientists Say About Scientific Investigation and Scientific Knowledge	Wong, S. L., & Hodson, D. (2009)	Science Education	144	9
7	Developing and acting upon one's conception of the nature of science: A follow-up study	Bell, R.L.; Lederman, N.G.; & Abd-El-Khalick, F. (2000)	Journal of Research in Science Teaching	144	5.76
8	I've decided to become a teacher': Influences on career change	Richardson, P.W., & Watt, H.M.G. (2005)	Teaching and Teacher Education	143	7.15
9	Student behavior patterns contributing to teacher burnout	Friedman, I.A. (1995)	Journal of Educational Research	133	4.43
10	Subject-matter knowledge and pedagogical content knowledge - prospective secondary teachers and the function concept	Even, R. (1993)	Journal for Research in Mathematics Education	131	4.09
11	How and what university students learn through online and face-to-face discussion: conceptions, intentions and approaches	Ellis, R. A., Goodyear, P., Prosser, M., & O'Hara, A. (2006)	Journal of Computer Assisted Learning	110	5.79

Most Used Keywords

A total of 743 articles were included, with 364 of the author's keywords. Figure 10 illustrates the results of the cluster analysis generated by VOSviewer, comprising the dynamic change and network map. Figure 10 shows the most frequently used keywords, including 'higher education' (n=45), 'teacher education' (n=30), 'professional development' (n=25), 'online learning' (n=20), 'nature of science' (n=18), 'COVID-19' (n=13), 'early childhood education' (n=11), 'self-efficacy' (n=10), 'teachers' (n=11), 'pre-service teachers' (n=10), and 'perceptions' (n=10).

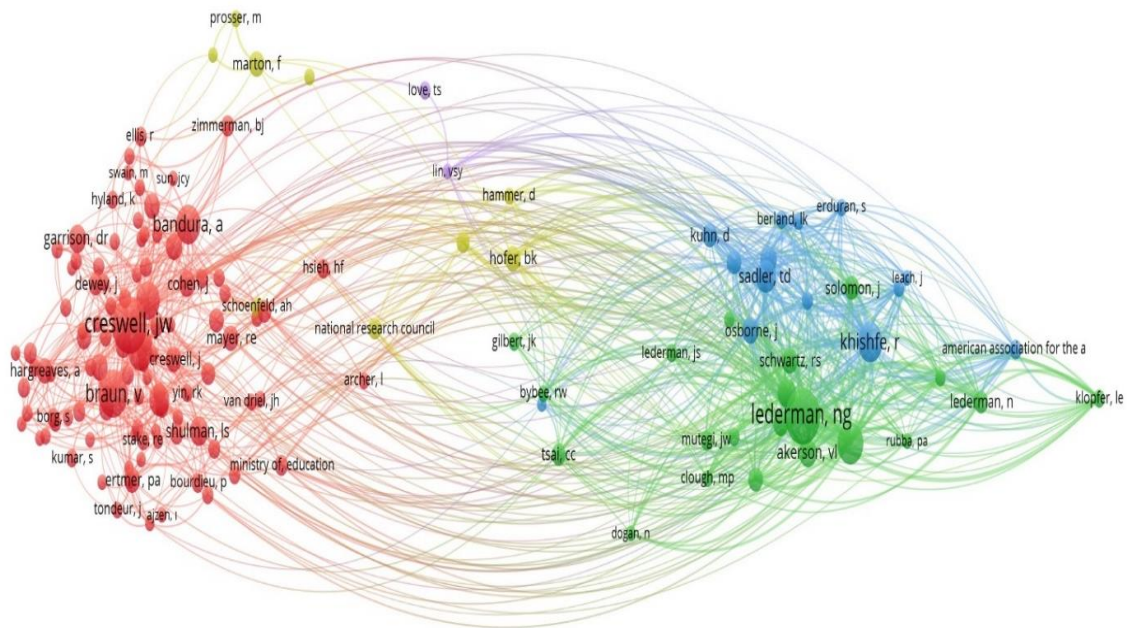
Figure 10.
The Most Used Keywords



Most Cited Authors/Co-Citation Analysis

The results of the co-citation analysis are presented in Figure 11 (the minimum number of citations is 10). Creswell, J.W. and Lederman, N.G. were the most co-cited authors, with 122 citations each.

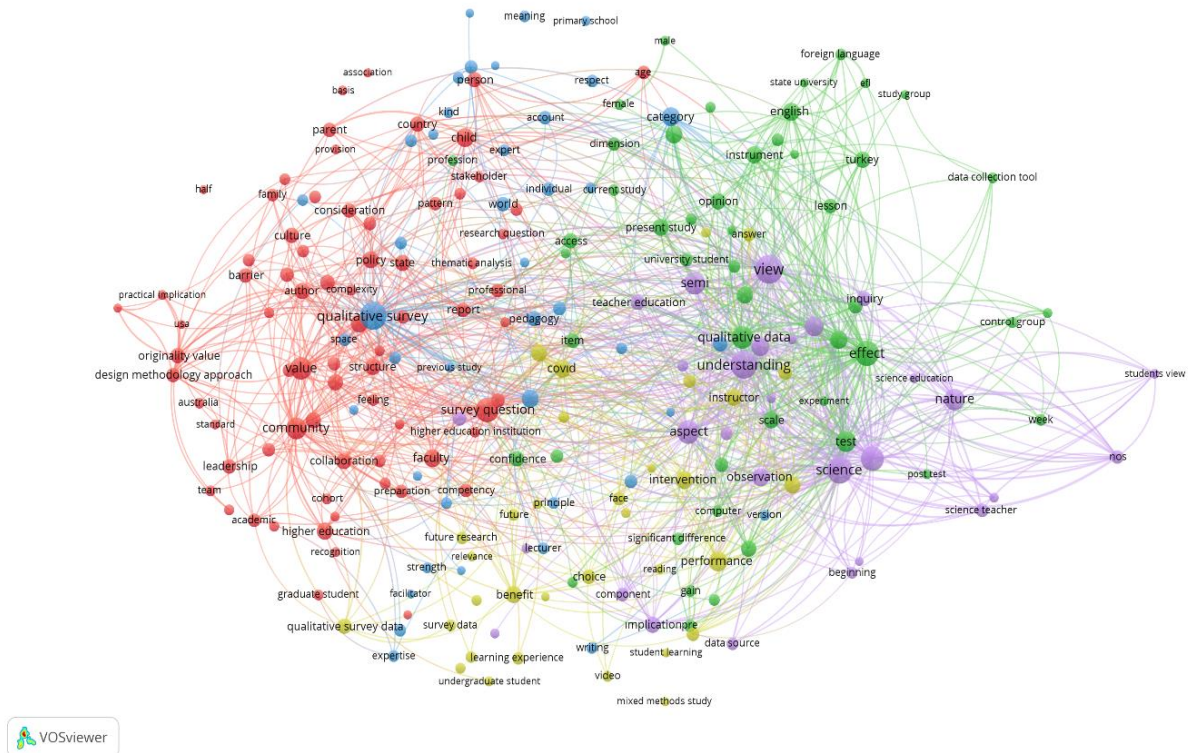
Figure 11.
The Most Cited Authors (Co-Citation Analysis)



Research's Topical Structure

For co-occurrence mapping, we applied the binary counting option in VOSviewer, set the minimum frequency threshold to 10 and used the relevance score for the analysis. This option means that the software selects the most relevant terms (the relevance score was calculated for 379 terms and the most relevant terms were selected according to this score. The default choice is to select the 60% most relevant terms). The most frequently used terms were 'view' (n=108), 'understanding' (n=96), 'science' (n=91), 'effect' (n=82), 'survey question' (n=73), and 'qualitative data' (n=65).

Figure 12.
Term Co-Occurrence Map

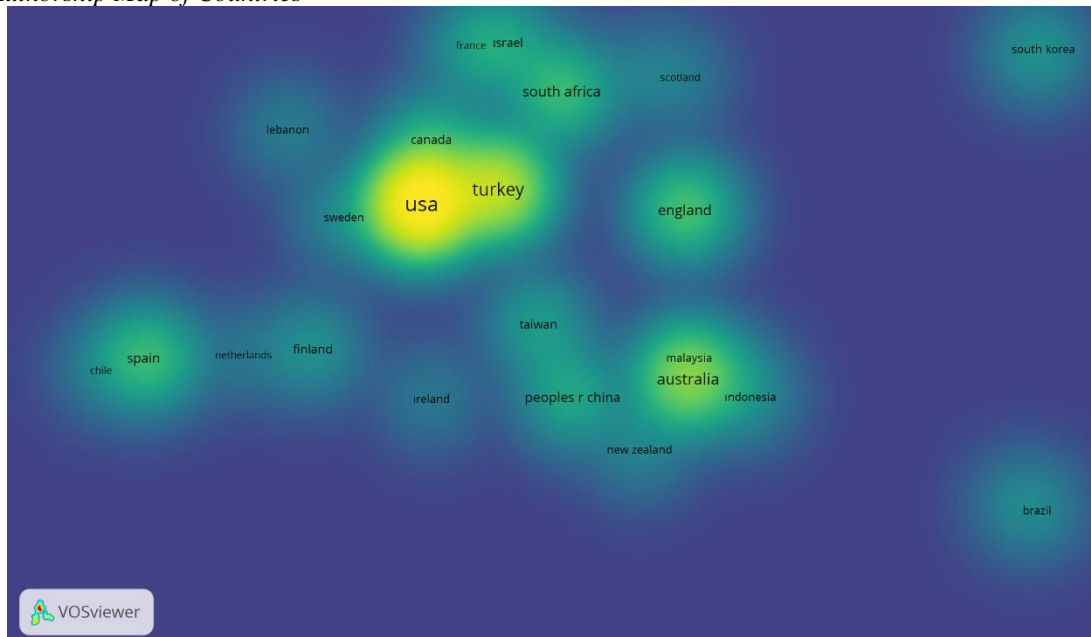


Co-Authorship of Countries

To assess international relations, we analysed co-authorship by country. We set the minimum number of documents in a country at 5 and obtained 36 collaborations. The collaboration patterns are primarily influenced by the most productive countries. Based on the number of papers and reviews published, American researchers are the most productive. Overall, the countries with the highest productivity in this field are the USA (205 documents, 4063 citations), Türkiye (107 documents, 752 citations), Australia (66 documents, 953 citations), the United Kingdom (46 documents, 491 citations) and South Africa (39 documents, 162 citations).

Figure 13.

Co-Authorship Map of Countries



DISCUSSION

In this study, we have used bibliometric analysis to delineate the contours of educational research through a 'qualitative survey', to examine trends in the field, and to show collaborations. In other words, we have attempted to demonstrate research trends and capacities through quantitative data. It is important to note that our analysis is limited to the WoS database and therefore may not represent the entirety of research in this field. The number of published studies is the main indicator of research capacity. Since 2005, there has been a significant increase in the number of studies that use qualitative surveys. This increase can be attributed to the intensive development of journalism, the increase in the number of journals indexed in the WoS database, more grant support for researchers, and increased expectations of universities from academics for academic publication performance. Furthermore, the change in the paradigm of scholarship supporting qualitative research over the last 20 years may also be a reason for this increase. Also, the fact that articles are mostly written in English has enabled articles to reach more researchers and global collaborations to take place. This may be another reason for the increase in research capacity. Overall, the 743 articles included in the bibliometric analysis were written by authors from 81 different countries. The most productive countries were the United States of America ($n = 205$, 27%), followed by Türkiye ($n = 107$, 14%), Australia ($n = 66$, 9%), the United Kingdom ($n = 50$, 7%) and South Africa ($n = 40$, 5%). It is possible to predict that countries whose first language is English will have a higher publication capacity than those whose first language is not English. The fact that Türkiye ranks second here is in parallel with the fact that it ranks high in all of the articles written in the field of education in the WoS database (WoS, 2024).

Between 1992 and 2024, the two journals with the highest number of articles were the International Journal of Science Education ($n=16$) and Education Sciences ($n=15$). The International Journal of Science Education, which has the highest number of publications, is indexed in SSCI and has an impact factor of 2.3 (Q3 rank). Education Science, which has the second highest number of publications, is indexed in ESCI and has an impact factor of 3 (Q1 rank) (WoS, 2002). According to Azer and Azer (2019), journals with a high impact factor are generally considered to be more important and of higher quality, and that highly cited articles can serve as an indicator for researchers to follow and improve the direction of their research, leading to greater impact. Hence, the greater number of publications in high-impact journals indicates that researchers who use the 'qualitative survey' method tend to favour such

journals.

It is seen that the majority of the journals in which 743 articles analysed from the WoS database are published are published by Taylor & Francis (n=213, 28%). Springer Nature (n=92, 12%) is followed by Springer Nature (n=92, 12%). This distribution is likely to be influenced by the journal capacities of the publishers. In the WoS database, 13% of the publications in the field of education were published in journals affiliated with Taylor & Francis, 7% in Springer Nature and 6% in Wiley. When the journals publishing the articles are analysed according to the WoS indexes, the distribution is as follows: Emerging Sources Citation Index (ESCI) (n=428, 58%); Social Sciences Citation Index (SSCI) (n=315, 43%); and Science Citation Index Expanded (SCI-EXPANDED) (n=32, 4%).

The distribution of authors' institutions is homogeneous, with a similar number of researchers from different universities having publications. The institutions with the highest number of publications are University System of Ohio (n=10), Indiana University System (n=9), American University of Beirut, Hacettepe University, Indiana University Bloomington, Mersin University, Pamukkale University, University of North Carolina, and University System of Georgia (n=8). This distribution is directly related to the capacity of the country. The most cited article in Science Education is the article on the nature of science and teaching practices by Abd-El Khalick et al. (1998) with 483 citations. The second most cited article is the article by Khlisde & Khalick (2002) with 414 citations, which evaluated the effect of explicit and reflective teaching on the formation of students' views about the nature of science.

As suggested by Chen et al. (2020), keyword analysis can assist academics in identifying relevant research trends, and the most frequently used keywords indicate the most popular topics of study. In the analysis of 364 keywords and their links, the most common keywords are higher education, teacher education, professional development and online learning. In addition to the authors' keywords, the most frequently used words in the abstracts of the studies were also analysed. The terms 'view', 'qualitative research', 'understanding', 'science', 'impact', 'survey question', and 'qualitative data' are most frequently used. It is an expected result that the terms about research method and data collection tool are common.

International research collaboration has increased significantly since the 1980s, when globalisation and communication created opportunities for researchers to build relationships outside their home countries or regions. Collaborative networks are associated with more efficient research production and spread of research knowledge (Munoz et al., 2016). International collaboration can help researchers in one country to access supplementary knowledge outside their own country (Bikard et al., 2015). It has been suggested that research collaborations and linkages are useful for understanding evolutionary themes and paradigm shifts in a field over time (Chen & Leydesdorff, 2014). The most frequently cited authors in the articles analysed in the current study were Creswell, J.W. (122 citations) and Lederman, N.G. (122 citations). The references to Creswell are related to the research method. The intensity of the studies in the field of science education explains the references to Lederman.

International co-operation helps to obtain better research evidence and can lead to excellence in research. The most productive global author co-operation has been with the USA, followed by Türkiye, Australia, United Kingdom and South Africa. According to Mutimukuru-Maravanyika (2022), researcher collaborations increase new awareness of one's own and others' perspectives; lead to enquiry; provide synergy, creativity, openness and ultimately build trust among researchers. The size of a country has an impact on the diversity of international co-operation. In a country with a large scientific sector there are more possibilities to find co-authors (Damaševičius & Zailskaitė-Jakštė, 2023). European countries are more prone to international co-operation than Asian countries. One reason for this is that the framework programmes of the European Union (EU) have had a positive impact on cooperation between EU countries (Veugelers & Baltensperger, 2019). According to Veugelers and Baltensperger (2019), publications co-authored by EU authors with other researchers from the EU are cited more than the world average (75% more). This is information that can lead countries from different geographies to co-operate.

Researchers may tend to prefer or not prefer qualitative surveys for different reasons. Researchers who tend not to prefer qualitative surveys may see this data collection tool as a temporary solution when face-to-face interviews cannot be conducted. For example, this data collection tool may be an option when face-to-face interviews are not possible, such as during epidemics (Ahmad et al., 2023). Another reason may be the intense influence of the positivist paradigm on researchers. The tendency to focus on the cause-and-effect nature of scientific research and to adhere to standards and patterns may make them reluctant to experiment with new methods. In Madill & Gough's (2016) categorization of qualitative data, open-ended questions are described as structured data collection tools. Qualitative researchers' distance from structured data collection tools may be another reason why they do not prefer qualitative surveys.

Researchers who prefer qualitative questionnaires may tend to prefer these data collection tools to collect qualitative data from participants who are physically distant or for whom face-to-face interviews and observation are not appropriate (Braun vd., 2021). Another reason is that qualitative surveys allow data to be collected from a large number of participants. In particular, online qualitative surveys allow researchers to check the data at any time. This flexibility may appeal to researchers. In qualitative surveys, participants can subjectively write about their experiences, narratives, practices and discourses in their own words, and these responses provide researchers with a rich and dense pool of data (Braun & Clarke, 2013). In addition, the participant can think about their answers without feeling time pressure, which can help the researcher to capture what is really important to the participants (Frith & Gleeson, 2011).

CONCLUSION, LIMITATIONS, AND FUTURE WORK

This study aims to examine the widespread use of 'qualitative surveys' as a qualitative data collection method from a global perspective. The results demonstrate that the use of qualitative surveys as a data collection tool has increased significantly over the last 20 years. Further important findings of the research are that the USA and Türkiye have the most publications and have established the most collaborations. The most common keywords are higher education, science, and teacher education.

In addition to the advantage of reaching different journals, publishers, and authors, it should be noted that the analysis is limited to publications in the WoS database. Publications in journals indexed in other databases (etc. Scopus) are not included in the analysis. Furthermore, this research only examines articles, but it is also crucial to examine books, the development of research and important references in the field. Publications were classified as a 'qualitative survey' data collection method in the study, but were distinguished according to whether they were one of multiple data collection sources or a stand-alone data collection source. Such studies can be carried out because they show the prevalence of qualitative research by researchers.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Özellikle son otuz yılda, sosyal bilimlerde nicel araştırma geleneğinden nitel araştırma geleneğine geçiş, pozitivist paradigmadan alternatif paradigmalara doğru bir 'paradigmatik kayma' olarak görülebilir. Nitel araştırmada, sosyal olgular deneyimsel bir düşünme biçimiyle derinlemesine anlaşılabilir. Nitel araştırmada verilerin geçerliliği/güvenilirliği her zaman tartışmaların merkezinde yer almıştır. Gözlem ve görüşmelere ek olarak belgeler, araştırmacının katılımcıların deneyimlerini ve durumlara yükledikleri anlamları derinlemesine keşfetmesi için en uygun veri türleri olarak görülmüş ve görülmeye devam etmektedir. Bununla birlikte, nitel araştırmanın gelişen doğası, veri çeşitliliğine olanak tanımaktadır. Nitel anket olarak da bilinen nitel soru formları, araştırmacı tarafından hazırlanan ve belirli bir konuya odaklanan bir dizi açık uçlu sorudan oluşur. Katılımcılar deneyimlerini, anlatılarını, uygulamalarını ve söylemlerini kendi kelimeleriyle öznel olarak ortaya koyar ve bu yanıtlar araştırmacılara zengin ve yoğun bir veri havuzu sağlar. COVID-19 salgını sırasında, yüz yüze görüşmelerin mümkün olmadığı durumlarda nitel anketlerin kullanımında bir artış olmuştur. Ancak nitel anketin yukarıdaki avantajları değerlendirildiğinde, görüşmelerin yapılamadığı durumlarda kullanılması zorunlu bir yöntem olmaktan ziyade güvenilir bir nitel veri toplama yöntemi olarak görülebilir. Bu çalışma, nitel anketlerin araştırmacılar tarafından bir veri toplama aracı olarak kullanımını incelemeyi amaçlamaktadır. Nitel anketlerin kullanıldığı çalışmalar hakkında detaylı bilgi sahibi olmak, bu veri toplama yönteminin alandaki yerini anlamak ve gelecekteki kullanımı hakkında fikir vermek açısından önemlidir.

Bibliyometrik yöntem, alanda yayınlanmış araştırmaların belirlenmesine ve analiz edilmesine yardımcı olan nicel bir yaklaşımdır. Bu yöntem, açık ve sistematik inceleme prosedürleri sağlayarak daha bütüncül ve net incelemelere olanak tanımanın yanı sıra araştırma alanının haritalandırılması açısından da değerlidir. Bu metin madenciliği uygulamasında, yüksek etkili dergiler için en önemli uluslararası indekslerden biri olarak kabul edilen WoS veri tabanı kullanılmıştır. WoS veri tabanında eğitim alanındaki (Eğitim ve Eğitim Araştırmaları ve Eğitim Bilimleri) makaleler aranmıştır. “Nitel anket” ve “açık uçlu anket” anahtar kelimeleri seçilmiştir. İlk aramada toplam 857 makale bulunmuştur. Veri toplama araçları gözden geçirildikten sonra makale sayısı 743'e düşürülmüştür. PRISMA Akış diyagramı WoS veri tabanından seçilen makaleleri özetlemektedir. Çalışmada ortak yazarlığı ve yazar anahtar kelimelerinin ortak oluşumunu belirlemek için VOSviewer kullanılmıştır. Bu bibliyometrik analiz çalışması, yıllar içinde yayınlanan makale sayısını, en çok kullanılan anahtar kelimeleri, en üretken yazarları ve ülkeleri, en çok yayın yapan dergileri ve yayıncıları ve en çok atıf alan yazarları ortaya koymaktadır. Bibliyometrik analiz sürecini gösteren diyagram metinde verilmiştir.

Yıllara göre makalelerin sıklığı incelendiğinde 2005 yılından bu yana makale sayısının arttığı görülmektedir. Bu artış, nitel araştırma yöntemlerinin yaygın olarak kullanılmasına bağlanabilir. Amerika Birleşik Devletleri en üretken ülkedir (n = 205, %27), onu Türkiye (n = 107, %14), Avustralya (n = 66, %9), Birleşik Krallık (n = 50, %7) ve Güney Afrika (n = 40, %5) takip etmektedir. Makalelerin 1992 ile 2024 yılları arasında yayımlandığı ve International Journal of Science Education (n=16), Education Sciences (n=15), BMC Medical Education (n=13), International Journal of Science and Mathematics Education (n=13), Journal of Research in Science Teaching (n=13), en çok yayın yapan dergilerdir. Taylor & Francis (n=213, %28), Springer Nature (n=92, %12), Sage (n=34, %4), Wiley (n=32, %4) ve Emerald Group (n=31, %4) en çok yayın yapılan dergilerin yayıncılarıdır.

Dergilerin çoğunluğu Emerging Sources Citation Index (ESCI) (n=428, %58), ardından Social Sciences Citation Index (SSCI) (n=315, %43) ve Science Citation Index Expanded (SCI-EXPANDED) (n=32, %4) indekslerinde taranmaktadır. Yazarların bağlı olduğu kurumlar incelendiğinde, University System of Ohio (n=10); Indiana University System (n=9); American University of Beirut, Hacettepe University, Indiana University Bloomington, Mersin University, Pamukkale University, University of North Carolina, University System of Georgia (n=8) en çok yayını olan yazarların kurumlarıdır. Atıf sayısı yayın sayısı ile birlikte artmasına rağmen, 2019 yılından sonra atıf sayısının daha belirgin bir şekilde arttığı dikkat çekmektedir. Science Education tarafından yayımlanan ve en çok atıf alan makale Abd-El Khalick ve diğerleri (1998) tarafından yayımlanan Bilimin Doğası ve Öğretim Uygulamaları başlıklı

makaledir. İkinci en çok atıf alan makale ise Khishfe & Khalick (2002) tarafından yayınlanan ve öğrencilerin bilimin doğası hakkındaki görüşlerinin oluşmasında açık ve yansıtıcı öğretimin etkisini değerlendiren makaledir. Üçüncü en çok atıf alan makale ise Khalick & Lederman (2000) tarafından bilim tarihi derslerinin etkisi üzerine yapılan çalışmadır.

VOSviewer tarafından oluşturulan dinamik değişim ve ağ haritasını içeren küme analizinin sonuçları incelendiğinde 'yükseköğretim' (n=45), 'öğretmen eğitimi' (n=30), 'mesleki gelişim' (n=25), 'çevrimiçi öğrenme' (n=20), 'bilimin doğası' (n=18), 'COVID-19' (n=13), 'erken çocukluk eğitimi' (n=11), 'öz yeterlilik' (n=10), 'öğretmenler' (n=11), 'öğretmen adayları' (n=10) ve 'algılar' (n=10) dahil olmak üzere en sık kullanılan anahtar kelimeleri göstermektedir. Ortak atıf analizinin sonuçları (minimum atıf sayısı 10'dur) incelendiğinde Creswell, J.W. ve Lederman, N.G. 122'ser atıfı ile en çok ortak atıf alan yazarlar olmuştur. Eş-oluşum haritalaması için VOSviewer'da ikili sayma seçeneğini uygulanmıştır. En sık kullanılan terimler 'görüş' (n=108), 'anlayış' (n=96), 'bilim' (n=91), 'etki' (n=82), 'anket sorusu' (n=73) ve 'nitel veri' (n=65) olmuştur. Uluslararası 36 işbirliği elde edilmiştir. Genel olarak, bu alanda en yüksek üretkenliğe sahip ülkeler ABD (205 belge, 4063 atıf), Türkiye (107 belge, 752 atıf), Avustralya (66 belge, 953 atıf), Birleşik Krallık (46 belge, 491 atıf) ve Güney Afrika'dır (39 belge, 162 atıf).

Sonuçlar, nitel anketlerin bir veri toplama aracı olarak kullanımının son 20 yılda önemli ölçüde arttığını göstermektedir. Araştırmanın diğer önemli bulguları ise ABD ve Türkiye'nin en çok yayına sahip olan ve en çok işbirliği kuran ülkeler olmasıdır. En yaygın anahtar kelimeler yükseköğretim, bilim ve öğretmen eğitimidir. Farklı dergilere, yayıncılara ve yazarlara ulaşma avantajının yanı sıra, analizin WoS veri tabanındaki yayınlarla sınırlı olduğunu belirtmek gerekir. Diğer veri tabanlarında (Scopus vb.) indekslenen dergilerdeki yayınlar analize dahil edilmemiştir. Ayrıca, bu araştırma sadece makaleleri incelemektedir, ancak kitapları, araştırmanın gelişimini ve alandaki önemli referansları incelemek de çok önemlidir.