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Global Trends and Challenges in Teacher Training: A Bibliometric Analysis (2019–2024)

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Abstract

By giving teachers the necessary tools, teacher training plays a critical role in raising the standard of education. Training programs that are accessible and structured are becoming more and more important as educational demands change. The usefulness of teacher training frameworks, the incorporation of contemporary educational approaches, and the difficulties in obtaining and executing these programs are all examined in this study. This study examines global trends in teacher training literature (2019–2024) using Scopus and bibliometric analysis. Thematic focuses, important contributors, and publication trends were evaluated by data analysis using R/R-Studio, VoSviewer, and Microsoft Excel. Despite a rise in research activity, the results indicate a decreasing annual growth rate of publications. With a focus on particular locations, the study identifies important journals, authors, organizations, and nations influencing research on teacher preparation. Results show that training that is well-organized and updated often improves student performance and instructional efficacy. Adaptability to different classrooms is enhanced by the integration of inclusive education and technology. Nonetheless, there are still gaps in our knowledge of the long-term effects of training and in guaranteeing fair access to professional growth. When creating evidence-based teacher training programs, policymakers, educational institutions, and training providers use these insights as a guide. Comparative evaluations of training approaches, long-term efficacy, and international cooperation tactics in teacher education should all be investigated in future studies. For education systems around the world to advance, teacher training programs must be strengthened.

Keywords: Teacher training; pedagogical techniques; bibliometric analysis; professional development; educational policy.

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Introduction

By giving teachers, the skills and information they need to improve student learning outcomes, teacher training plays a critical role in raising the standard of education. The need for qualified educators has increased dramatically as a result of the changing nature of education. Teachers must engage in ongoing professional development due to recent developments in inclusive education practices, digital tools, and pedagogical strategies. The value of teacher training programs in promoting successful teaching practices and guaranteeing that educators can adjust to a variety of classroom settings has been underlined in several studies [1],[2],[3],[4],[5]

There are still issues with teacher preparation's efficacy, accessibility, and integration with contemporary educational demands, despite its acknowledged significance. Teachers in many programs are ill-prepared for the dynamics of the real classroom because they lack defined curricula that meet modern teaching standards. Furthermore, little is known about how various approaches to teacher preparation affect student achievement [6],[7],[8],[9],[10],[11],[12].

By examining the current frameworks for teacher training and how well they enhance the quality of instruction, this study aims to investigate these concerns. The main goals of this study are to determine how well current teacher training programs enhance teaching abilities, investigate how contemporary pedagogical approaches—such as digital tools and inclusive education—are incorporated into teacher training curricula, pinpoint the difficulties educators encounter in obtaining and putting into practice teacher training programs, and offer suggestions for enhancing teacher training initiatives based on empirical findings [13],[14],[15],[16],[17],[18],[19],[20],[21].

According to the study's hypothesis, teacher preparation programs that are well-organized and updated often greatly improve both student performance and the quality of instruction. Additionally, training programs that incorporate technology and inclusive education concepts enhance teachers' efficacy and flexibility in a variety of classroom environments. This study is essential for filling the effectiveness gaps in teacher preparation and making sure that teachers are prepared to handle the demands of modern education [22],[23],[24],[25],[26],[27],[28],[29].

This study aids in the creation of training programs that benefit teachers and students alike by evaluating existing programs and suggesting enhancements. Furthermore, better learning results, student engagement, and general educational standards can result from improving teacher preparation. The importance of teacher preparation for professional growth and its effect on student learning are highlighted in the literature currently under publication.

According to studies, instructors must engage in ongoing professional development to stay current with emerging teaching strategies [30],[31], [32],[33], [34].

Additionally, studies on digital learning resources indicate that incorporating technology into teacher preparation improves the effectiveness of education. Comprehensive research comparing various teacher training approaches is scarce, nevertheless, especially when it comes to long-term results. This study employs a mixed-methods approach, combining quantitative and qualitative research methods. Surveys and interviews with educators were used to gather information on their experiences with teacher preparation programs [35],[36],[37],[38],[39],[40].

A content study of current training programs will also be carried out to assess how well contemporary teaching methods are included. The impact of training programs on student outcomes and teaching effectiveness will be examined using statistical techniques. Both existing and developing educational systems' teacher training programs are the subject of the study. It examines university-led teacher education programs, private professional development courses, and government-sponsored training initiatives. To guarantee relevance to current educational difficulties, the study mainly looked at programs that were put into place within the last ten years [41],[42],[43],[44].

Method

With a thorough bibliometric analytic technique that incorporates document and network analysis, this study employs a quantitative methodology [45],[46]. On September 29, 2024, at 8:48 p.m., a Boolean search was performed on the Scopus database from 2019 to 2024 to gather data. VoSviewer, Microsoft Excel, and R/R-Studio applications were utilized for networking, document analysis, and citations [47],[48].

Because Scopus is a significant database that offers peer-reviewed publications, it was selected. Scopus has a greater selection of items than other databases [49],[50], and it is almost 70% larger than WoS [51],[52],[53]. The following criteria were the only ones used in the bibliographical searches: The following elements included the study's phases: To make sure the research is pertinent and to find any gaps in bibliometric themes, a literature review is carried out.

The study also helped determine the right keywords for the scope of the study, then a search using the Boolean operator in Scopus (Title-Abs-Key ("Teachers Training") And Title-Abs-Key ("School")) 4759 Documents. Furthermore, Filtration Uses The Boolean Operator From Scopus To (Title-Abs-

Key ("Teachers Training") And Title-Abs-Key ("School")) And Pubyear > 2018 And Pubyear < 2026 And (Limit-To (Subjarea , "Arts")) And (Limit-To (Exact Keyword , "Teacher Training") Or Limit-To (Exact Keyword , "Education") Or Limit-To (Exact Keyword , "School") Or Limit-To (Exact Keyword , "School Teachers")) And (Limit-To (Doctype , "Ar")) And (Limit-To (Language , "English")). In total, it produced 153 documents. The bibliography search results were saved in the EndNote X9 application and saved into a CSV file to be opened in the Excel or Numbers application. The saved files were then checked, and the metadata was completed [54],[55],[56].

This study ultimately employed bibliometric analysis to ascertain the yearly number of documents according to journals, authors, affiliations, countries, and disciplines of study. R/R-Studio and a Scopus analyzer were used for this. The document network visualization was examined using VOSViewer, and the data was handled using Microsoft Excel [57],[58],[59],[60]. This is shown in Figure 1 of the Research Flow:

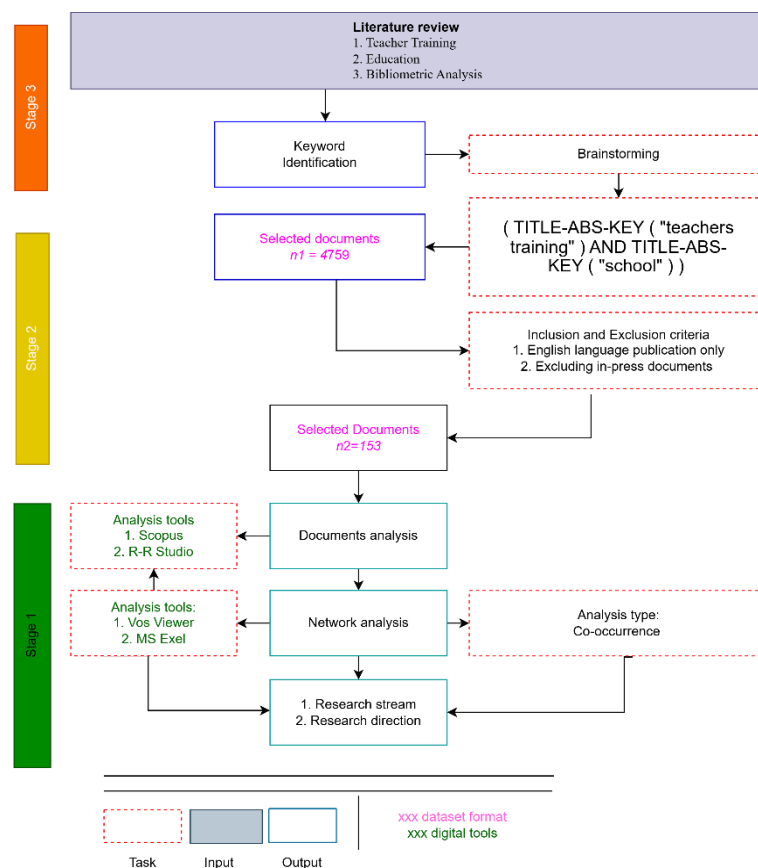


Figure 1. Research Flow

Result and Discussion

Documents Analysis

Table 1. Main Information

MAIN INFORMATION ABOUT DATA	
Timespan	2019:2025
Sources (Journals, Books, etc)	1923
Documents	5225
Annual Growth Rate %	-62.76
Document Average Age	2.45
Average citations per doc	4.478
References	214977
DOCUMENT CONTENTS	
Keywords Plus (ID)	5105
Author's Keywords (DE)	11234
AUTHORS	
Authors	14189
Authors of single-authored docs	951
AUTHORS COLLABORATION	
Single-authored docs	977
Co-Authors per Doc	3.11
International co-authorships %	15.33
DOCUMENT TYPES	
article	4162

Examination of primary data Table 1, which includes 5225 documents from 1923 different sources, including books and journals, summarizes significant bibliometric data from 1912 to 2024 and shows various features of the dataset used in the study. The data points to a troubling -62.76% annual growth rate, indicating a gradual fall in document output that merits more investigation. The emphasis on contemporary research is shown by the fact that the materials are comparatively recent, with an average age of 2.45 years. A high total of 214,977 references suggests considerable academic interconnection, but an average of 4.478 citations per document suggests a modest impact on the academic community.

With 5105 Keywords Plus and 11234 Author's Keywords, the study covers a wide range of topics, demonstrating the multidisciplinary nature of the research. Just 977 of the 14,189 writers are single-authored, and the average number of co-authors per document is 3.11, indicating that most of the papers are collaborative. The proportion of documents involving international collaboration is 15.33%, indicating a growing but still regional trend in research.

As is customary in academic study, the majority of the materials (4162) are articles. All things considered, the data points to a tendency toward current, cooperative, and moderately cited research, along with a possible drop in total output that merits more research.

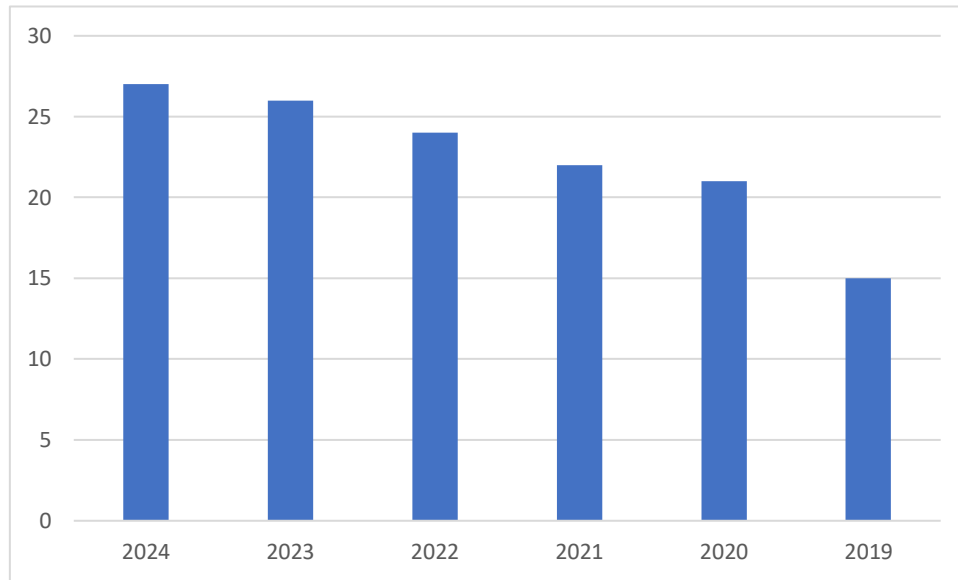


Figure 2. Trends of Publication from 2019-2024

There is a discernible rise in publications, with 2024 emerging as the year with the most documents, according to the chart that compares publishing trends from 2019 to 2024. This pattern shows a rebound in research production near the end of the period, which contrasts with the bibliometric data's overall negative annual growth rate of -62.76%. From 2020 to 2023, publications stayed largely the same, indicating steady but unimpressive scientific activity.

The fewer publications in 2019 and 2020, however, can be the result of delays or interruptions brought on by outside variables like the worldwide pandemic. In line with the collaborative and global focus observed in the entire dataset, the encouraging trend in 2024 raises the possibility that research productivity may be rebounding. This implies that as the years go by, there will be a dynamic shift towards more international and cooperative research initiatives.

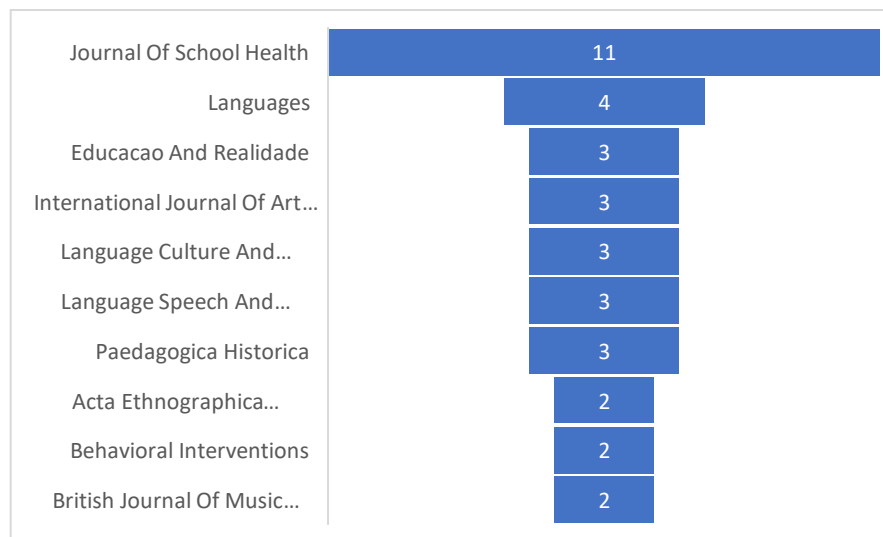


Figure 3. Top Journals by Number of Publications

Figure 3 illustrates the top journals by the number of publications, with "Journal of School Health" leading the list with 11 publications. Following this, "Languages" has 4 publications, showing a significant gap between the top journal and others. The next set of journals, each with 3 publications, includes "Educação and Realidade," "International Journal of Art," "Language Culture and," "Language Speech," and "Paedagogica Historica" [61],[62],[63],[64],[65],[66],[67]."

These journals are relatively close in terms of publication numbers, indicating that they are somewhat prominent in the field but not as dominant as the "Journal of School Health." The remaining journals, "Acta Ethnographica Hungarica," "Behavioral Interventions," and "British Journal of Music," each have 2 publications, further emphasizing a concentration of publications in just a few key journals. Overall, the figure highlights a skewed distribution where a small number of journals dominate the publication landscape [68],[69],[70],[71].

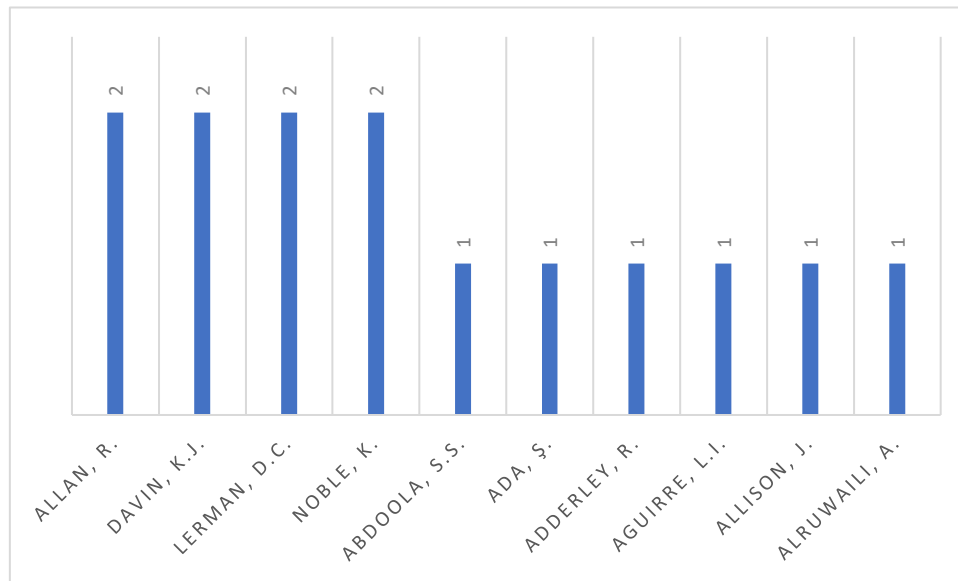


Figure 4. Top Authors by Number of Documents

Figure 4 provides insight into the distribution of publications among the top authors in the dataset. The authors Allan, R., Davin, K.J., Lerman, D.C., Noble, K., and Abdoola, K. are the most active in this period, each having published 2 documents. This group of authors represents a small but influential subset of researchers who have contributed more to the body of work in the studied period compared to others [72],[73],[74],[75],[76].

The remaining authors listed—Ada, S., Adderley, R., Aguirre, L.I., Allison, J., and Alruwaili, A.—have only one publication each [77],[78],[79],[80]. This shows that while these authors are present in the dataset, their contribution is relatively minor in comparison to the top group. The fact that these authors are still included among the top names, despite their single publication, might indicate that the dataset is skewed by a few researchers publishing frequently, while the majority of authors contribute only one or a few works.

In academic research, this distribution is typical, with many academics contributing only a few papers and some authors, typically well-known or very active in their field, publishing a large majority of the work. It appears that certain research leaders or groups are driving the majority of the output, while others contribute at a lower pace, as evidenced by the concentration of publications in a limited number of authors. This may illustrate how research is a collaborative process, with some major contributors spearheading initiatives while others assist.

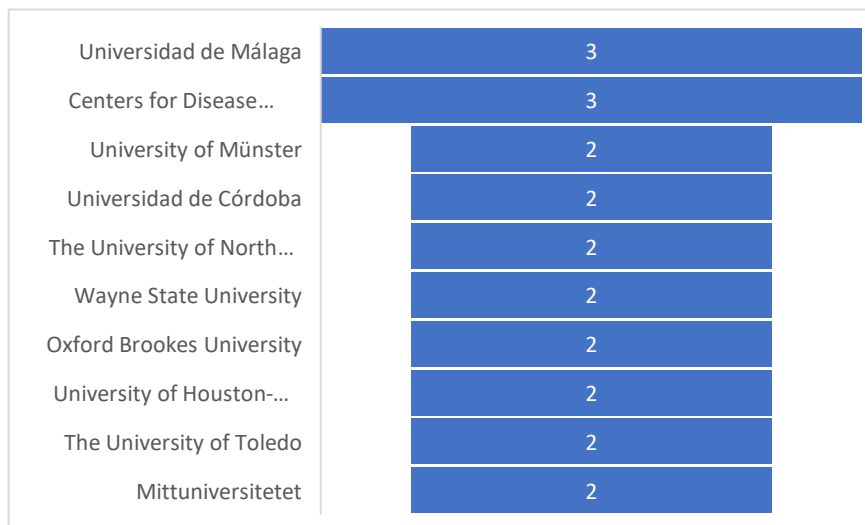


Figure 5. Top Institutions with Cumulative Percentage of Publications chart

The top institutions by number of articles in the dataset are displayed in Figure 5. The two top organizations, Universidad de Málaga and the Centers for Disease Control (CDC), each contributed three papers. The most frequent donors to the dataset are these institutions. University of Münster, Universidad de Córdoba, The University of North, Wayne State University, Oxford Brookes University, University of Houston-Clear Lake, The University of Toledo, and Mittuniversitetet are the next group of universities, each of which has two publications.

Both major universities and specialized research centers are represented in the distribution, which shows a wide variety of establishments. This points to a wide-ranging, global partnership or a scattered research strategy in which several institutions, each with a distinct focus, are adding to the total number of publications. Numerous universities participate, producing a smaller but still noteworthy number of papers, even though a small number of institutions control the majority of the dataset. This pattern is common in academic research, as many additional institutions participate, but at a slower rate, even though leading universities may create a larger volume of material.

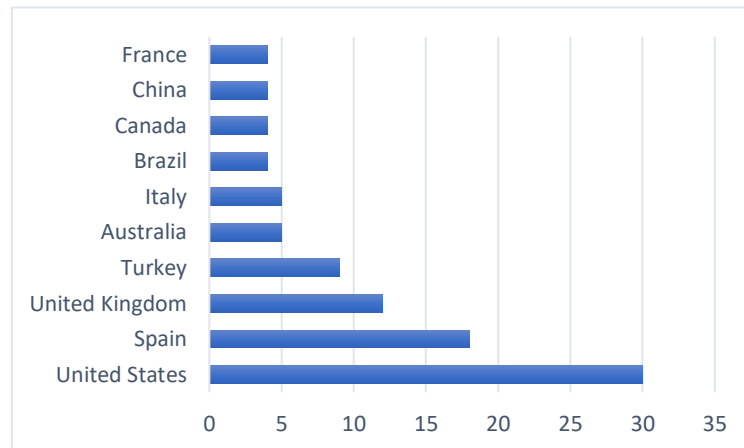


Figure 6. Top Ten Countries that Have Published the Most Articles on Teacher Training

Figure 6 presents the top ten countries that have published the most articles on teacher training. The United States is the clear leader, with a significantly higher number of publications compared to other countries, reaching more than 30 publications. This suggests that the United States is a major contributor to research on teacher training, possibly due to the presence of numerous research institutions and a strong focus on educational research.

After the United States, Spain has the second-highest number of publications, however, there is a significant difference. The United Kingdom, Turkey, Australia, Italy, Brazil, Canada, China, and France are among the other nations that have made significant contributions. Though not as well-known as the US and Spain, these nations actively participate in teacher training research, as evidenced by their lesser but still noteworthy numbers of publications, which range from five to ten apiece.

While the contributions from other nations demonstrate a varied and global interest in teacher training, the United States' pronounced dominance in this area emphasizes its leadership role in global educational research. This trend is common in academic research, as many nations make significant contributions, but a small number of countries generate the majority of publications.

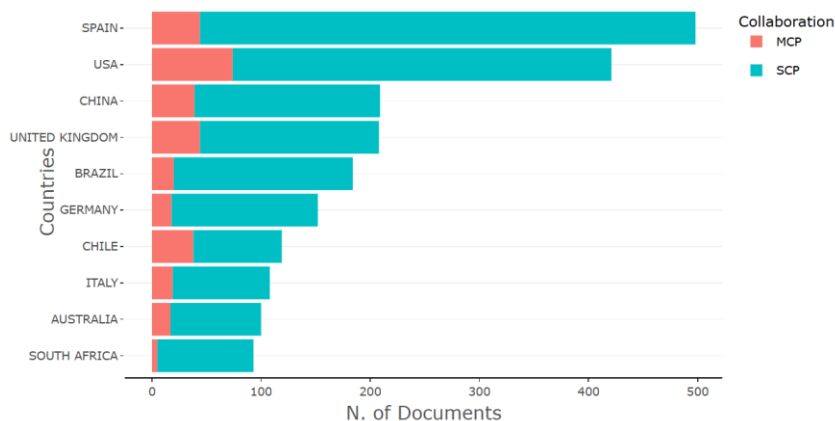


Figure 7. Corresponding Authors Collaboration Chart by Country

With two different forms of collaboration—MCP (Multiple Country Participation) and SCP (Single Country Participation)—Figure 7 shows the associated authors' participation patterns by nation. According to the graphic, Spain has the most documents overall. A sizable portion of these documents exhibit MCP collaboration, as shown by the red bars, indicating that many of Spain's publications have international co-authorships. Although there are a few more publications in SCP (shown by the blue bars), the United States trails closely behind with a similar trend, suggesting that many of their papers are domestically rather than internationally collaborative.

Other countries, such as China, the United Kingdom, and Brazil, show a mix of SCP and MCP publications, with SCP being slightly more dominant in some cases. For instance, China and the UK appear to have a higher proportion of single-country collaborations compared to Spain or the USA, which may suggest that research in these countries tends to be more nationally focused, or there might be fewer collaborative networks involved.

While having fewer publications, nations like Australia, South Africa, Chile, Germany, and Italy likewise show a balance between SCP and MCP. As demonstrated by the inclusion of MCP in the figure, this suggests that even while these nations produce fewer documents overall, they nevertheless participate in cooperative research, especially with other nations.

Overall, the figure shows that different countries have different patterns of collaboration, with the USA and Spain leading worldwide collaborative efforts while other nations continue to take a more domestic approach to research.

Table 2. Globally cited documents

Paper	Total Citations	TC per Year	Normalized TC
Zhang W, 2020, J Risk Financ Manag	577	115.40	70.18
Hillmayr D, 2020, Comput Educ	184	36.80	22.38
Spiteri M, 2020, Tech Knowl Learn	149	29.80	18.12
Artacho Eg, 2020, Sustainability	144	28.80	17.51
Smale-Jacobse Ae, 2019, Front Psychol	139	23.17	15.68
Sánchez-Cruzado C, 2021, Sustainability	125	31.25	24.57
Daly-Smith A, 2020, Int J Behav Nutr Phys Act	114	22.80	13.87
Naveed Qn, 2020, Plos One	94	18.80	11.43
Domingo-Coscollola M, 2020, Rev Invest Educ	94	18.80	11.43
Hutzler Y, 2019, Phys Educ Sport Pedagogy	92	15.33	10.38

Including total citations, citations per year (TC per Year), and normalized total citations (Normalized TC), the table displays the most internationally referenced papers. With the most citations overall (577), citations annually (115.40), and normalized citations (70.18) among these, ZHANG W, 2020, J RISK FINANC MANAGE stands out above the others, demonstrating its substantial and ongoing influence in the area. It is followed by HILLMAYR D, 2020, COMPUT EDUC, which has 184 total citations [81], [82], [83]. However, its normalized citations (22.38) are lower, indicating that Zhang's paper receives more citations annually. With 149 and 144 total citations, respectively, and normalized citations of 18.12 and 17.51, SPITERI M, 2020, TECH KNOWL LEARN and ARTACHO EG, 2020, SUSTAINABILITY show high citation counts but low annual citation rates [84],[85].

There are 139 and 125 total citations in SMALE-JACOBSE AE, 2019, FRONT PSYCHOL, and SÁNCHEZ-CRUZADO C, 2021, SUSTAINABILITY, respectively [86],[87],[88],[89]. SÁNCHEZ-CRUZADO C leads in normalized citations (24.57), indicating its recent but significant presence in the field. Other works with less total and normalized citations, such as DALY-SMITH A, 2020, INT J BEHAV NUTR PHYS ACT, and NAVEED QN, 2020, PLOS ONE, demonstrate their specialized but noteworthy contributions [90],[91]. Overall, these findings highlight the significant influence of recent publications, particularly those published in 2020, with ZHANG W ranking highest in terms of both yearly and total citations, highlighting its enduring influence on scholarly study in the area [92].

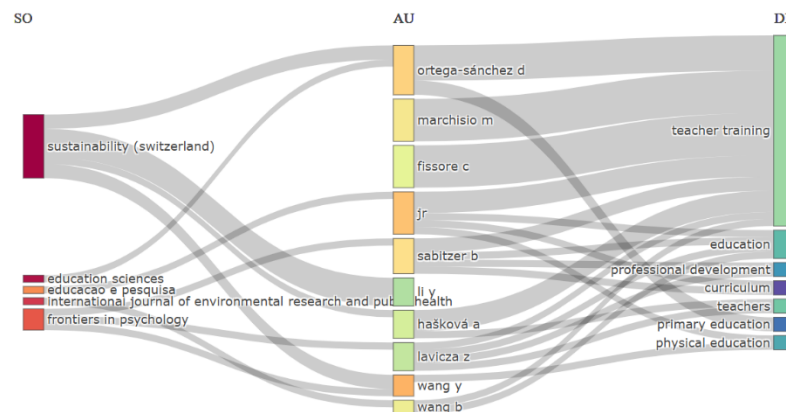


Figure 8. Publications by Author, Source, and Discipline Flow

A Sankey diagram showing the connections between journals (SO), authors (AU), and keywords (DE) in teacher training research is shown in Figure 8. Academic journals are shown in the left column, with Sustainability (Switzerland) appearing as the most popular source, followed by Frontiers in Psychology and Education Sciences. Contributing authors who are connected to several study themes are included in the center column, including Ortega-Sánchez D, Marchisio M, and Fissore C. The multidisciplinary aspect of the area is illustrated by the right column, which highlights important subjects such as curriculum, professional development, teacher training, education, and physical education.

The strong connections between authors, journals, and keywords suggest that research on teacher training spans various disciplines and is concentrated in a few influential sources and researchers. This visualization underscores the collaborative nature of the field and highlights the major contributors shaping the discourse.

Network analysis

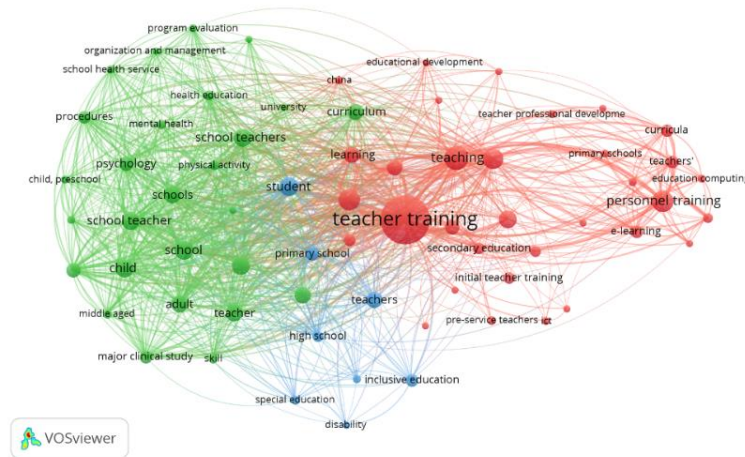


Figure 9. Network Visualization of Title Terms of Teacher Training

A network visualization of teacher training-related title phrases created with VOSviewer is shown in Figure 9. Teacher training is shown at the middle of the diagram, which shows interconnected clusters of terms, indicating its importance in the dataset. The terms are arranged into several colored clusters that correspond to the research's thematic themes. The red cluster emphasizes pedagogical and instructional components of teaching, learning, curriculum, and educational growth.

A connection between teacher preparation and educational settings is suggested by the green cluster, which is focused on students, teachers, psychology, and health education. The blue cluster highlights studies on diversity and accessibility in education and includes terms like special education, disability, and inclusive education. Strong linkages between these themes are indicated by the density of connections between terms, highlighting the interdisciplinary nature of teacher training research. Important research trends and topic connections in the discipline are identified with the aid of this visualization.

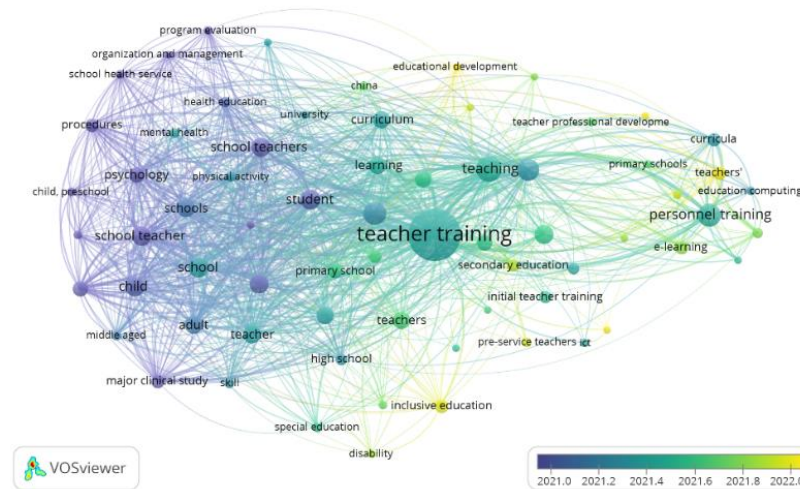


Figure 10. Temporal Evolution of Keywords in Teacher Training

Using a network visualization from VOSviewer, Figure 10 shows the historical evolution of keywords in teacher training research. The chronology from 2021 to 2022 is represented by the color gradient, which goes from purple to yellow and shows how the study themes have changed over time. Key concepts like teaching, learning, and teacher preparation are constant across the time frame. Reflecting well-established research fields, the older terms, which are displayed in colors of blue and purple, include psychology, health education, school instructor, and student.

In contrast, newer research directions, highlighted in green to yellow, include teacher professional development, curriculum, e-learning, and personnel training, suggesting an emerging focus on digital learning, professional growth, and curriculum reforms. The visualization demonstrates how the field of teacher training has evolved, with increasing attention toward contemporary issues such as inclusive education and technological advancements in teaching methodologies.

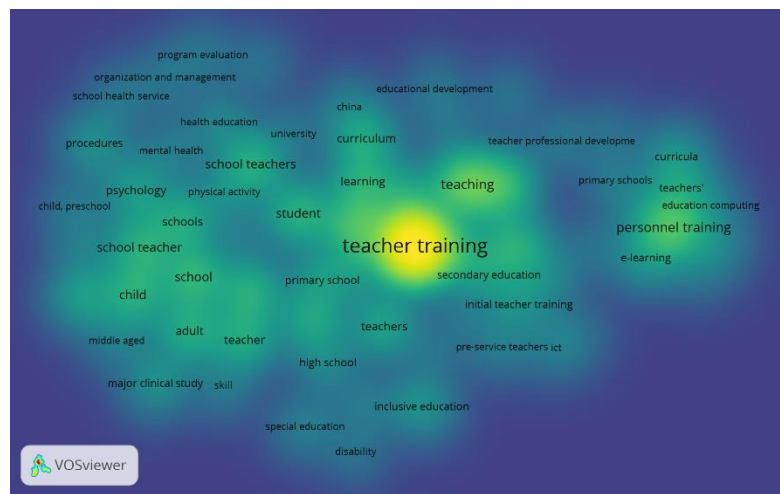


Figure 11. The Density of the Most Used in Abstract Terms Teacher training articles

A density visualization of the most commonly used phrases in teacher training article abstracts, produced with VOSviewer, is shown in Figure 11. With yellow denoting the highest number of occurrences, the color gradient, which ranges from dark blue to bright yellow, shows the intensity of term usage. The most common term seems to be teacher training, underscoring its importance in the subject of study.

The high density of other commonly used terms, like curriculum, teaching, learning, and school teachers, indicates their significance in academic discourse. Furthermore, there is moderate density for phrases like e-learning, inclusive education, and people training, suggesting that these topics are receiving more attention from researchers. The phrases' distribution throughout the graphic points to a wide range of subjects covered by teacher training research, including professional development, instructional strategies, and technology developments

Conclusion

By giving teachers the fundamental pedagogical skills they need, teacher preparation plays a critical role in improving the quality of education. The bibliometric analysis of this study shows how the field of teacher training research has changed over time, highlighting significant themes, contributors, and trends between 2019 and 2024. The decreasing publication growth rate indicates possible difficulties in maintaining interest in the issue, even in the face of increased research interest. The results highlight how important well-designed and frequently updated training programs are for raising student achievement and instructor efficacy. Training courses that incorporate inclusive education and technology improve students' ability to adapt to a variety of learning contexts. However, there are also issues with assessing the long-term effects of training

and guaranteeing fair access to professional growth. Policymakers, academic institutions, and training providers need to work together to create training programs that are accessible and grounded in evidence in light of these lessons. To improve teacher education worldwide, future studies should compare various training programs, evaluate long-term efficacy, and foster international collaborations. To support high-quality educational systems around the world, a concentrated effort to enhance teacher training frameworks is necessary

Author Contributions

Mohieddin Masoud: Conceptualization, Methodology, Writing – review & editing, Supervision, Project administration. **Abdulnasir Alsayd:** Methodology, Writing – review & editing, Investigation. **Majdy kasheem:** Conceptualization, Methodology, Writing – review & editing, Investigation.

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Conflict of Interest

The authors declare no conflicts of interest.

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Bibliography

- [1] A. N. A.N., M. Mahmudulhassan, F. D. Marshal, M. Muthoifin, and N. Fadli, "Human rights and social justice in Quranic contexts: a global trend," *Leg. J. Ilm. Huk.*, vol. 32, no. 2, pp. 453–471, Sep. 2024, doi: <https://doi.org/10.22219/ljih.v32i2.35088>.
- [2] Ardiansyah et al., "Tracing Trends in Quran Memorization and Cognitive Learning: A Bibliometric Analysis from the Scopus Database," *Pakistan J. Life Soc. Sci.*, vol. 22, no. 2, pp. 1493–1509, 2024, doi: <https://doi.org/10.57239/PJLSS-2024-22.2.00105>.
- [3] Muthoifin, I. Afiyah, and Nuha, "Behavioral responses of cows and goats during slaughtering for Eid Al-Adha: A field study in Surakarta," *J. Anim. Behav. Biometeorol.*, vol. 12, no. 4, p. 2024034, Dec. 2024, doi: <https://doi.org/10.31893/jabb.2024034>.

- [4] Muthoifin and A. H. Anfas, "Optimizing the Potential of Zakat to Alleviate Poverty Problems and Improve Community Economy in Surakarta City," *J. Ecohumanism*, vol. 3, no. 3, pp. 121–127, 2024, doi: <https://doi.org/10.62754/joe.v3i3.3394>.
- [5] Muthoifin, Q. Q. Yusran, . M., . N., . W., and A. Nirwana, "The Practice of Changing the Status of Change of Waqf Property in the Islamic Social Economic View," *J. Ecohumanism*, vol. 3, no. 6, pp. 229–238, Sep. 2024, doi: <https://doi.org/10.62754/joe.v3i6.3996>.
- [6] I. Cimermanová, "A review of European research on content and language integrated learning," *Integr. Educ.*, vol. 25, no. 2, pp. 192–213, 2021, doi: <https://doi.org/10.15507/1991-9468.103.025.202102.192-213>.
- [7] M. Miskiah, Y. Suryono, and A. Sudrajat, "Integration of information and communication technology into Islamic religious education teacher training," *Cakrawala Pendidik.*, vol. 38, no. 1, pp. 130–140, 2019, doi: <https://doi.org/10.21831/cp.v38i1.23439>.
- [8] P. K. Sah, "Teacher Preparation for Primary English Education in Nepal: Missing Agendas of Diversity and Inclusion," *English Teach. Learn.*, vol. 46, no. 4, pp. 373–393, 2022, doi: <https://doi.org/10.1007/s42321-021-00100-7>.
- [9] A. N. An et al., "Millennial era Islamic parenting studies: A bibliometric analysis utilizing the Scopus database," *Multidiscip. Rev.*, vol. 8, no. 1, p. 2025002, Aug. 2024, doi: <https://doi.org/10.31893/multirev.2025002>.
- [10] A. N. Andri Nirwana et al., "A historical review on mapping the evolution and direction of leadership in Islam: Challenges and development opportunities," *Multidiscip. Rev.*, vol. 7, no. 6, 2024, doi: <https://doi.org/10.31893/multirev.2024124>.
- [11] A. N. A.N. et al., "Examining Religious Coexistence: Perspectives from the Quran and Hadith in the Context of Bangladesh," *Int. J. Relig.*, vol. 5, no. 10, pp. 718–731, Jun. 2024, doi: <https://doi.org/10.61707/yyd0mm12>.
- [12] S. Amini, R. Ismail, S. A. Aryani, and A. Nirwana, "Religiosity To Minimize Violence: A Study Of Solo Indonesian Society," *Rev. Gest. Soc. e Ambient.*, vol. 18, no. 6, 2024, doi: <https://doi.org/10.24857/RGSA.V18N6-089>.
- [13] N. Lysenko, L. Shtefan, and O. Kholodniak, "Teaching Tolerance At School: The Experience Of Modern French Education System," *J. Lib. Int. Aff.*, vol. 6, no. 1, pp. 129–138, 2020, [Online]. Available: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85100773563&partnerID=40&md5=e2ef008d9a3ffa6b2fc8f8e063b26e46>

- [14] R. Allan, I. Shaw, and M. Shaw, "Building a Corpus of Written Tasks of Swedish National Tests in English: Motivation, Method and Research Applications," *NJES Nord. J. English Stud.*, vol. 22, no. 2, pp. 128–154, 2023, doi: <https://doi.org/10.35360/njes.821>.
- [15] S. Esbjörn-Hargens, "Vivescer: an Online Integral Teacher Development Platform – an Integral Education Case Study from Brazil," *Beijing Int. Rev. Educ.*, vol. 5, no. 1–2, pp. 137–157, 2023, doi: <https://doi.org/10.1163/25902539-05010002>.
- [16] M. Mahmudulhassan, S. Begum, S. U. Ahmed Khondoker, A. E. Conti Morales, M. Muthoifin, and W. Mahir Muttaqin, "Tracing the Roots of Socio-Cultural Factors in Legal and Religious Thought: Historical and Contemporary Perspectives," *Solo Int. Collab. Publ. Soc. Sci. Humanit.*, vol. 2, no. 02, pp. 85–94, Mar. 2024, doi: <https://doi.org/10.61455/sicopus.v2i02.122>.
- [17] Mahmudulhassan, Muthoifin, and S. Begum, "Artificial Intelligence in Multicultural Islamic Education : Opportunities , Challenges , and Ethical Considerations," *Solo Univers. J. Islam. Educ. Multicult.*, vol. 2, no. 1, pp. 19–26, 2024, doi: <https://doi.org/10.61455/sujiem.v2i01.114>.
- [18] M. Mahmudulhassan, "Exploring the Essence, Importance, and Distinctive Attributes of Islamic Culture: An In-depth Cultural Analysis," *Bull. Islam. Res.*, vol. 2, no. 2, pp. 311–326, Jun. 2024, doi: <https://doi.org/10.69526/bir.v2i2.25>.
- [19] M. Mahmudulhassan, W. Waston, M. Muthoifin, and S. U. Ahmed Khondoker, "Understanding the Essence of Islamic Education: Investigating Meaning, Essence, and Knowledge Sources," *Solo Univers. J. Islam. Educ. Multicult.*, vol. 2, no. 01, pp. 27–36, Mar. 2024, doi: <https://doi.org/10.61455/sujiem.v2i01.115>.
- [20] M. Mahmudulhassan and M. Abuzar, "Developing Religious Identity: Assessing the Effects of Aliya Madrasahs on Muslim Students in Bangladesh," *Solo Univers. J. Islam. Educ. Multicult.*, vol. 2, no. 01, pp. 49–60, May 2024, doi: <https://doi.org/10.61455/sujiem.v2i01.135>.
- [21] Mahmudulhassan, W. Waston, A. Nirwana, S. Amini, M. M. A. Sholeh, and M. Muthoifin, "A moral-based curriculum to improve civilization and human resource development in Bangladesh," *Multidiscip. Rev.*, vol. 7, no. 8, 2024, doi: <https://doi.org/10.31893/multirev.2024137>.
- [22] V. Gabdulhakov, N. Novik, and O. Yashina, "Anthropology of teacher training in interdisciplinary and digital education," in *CEUR Workshop Proceedings*, R. J. and L. M., Eds., Kazan (Volga Region) Federal

- University, Institute of Psychology and Education, 18 Kremlyovskaya street, Kazan, 420008, Russian Federation: CEUR-WS, 2020, pp. 60–69. [Online]. Available: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85106045584&partnerID=40&md5=36c9e08f9176c81caa62021c893df87d>
- [23] A. Fathoni, A. Muhibbin, Z. Arifin, W. N. Habiby, and M. E. Ismail, "Implementation of guidance and counselling services to Muhammadiyah elementary schools, Surakarta, provincial central Java, Indonesia," *Kasetsart J. Soc. Sci.*, vol. 42, no. 1, pp. 177–184, 2021, doi: <https://doi.org/10.34044/j.kjss.2021.42.1.28>.
- [24] L. G. Rodríguez, "Domestic Economy in the school. Women's education: Programs and textbooks (Argentina, 1870- 1920)," *Hist. y Mem. la Educ.*, no. 14, pp. 615–641, 2021, doi: <https://doi.org/10.5944/hme.14.2021.28974>.
- [25] Mahmudulhassan, S. Rahmawati, F. Qurrota, and A. Tamami, "The Integration of Faith and National Identity : A Comprehensive Study on Islamic Patriotism and Its Theological Implications," *Solo Univers. J. Islam. Educ. Multicult.*, vol. 2, no. 2, pp. 83–92, 2024, doi: <https://doi.org/10.61455/sujiem.v2i02.158>.
- [26] A. N. AN, Mahmudulhassan, Muthoifin, Waston, and S. Hidayat, "Research Trends In Quranic And Biblical Studies: A Bibliometric Analysis Of Islamic And Christian Scholarship (2019-2024) Andri Nirwana. AN*, Mahmudulhassan, Muthoifin, Waston, Syamsul Hidayat Faculty of Islamic Studies, Universitas Muhammadiyah Surakarta," *Rev. Iberoam. Psicol. DEL Ejerc. Y EL Deport.*, vol. 19, no. 4148, pp. 343–349, 2024.
- [27] M. Kelkusa, M. Mahmudulhassan, D. Anurogo, and U. A. Syarif, "The Phenomenon and Existence of Corruption in the 5.0 Era: Moral and Ethical Perspectives," *Solo Int. Collab. Publ. Soc. Sci. Humanit.*, vol. 1, no. 02, pp. 78–87, Oct. 2023, doi: <https://doi.org/10.61455/sicopus.v1i02.37>.
- [28] M. Mahmudulhassan and M. Abuzar, "Harmony in the Family: Indicators of Marriage Success in Cultural and Religious Foundations in Bangladesh," *Demak Univers. J. Islam Sharia*, vol. 2, no. 03, pp. 221–230, May 2024, doi: <https://doi.org/10.61455/deujis.v2i03.136>.
- [29] M. Ishaque, Mahmudulhassan, and M. Abuzar, "Global Contributions to Mental Health Research in Muslim Communities : A Bibliometric Approach to Islamic Education," vol. 3, no. 2, pp. 315–338, 2025, doi: <https://doi.org/10.69526/bir.v3i2.333>.
- [30] N. D. Ndwandwe, "Barriers to implementing peace education in secondary schools in South Africa," *J. Peace Educ.*, 2024, doi:

- <https://doi.org/10.1080/17400201.2024.2367966>.
- [31] M. Ashraf and A. Huma, "Professional development needs of primary school teachers in Khyber Pakhtunkhwa to teach peace," *Educ. 3-13*, vol. 48, no. 4, pp. 405-412, 2020, doi: <https://doi.org/10.1080/03004279.2019.1614085>.
 - [32] R. Smith, P. Snow, T. Serry, and L. Hammond, "Elementary Teachers' Perspectives on Teaching Reading Comprehension," *Lang. Speech. Hear. Serv. Sch.*, vol. 54, no. 3, pp. 888-913, 2023, doi: https://doi.org/10.1044/2023_LSHSS-22-00118.
 - [33] T. Şimşek, "An Overview of Teacher Schools in the Last Period of the Ottoman State," *Milli Egit.*, vol. 52, no. 238, pp. 1065-1088, 2023, doi: <https://doi.org/10.37669/milliegitim.1107512>.
 - [34] N. Dasoo, "Student Teachers' Experience of Values Education and Its Implications for Teacher Education," in *Springer International Handbooks of Education*, vol. Part F1708, Department of Education and Curriculum Studies, University of Johannesburg, Johannesburg, South Africa: Springer Nature, 2023, pp. 855-868. doi: https://doi.org/10.1007/978-3-031-24420-9_47.
 - [35] M. Zembylas, L. Loukaidis, and M. Antoniou, "The politicisation and securitisation of religious education in Greek-Cypriot schools," *Eur. Educ. Res. J.*, vol. 18, no. 1, pp. 69-84, 2019, doi: <https://doi.org/10.1177/1474904118788990>.
 - [36] N. A. Manan and A. Rahmat, "Moodle-Based Speaking Learning Model," in *Journal of Physics: Conference Series*, V. S., M. M.B., L. C.-H., G. T.L., M. null, and S. A., Eds., Faculty of Teacher Training and Education, STKIP Muhammadiyah Kuningan, Kuningan, Indonesia: Institute of Physics Publishing, 2020. doi: <https://doi.org/10.1088/1742-6596/1477/4/042009>.
 - [37] J. S. Nfundiko, "Teaching peace: The impact of a teacher training program on the peacebuilding process in the Eastern DRC," in *Conflict Resolution - Actors, Dynamics, and Cases*, Katholieke Universiteit Leuven, Leuven, Belgium: Nova Science Publishers, Inc., 2021, pp. 147-170. [Online]. Available: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85108400878&partnerID=40&md5=399f78db1f0affafb1a88dca1f660cca>
 - [38] A. Cabrera-Vázquez, C. G. del Pino, E. M. Romera, D. Falla, and R. Ortega-Ruiz, "Civic moral disengagement, empathy and attitudes of prospective teachers towards cultural diversity," *Aula Abierta*, vol. 51, no. 3, pp. 285-292, 2022, doi: <https://doi.org/10.17811/rifie.51.3.2022.285-292>.

- [39] C. S. L. Teo, "Beyond Academic Grades: Reflections on My Care for University Students' Holistic Development in Singapore," *Int. J. TESOL Stud.*, vol. 5, no. 3, pp. 71–83, 2023, doi: <https://doi.org/10.58304/ijts.20230306>.
- [40] R. D. Dombrowski, J. Mallare, M. E. Auld, C. Hughes, and J. Fuhrmeister, "Quality of Health Education Teacher Preparation Program Curricula Throughout the United States," *J. Sch. Health*, vol. 94, no. 8, pp. 697–707, 2024, doi: <https://doi.org/10.1111/josh.13475>.
- [41] M. A. Oltra Albiach, "Puppets and education: ideas, beliefs, and school practices of Spanish teachers," *Res. Drama Educ.*, vol. 28, no. 4, pp. 554–562, 2023, doi: <https://doi.org/10.1080/13569783.2023.2256233>.
- [42] I. Mosquera-Gende, "Digital Competence of Future English Language Teachers: Influence of Age and Gender on Their Self-perception," *Forum Linguist. Stud.*, vol. 6, no. 3, pp. 357–373, 2024, doi: <https://doi.org/10.30564/fls.v6i3.6613>.
- [43] M. Celebre-Baird and D. B. Reid, "Exploring teachers' perceptions of assessment literacy in a high-performing school district in New Jersey," *Teach. Teach. Theory Pract.*, vol. 30, no. 3, pp. 310–326, 2024, doi: <https://doi.org/10.1080/13540602.2023.2252344>.
- [44] M. Fernández Álvarez and S. García Hernández, "Teachers' perceptions of linguistic mediation in the curriculum for advanced English in Madrid secondary schools," *Lang. Teach. Res.*, vol. 28, no. 2, pp. 389–412, 2024, doi: <https://doi.org/10.1177/13621688211005602>.
- [45] A. N. An et al., "Examining Religious Coexistence: Perspectives from the Quran and Hadith in the Context of Bangladesh," *Int. J. Relig.*, vol. 5, no. 10, pp. 718–731, 2024, doi: <https://doi.org/10.61707/yyd0mm12>.
- [46] A. Diana, M. Z. Azani, and M. M., "The Concept And Context Of Islamic Education Learning In The Digital Era: Relevance And Integrative Studies," *Profetika J. Stud. Islam*, vol. 25, no. 01, pp. 33–44, Feb. 2024, doi: <https://doi.org/10.23917/profetika.v25i01.4239>.
- [47] I. Afiyah, V. G. Macsudov, Mahmudulhassan, and Muthoifin, "Impact Analysis of Marital Dispensation: Economic Implications and Family Welfare in Social and Legal Context," *Solo Int. Colab. Publ. Soc. Sci. Humanit. Publ. Soc. Sci. Humanit.*, vol. 2, no. 1, pp. 25–36, 2024.
- [48] A. Wahid, D. P. Erdina, and M. Mahmudulhassan, "Study of the Practice of Reading Surah Al-Isra Verses 79-82 At Duha Time At Hidayatul Islamiyah Pesantren," *QiST J. Quran Tafseer Stud.*, vol. 1, no. 3, pp. 290–

- 306, 2022, doi: <https://doi.org/10.23917/qist.v1i3.2766>.
- [49] Mahmudulhassan, A. Nirwana, and K. Saif Uddin Ahmed, "Exploring the Contributions of Prof. Dr. Syed Ali Ashraf to the Islamization of Knowledge in Bangladesh: A Comprehensive Analysis," *J. World Thinkers*, vol. 1, no. 1, pp. 91–98, 2024.
 - [50] Mahmudulhassan and I. Afiyah, "Professional Zakat as a Catalyst for Welfare: Strategic Mapping for Sustainable Economic Growth in Semarang," *Demak Univers. J. Islam Sharia*, vol. 2, no. 3, pp. 199–210, 2024.
 - [51] N. E. P. Espejo, D. Y. R. Ochoa, L. E. M. Barrera, D. V. F. Valencia, and C. M. O. Montoya, "[en] Bibliographic and Documentary Heritage of the Universidad Pedagógica y Tecnológica de Colombia: Teacher training Schools Collection. Information course 1932," *Rev. Gen. Inf. y Doc.*, vol. 33, no. 2, pp. 337–352, 2023, doi: <https://doi.org/10.5209/RGID.84302>.
 - [52] N. E. Pardo Espejo, D. Y. R. Ochoa, L. E. M. Barrera, D. V. F. Valencia, and C. M. O. Montoya, "Bibliographic and Documentary Heritage of the Universidad Pedagógica y Tecnológica de Colombia: Teacher training Schools Collection. Information course 1932," *Rev. Filos.*, vol. 33, no. 2, pp. 337–352, 2023, doi: <https://doi.org/10.5209/rgid.84302>.
 - [53] T. Zhou, H. Wang, and D. Li, "Focusing on the value of cooperative learning in physical education: a bibliometric analysis," *Front. Psychol.*, vol. 14, 2023, doi: <https://doi.org/10.3389/fpsyg.2023.1300986>.
 - [54] I. Teixeira and C. Vasconcelos, "The Use of Educational Games to Promote Learning in Geology: Conceptions of Middle and Secondary School Teachers," *Geosci.*, vol. 14, no. 1, 2024, doi: <https://doi.org/10.3390/geosciences14010016>.
 - [55] A. Mathews, "'The Bible Doesn't Say Anything About Trans People, Does it Sir?': Transgender And Transsexual Narratives of the Relationships Between Religion and Education,'" in *Past and Present: Perspectives on Gender and Love*, Catholic sixth form college, United Kingdom: Brill, 2019, pp. 35–44. doi: https://doi.org/10.1163/9781848883918_005.
 - [56] J.-L. Hernández-Marín, M.-D. Castro-Montoya, and S. Figueroa-Rodríguez, "Literacy in Media, Information, and Digital: Self -Perception of Teachers in Telesecundaria Training in Mexico," *Rev. Interam. Bibliotecol.*, vol. 47, no. 2, 2024, doi: <https://doi.org/10.17533/udea.rib.v47n2e353714>.
 - [57] J.-L. Huang, M.-J. Chen, and H.-J. Weng, "Mapping the Categories and Trends of Teacher Education Research: 1980-2020," *J. Res. Educ. Sci.*, vol.

- 67, no. 3, pp. 1–35, 2022, doi: [https://doi.org/10.6209/JORIES.202209_67\(3\).0001](https://doi.org/10.6209/JORIES.202209_67(3).0001).
- [58] F. Guerra-Reyes, E. Guerra-Dávila, M. Naranjo-Toro, A. Basantes-Andrade, and S. Guevara-Betancourt, "Misconceptions in the Learning of Natural Sciences: A Systematic Review," *Educ. Sci.*, vol. 14, no. 5, 2024, doi: <https://doi.org/10.3390/educsci14050497>.
- [59] A. Tantowi, H. Ibda, K. Saifuddin, M. Baehaqi, and Z. Khaq, "Teacher Performance in Online Learning during the COVID-19 Pandemic: A Systematic Literature Review," *Int. J. Adv. Sci. Eng. Inf. Technol.*, vol. 13, no. 4, pp. 1492–1500, 2023, doi: <https://doi.org/10.18517/ijaseit.13.4.18164>.
- [60] M. M. Olmo and B. G. Alba, "Training in digital competence of teachers of primary and early childhood education in Spain. A bibliometric review of the literature," *Publicaciones la Fac. Educ. y Humanidades del Campus Melilla*, vol. 53, no. 1, pp. 163–186, 2023, doi: <https://doi.org/10.30827/publicaciones.v53i1.27990>.
- [61] T. H. Cruz, D. E. Ross-Reed, C. A. FitzGerald, K. Overton, E. Landrau-Cribbs, and M. Schiff, "Effects of School Policies and Programs on Violence Among All High School Students and Sexual and Gender Minority Students," *J. Sch. Health*, vol. 93, no. 8, pp. 679–689, 2023, doi: <https://doi.org/10.1111/josh.13297>.
- [62] S. Makeleni, B. H. Mutongoza, M. A. Linake, and O. G. Ndu, "Teacher Self-Efficacy and Learner Assessment: A Perspective from Literature on South African Indigenous Languages in the Foundation Phase," *J. Curric. Stud. Res.*, vol. 5, no. 3, pp. 44–64, 2023, doi: <https://doi.org/10.46303/jcsr.2023.30>.
- [63] E. C. M. Moura, "The protagonism of the national technical school in teacher education: What monuments and mathematics say," *Educ. Real.*, vol. 46, no. 2, 2021, doi: <https://doi.org/10.1590/2175-6236112166>.
- [64] M. Imran, N. Almusharraf, and M. S. Abdellatif, "Education for a Sustainable Future: The Impact of Environmental Education on Shaping Sustainable Values and Attitudes among Students," *Int. J. Eng. Pedagog.*, vol. 14, no. 6, pp. 155–171, 2024, doi: <https://doi.org/10.3991/ijep.v14i6.48659>.
- [65] M. L. Salvatori and D. Cherubini, "Gender stereotypes in physical education: state of the art and future perspectives in primary school," *Pedagog. Phys. Cult. Sport.*, vol. 28, no. 3, pp. 231–238, 2024, doi: <https://doi.org/10.15561/26649837.2024.0308>.

- [66] V. Cautín-Epifani, J. Gladic, C. González, and R. Arellano, "Beliefs of teachers in training regarding the use of Chilean voseo in the everyday and educational context," *Circ. Linguist. Apl. a la Comun.*, vol. 96, pp. 143–173, 2023, doi: <https://doi.org/10.5209/clac.77598>.
- [67] K. Moore, "James bonwick: Australian school inspector and fellenberg disciple," *Paedagog. Hist.*, vol. 55, no. 2, pp. 183–206, 2019, doi: <https://doi.org/10.1080/00309230.2018.1499782>.
- [68] M. Lahti et al., "Competences for promoting mental health in primary school," *Health Educ. J.*, vol. 82, no. 5, pp. 529–541, 2023, doi: <https://doi.org/10.1177/00178969231173270>.
- [69] V. R. Nickel, "Children Don't Like Eating What They're Supposed to Eat... A Study of Public Catering for Children in Hungary from a Historical Perspective," *Acta Ethnogr. Hungarica*, vol. 68, no. 1, pp. 53–77, 2024, doi: <https://doi.org/10.1556/022.2023.00029>.
- [70] N. E. Lorenzo, D. Cornacchio, T. Chou, S. M. S. Kurtz, J. M. Furr, and J. S. Comer, "Expanding Treatment Options for Children With Selective Mutism: Rationale, Principles, and Procedures for an Intensive Group Behavioral Treatment," *Cogn. Behav. Pract.*, vol. 28, no. 3, pp. 379–392, 2021, doi: <https://doi.org/10.1016/j.cbpra.2020.06.002>.
- [71] A. Daubney and M. Fautley, "Editorial Research: Music education in a time of pandemic," *Br. J. Music Educ.*, vol. 37, no. 2, pp. 107–114, 2020, doi: <https://doi.org/10.1017/S0265051720000133>.
- [72] R. Allan, "Reserved for Research? Normalising Corpus Use for School Teachers," *NJES Nord. J. English Stud.*, vol. 22, no. 1, pp. 68–92, 2023, doi: <https://doi.org/10.35360/njes.795>.
- [73] K. J. Davin and R. Donato, "Stories of struggle and resilience: Examining the experiences of two Spanish teachers through history in person," *Mod. Lang. J.*, vol. 108, no. 3, pp. 670–687, 2024, doi: <https://doi.org/10.1111/modl.12947>.
- [74] K. L. Berdeaux, D. C. Lerman, and S. D. Williams, "Effects of environmental distractions on teachers' procedural integrity with three function-based treatments," *J. Appl. Behav. Anal.*, vol. 55, no. 3, pp. 832–850, 2022, doi: <https://doi.org/10.1002/jaba.918>.
- [75] K. Noble, "'Getting Hands On with Other Creative Minds': Establishing a Community of Practice around Primary Art and Design at the Art Museum," *Int. J. Art Des. Educ.*, vol. 40, no. 3, pp. 615–629, 2021, doi: <https://doi.org/10.1111/jade.12371>.

- [76] S. S. Abdoola, R. Mosca, and B. S. Pillay, "Responsive communication coaching for early childhood practitioners in underserved south african contexts: Clinical perspectives," *South African J. Commun. Disord.*, vol. 66, no. 1, 2019, doi: <https://doi.org/10.4102/sajcd.v66i1.608>.
- [77] E. Ada and E. Kartal, "Professional anxieties of preschool teacher candidates," *Elem. Educ. Online*, vol. 19, no. 4, pp. 2017–2031, 2020, doi: <https://doi.org/10.17051/ilkonline.2020.763209>.
- [78] B. Wang et al., "The Effectiveness of Two Implementation Strategies for Improving Teachers' Delivery of an Evidenced-based HIV Prevention Program," *Prev. Sci.*, vol. 23, no. 6, pp. 889–899, 2022, doi: <https://doi.org/10.1007/s11121-022-01335-x>.
- [79] Z. Aguirre-Muñoz, M. Pando, and C. Liu, "Enhancing Bilingual/ESL Teachers' STEM Instruction with Targeted Content and Disciplinary Literacy Professional Development: A Study on Knowledge and Practice Outcomes," *Educ. Sci.*, vol. 14, no. 7, 2024, doi: <https://doi.org/0.3390/educsci14070745>.
- [80] B. Wang et al., "Effects of Teacher Training and Continued Support on the Delivery of an Evidence-Based HIV Prevention Program: Findings From a National Implementation Study in the Bahamas," *Heal. Educ. Behav.*, vol. 50, no. 6, pp. 770–782, 2023, doi: <https://doi.org/10.1177/10901981231195881>.
- [81] L. J. Zhang, J. Fathi, and F. Mohammaddokht, "Predicting Teaching Enjoyment from Teachers' Perceived School Climate, Self-Efficacy, and Psychological Wellbeing at Work: EFL Teachers," *Percept. Mot. Skills*, vol. 130, no. 5, pp. 2269–2299, 2023, doi: <https://doi.org/10.1177/00315125231182269>.
- [82] N. Baghian et al., "Barriers to Mental and Social Health Programs in Schools: A Qualitative Study," *Iran. J. Psychiatry*, vol. 18, no. 2, pp. 97–107, 2023, doi: <https://doi.org/10.18502/ijps.v18i2.12360>.
- [83] D. Hillmayr, L. Ziernwald, F. Reinhold, S. I. Hofer, and K. M. Reiss, "The potential of digital tools to enhance mathematics and science learning in secondary schools: A context-specific meta-analysis," *Comput. Educ.*, vol. 153, 2020, doi: <https://doi.org/10.1016/j.compedu.2020.103897>.
- [84] E. Garzón-Artacho, T. Sola-Martínez, J.-M. Romero-Rodríguez, and G. Gómez-García, "Teachers' perceptions of digital competence at the lifelong learning stage," *Heliyon*, vol. 7, no. 7, 2021, doi: <https://doi.org/10.1016/j.heliyon.2021.e07513>.

- [85] J. Spiteri, "Early childhood educators' conceptions of the environment: a 'funds of knowledge' approach," *Environ. Educ. Res.*, vol. 30, no. 1, pp. 1–15, 2024, doi: <https://doi.org/10.1080/13504622.2022.2098932>.
- [86] A. E. Smale-Jacobse, A. Meijer, M. Helms-Lorenz, and R. Maulana, "Differentiated Instruction in Secondary Education: A Systematic Review of Research Evidence," *Front. Psychol.*, vol. 10, 2019, doi: <https://doi.org/10.3389/fpsyg.2019.02366>.
- [87] M. Fazel, E. Soneson, E. Sellars, G. Butler, and A. Stein, "Partnerships at the Interface of Education and Mental Health Services: The Utilisation and Acceptability of the Provision of Specialist Liaison and Teacher Skills Training," *Int. J. Environ. Res. Public Health*, vol. 20, no. 5, 2023, doi: <https://doi.org/10.3390/ijerph20054066>.
- [88] C. Sánchez-Cruzado, R. Santiago Campi3n, and M. T. Sánchez-Compa3a, "Teacher digital literacy: The indisputable challenge after covid-19," *Sustain.*, vol. 13, no. 4, pp. 1–29, 2021, doi: <https://doi.org/10.3390/su13041858>.
- [89] G. Healy, D. Mitchell, and N. Walshe, "Climate Change, Sustainability, and Education: Conceptions of Teachers of Geography in England," *Sustain.*, vol. 16, no. 16, 2024, doi: <https://doi.org/10.3390/su16167213>.
- [90] A. Daly-Smith et al., "Implementing physically active learning: Future directions for research, policy, and practice," *J. Sport Heal. Sci.*, vol. 9, no. 1, pp. 41–49, 2020, doi: [10.1016/j.jshs.2019.05.007](https://doi.org/10.1016/j.jshs.2019.05.007).
- [91] Q. N. Naveed et al., "Evaluating critical success factors in implementing E-learning system using multi-criteria decision-making," *PLoS One*, vol. 15, no. 5, 2020, doi: <https://doi.org/10.1371/journal.pone.0231465>.
- [92] Y. Zhang, M. Stephens, and X. Liu, "Assessment of Chinese primary school mathematics teachers' knowledge of students' misconceptions regarding space and shape," *Asia-Pacific J. Teach. Educ.*, vol. 52, no. 4, pp. 417–440, 2024, doi: <https://doi.org/10.1080/1359866X.2024.2379541>.
- [93] M. N. Ichwan, Mowafg Masuwd, M. Sya'roni, and N. A. Abdulghani, "Muhammad Abduh and Sufism: Building Spiritual Consciousness in the Context of Social Change," *Teosof. J. Tasawuf dan Pemikir. Islam*, vol. 14, no. 1, pp. 163–187, Jun. 2024, doi: <https://doi.org/10.15642/teosofi.2024.14.1.163-187>.
- [94] E. Engkizar et al., "Challenges and Steps in Living Quran and Hadith Research: An Introduction," *Int. J. Multidiscip. Res. High. Educ.*, vol. 8, no. 3, pp. 426–435, 2025, doi: <https://doi.org/10.24036/ijmurhica.v8i3.396>.

- [95] Paisun, Syarifah, and M. Masuwd, "Investigating The Relationship Between Teacher Self-Efficacy and Student Achievement," *Andragogi J. Pendidik. dan Pembelajaran*, vol. 4, no. 2, pp. 98-104, Aug. 2024, doi: <https://doi.org/10.31538/adrg.v4i2.1303>.
- [96] A. J. Fuad and M. Masuwd, "Religiosity and its Relationship with the Tolerance Attitudes of Higher Education Students," *Tribakti J. Pemikir. Keislaman.*, vol. 34, no. 2, pp. 213-228, Jul. 2023, doi: <https://doi.org/10.33367/tribakti.v34i2.3617>.
- [97] M. N. Ichwan, A. H. A. Ulama'i, M. A. Masuwd, and N. A. Abdulghani, "Sufism And Quranic Interpretation: Bridging Spirituality, Culture, and Political Discourse in Muslim Societies," *Ullumuna*, vol. 28, no. 2, pp. 655-689, Dec. 2024, doi: <https://doi.org/10.20414/ujs.v28i2.1082>.
- [98] M. Masuwd, E. D. Sumanik, S. Sarkawi, and M. A. B. Amer, "Measuring foreign language anxiety: Concerning students' motivation and their self-perception," *Int. J. Teach. Learn.*, vol. 2, no. 8, pp. 2087-2099, 2024, [Online]. Available: <https://injournal.org/index.php/12/article/view/233>
- [99] M. Fatimah, M. Mustofa, Rizkiy Pratama Putra, M. M. Abu Zinah, and M. Masuwd, "OPTIMIZATION OF THE PRINCIPAL'S ROLE AS A SUPERVISOR TO IMPROVE THE PERFORMANCE OF TEACHERS IN SURAKARTA," *Profetika J. Stud. Islam*, vol. 24, no. 02, pp. 207-216, Aug. 2023, doi: <https://doi.org/10.23917/profetika.v24i02.1986>.
- [100] I. S. Milsih, W. Fitri, and M. A. Masuwd, "THE TERM AL-HADID IN CLASSICAL AND CONTEMPORARY INTERPRETATION (COMPARATIVE STUDY OF THE QUR'AN & ITS TAFSEER AND TAFSIR MAFATIH AL GHAIB)," *QiST J. Quran Tafseer Stud.*, vol. 1, no. 3, pp. 343-379, Dec. 2022, doi: <https://doi.org/10.23917/qist.v1i3.2058>.
- [101] M. Sa'diyah, M. A. Masuwd, and A. F. Supandi, "Legal Problems Using AstraZeneca Vaccine: Hermeneutic Analysis of the Fatwa of the Indonesian Ulema Council," *JIL J. Islam. Law*, vol. 3, no. 1, pp. 1-16, Jan. 2022, doi: <https://doi.org/10.24260/jil.v3i1.496>.

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