



The Development of Teacherpreneurs in Education: a Bibliometric Review (2000 - 2023)

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ABSTRAK

Teachers need one of the competencies in this era of global disruption: teacherpreneurism. This study aims to explore the research objectives of teacherpreneurs in education from 2000 to 2023 by systematically mapping the scientific literature. This study used a bibliometric approach to map research on teacherpreneurs using data from Scopus, refined to 72 publications, and mapped using VOSviewer. The main findings are: The peak of publications is in 2021, with 13 articles. The United States is the most influential, with 11 publications and international collaborations. Most journals are ranked Q1. Key topics include entrepreneurship education, teacher entrepreneurship, entrepreneurial competence, and the role of educators. These findings help identify role models, potential collaborations, and new research questions about teacherpreneurs.

Keyword: *Teacherpreneur; teacherpreneurship; Entrepreneurial Teacher; Entrepreneur teacher; Entrepreneurship Education.*

INTRODUCTION

In the ever-evolving educational and business landscape, the concept of the "teacherpreneur" has gained prominence (Arruti & Paños-Castro, 2020). The term encapsulates the fusion of teaching and entrepreneurship and represents educators using their skills, knowledge, and ideas to create learning innovations (Shelton, C., Geiger, T., & Archambault, 2021). Teachers can also foster and utilize an entrepreneurial mindset in their teaching practices to generate student learning motivation (Listiningrum et al., 2020). For graduates to have the skills and creativity needed in the global era, entrepreneurship education is crucial. Entrepreneurship education should be provided at all levels of education from an early stage (Rina et al., 2019).

Students' entrepreneurial skills can develop with the help of teachers. Teachers need specialized knowledge, skills, and attitudes that can help students learn in a supportive environment (Toding et al., 2023). Teacherpreneurship is a hallmark of professional educators. It instills in teachers an entrepreneurial mindset that drives them to innovate in their teaching methods and other educational activities (Feriady et al., 2020).

The teacherpreneur perspective has recently begun to attract the attention of researchers. Teacherpreneurs are widely associated with online teacherpreneurs (Sawyer et al., 2020; Shelton, C., Geiger, T., & Archambault, 2021; C. C. Shelton & Archambault, 2019; Xu & Hewlett, 2023). Besides teacherpreneur in formal education is associated with vocational education, teacher education, and even basic education (Handayani & Ridlo, 2020; Lasekan et al., 2020; Paños-Castro & Arruti, 2020; Pilkita et al., 2022). Meanwhile, in (Keyhani & Kim, 2021), there is a point of view that states that teacherpreneurs are teachers or educators who closely associate their work with some kind of business development. In this study, the teacherpreneurs referred to in (Mahendra et al., 2019) are not teachers or educators who focus on buying and selling businesses. Instead, it refers to a teacher who is deeply committed to his or her work and strives to improve the quality of learning through creativity and innovation. Teacherpreneurs are distinguished by their leadership skills, extensive teaching knowledge, deep understanding of learning strategies, and commitment and ability to share their expertise with others. This research seeks to capture the diverse views of teacherpreneurs.

The primary goal of this bibliometric analysis is to create a comprehensive map of teacherpreneur research by identifying key areas of study: (1) publication

trends; (2) countries of origin; (3) country collaborative networks; (4) journal rankings; (5) teacherpreneur research keywords. Each point will be presented in different tables and figures to make it easier for readers to understand the information presented. The results will be useful for readers to identify role models in writing about teacherpreneurs, to identify potential collaborations with authors and institutions across countries, and to develop new questions about teacherpreneurs in existing research areas or, conversely, to develop existing questions in these areas into new research areas.

TEACHERPRENEUR IN EDUCATION

The first literature review on teacherpreneurs in 2000 presented new perceptions of the work of GP tutors resulting from an in-depth study in one region of the UK between 1997 and 1998 (Singleton et al., 2000). The research described different strategies to overcome the barriers they faced in applying adult learning theory in a particular setting. The result was the use of additional categories, including entrepreneurial character. The research article (Berry, 2013) further discussed teacherpreneur education as the future of teaching and learning. Then, the research on teacherpreneurs continues to grow, followed by several researchers such as (C. Shelton & Archambault, 2018) who discusses improving teacher professionalism through online teacher pay, (Paños-Castro & Arruti, 2020) who discuss the perspective of teacher performance competencies in terms of entrepreneurial competencies. Some researchers were such (Lasekan et al., 2020; Mahendra et al., 2019; Suyudi et al., 2020) further discuss teacherpreneurship in primary, secondary, and even higher education, such as training for future teachers.

Teacherpreneurs are in the spotlight globally, driven by the need for educational innovation and teachers' desire for greater autonomy and impact (Fadil, n.d.). Teacherpreneurs play a critical role in curriculum development, ensuring that educational content is relevant, engaging, and aligned with real-world needs (Zhao & Watterston, 2021). While the future holds great opportunities for teacherpreneurs to leverage digital technologies, issues of quality assurance and intellectual property rights pose significant challenges (Epler, 2019). Policy support, professional development programs, and access to funding are essential to fostering the growth of teacherpreneurs and enabling educators to develop an entrepreneurial mindset (Roundy, 2022).

A teacherpreneur will continuously strive to use technology, create new learning programs, and collaborate with various parties to improve the learning experience of students (Shetty & Dhannur, 2020). They also can identify opportunities, manage projects, and implement new ideas that can improve teaching effectiveness (Feriady et al., 2020). Therefore, although the literature on teacherpreneurs is still limited, education researchers and practitioners need to begin to pay attention to and explore this concept more deeply. Fostering and supporting teacherpreneurs can greatly benefit the education system by improving the quality of learning and enabling adaptation to the rapidly changing educational landscape. This support can take the form of training, providing resources, and recognizing the innovative efforts of teacherpreneurs (C. C. C. Shelton, 2018).

In analyzing the various literature on teacherpreneurs, it is still very rare to discuss the importance of teacherpreneurs in education. This is because the term teacherpreneur is rarely used. When analyzing the teacherpreneur, most researchers use the term teacher entrepreneurial character or teacher entrepreneurial competence. In addition, teacherpreneurship can be discussed several times in research on teacher leadership. Although the term "teacherpreneur" is not widely recognized, the role of a teacherpreneur is critical to improving the quality of education. Teacherpreneurs are teachers who not only teach but also innovate and take the initiative to create positive change in education. They combine pedagogical and entrepreneurial skills to develop creative solutions that can overcome various educational challenges.

METHODS

In order to search and find data sources related to "teacherpreneurial competence in education", the researchers used the Scopus database because of its comprehensive interdisciplinary coverage. The analysis was carried out in four steps: (1) collecting document records from the Scopus article database, (2) preprocessing and filtering these records, (3) constructing and visualizing the network, and (4) analyzing and interpreting the results (Han et al., 2020).

The first step was to collect records from the Scopus database. The researcher entered keywords to search the database. The keywords entered by the researchers are ("teacher" AND "entrepreneur") OR ("teacherpreneur"). From the search results, 596 publication data were obtained. The next step is to preprocess and filter the data set. The researchers filter the data according to specific criteria: publications must be in English, in the form of journal articles,

and published between the years 2000 and 2023. From the results of filtering this dataset, 289 publication documents were obtained that corresponded to the previously specified criteria. This means that 307 publication data are discarded and do not follow the next process. The researchers then manually assessed the eligibility of these 289 publication records by examining the titles, reading the abstracts, and assessing whether the publications included variables related to teacher entrepreneurs and teacherpreneurs. This process resulted in 72 eligible publications for the next phase.

These data were collected in the third week of December 2023 during the network construction and visualization phase using the VOSviewer application. Publication trends related to entrepreneurial teachers and teacherpreneurs, derived from the Scopus database, are analyzed and interpreted using bibliometric analysis. These trends are visually presented using VOSviewer and Microsoft Excel software.

The publication and citation trends from 2000 to 2023 are broken down by year, with the number of publications per year presented in tabular form using Microsoft Excel. The average citations per publication are calculated using Publish or Perish software and Microsoft Excel. The geographical distribution of publications by country is also shown using Microsoft Excel, while international collaborations are visualized using VOSviewer. Research focus areas related to teacherpreneurs are identified by analyzing keyword occurrences with VOSviewer, with a minimum threshold of three publications using the same keywords as defined by the researchers..

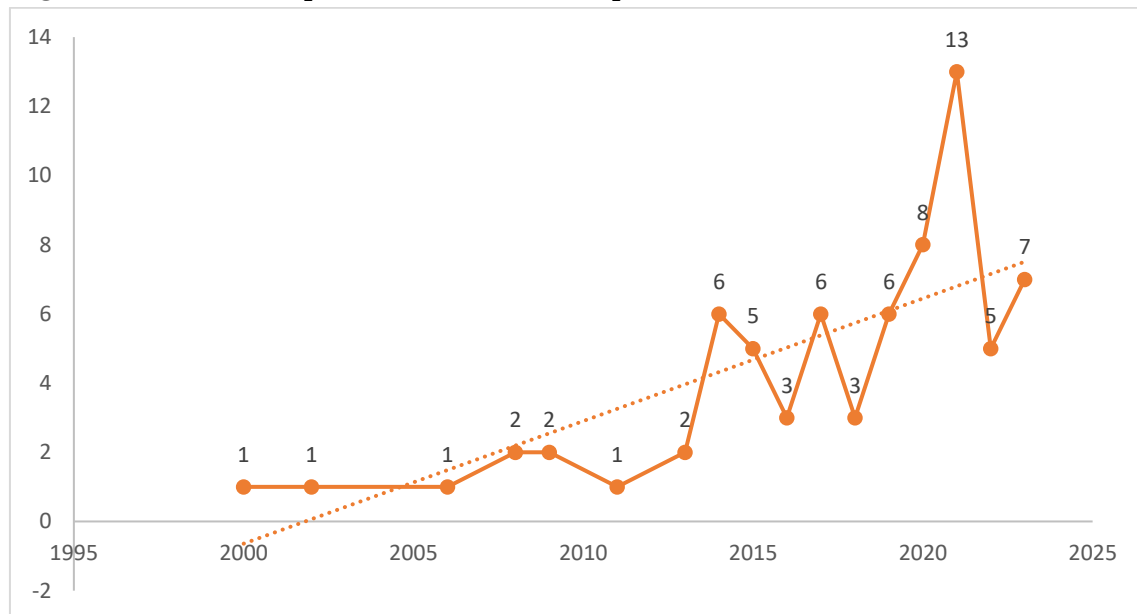
RESULTS AND DISCUSSION

Annual Publication Trends

This dataset contains 72 documents and has been cited 668 times in 23 years. The initial idea of teacherpreneurs in education dates back to 1986 when (Parker, 1986) wrote "*Teachers as Entrepreneurs: Practicability or Pipe Dream?*" a conceptual paper in the journal Economics Affair. However, after the first article, there were few publications on teacherpreneurs in education until 2000. Between 2000 and 2023, the number of publications on this topic fluctuated significantly. Since 2013, there has been an increasing trend in publications on teacherpreneurs in education, reaching a peak of 13 titles in Scopus in 2021. It is expected that the interest in this topic will continue to grow in different databases in the coming years. Based on the Scopus database and the criteria in the analysis and

interpretation step, this study retrieved 72 publications on teacherpreneurs in different countries from 2000 to 2023. The annual number of publications can indicate the trend of development within a particular field. The 72 publications were categorized according to their year of publication, as shown in Figure 1.

Figure 1. The annual publication of Teacherpreneur (2000-2023)



Based on Figure 1, the annual publication trend of Teacherpreneur research from 2000-2023 has minimal growth from 2000 to 2023. Significant developments were in 2019 to 2021, especially when the COVID-19 pandemic took place in 2021, experiencing a surge in research with 13 publications. This means that teacherpreneurs are in the spotlight when there is a lot of learning with distance learning conditions.

Citation Trends of Teacherpreneur

Citation trends for teacherpreneurs from 2000 to 2023 are shown in Table 1. Similar to the annual publication trends, 72 publications were categorized based on their respective years of publication. These publications were analyzed for metrics such as total publications per year, non-cumulative publications (NCP), total citations (TC), citations per publication (C/P), and other relevant indicators, as shown in Table 1.

Table 1. Analysis of citations in scientific publications

Year	TP	NCP	TC	C/P	C/CP	h	g
2000	1	1	4	1.0	4	1	1
2002	1	1	6	1.0	6	1	1
2006	1	1	2	1.0	2	1	1

2008	2	2	65	1.0	33	2	2
2009	2	2	14	1.0	7	2	2
2011	1	1	7	1.0	7	1	1
2013	2	1	2	0.5	2	1	1
2014	6	5	136	0.8	27	4	6
2015	5	2	7	0.4	4	1	2
2016	3	3	9	1.0	3	2	3
2017	6	6	135	1.0	23	5	6
2018	3	3	39	1.0	13	2	3
2019	6	5	48	0.8	10	4	6
2020	8	7	27	0.9	4	2	5
2021	13	12	154	0.9	13	6	12
2022	5	3	4	0.6	1	1	1
2023	7	3	9	0.4	3	2	3

Notes. TP = total publications, NCP = number of cited publications, TC = total citations, C/P = average citations per publication, C/CP = average citations per cited publication, h = h-index, g = g-index

From Table 1 above, we can see that the NCP value in 2021 is 12, making it the year with the highest NCP compared to other years. In addition, in terms of citations, publications from 2021 received more citations than any other year, with a total of 154 citations. This indicates that 2021 had a significant research impact, although there are years with no publications and low citation counts. This underscores 2021's significant impact on research related to teacherpreneurs. The top ten most cited articles published in 2021 are listed in Table 2 below.

Table 2. Most cited articles published in 2021.

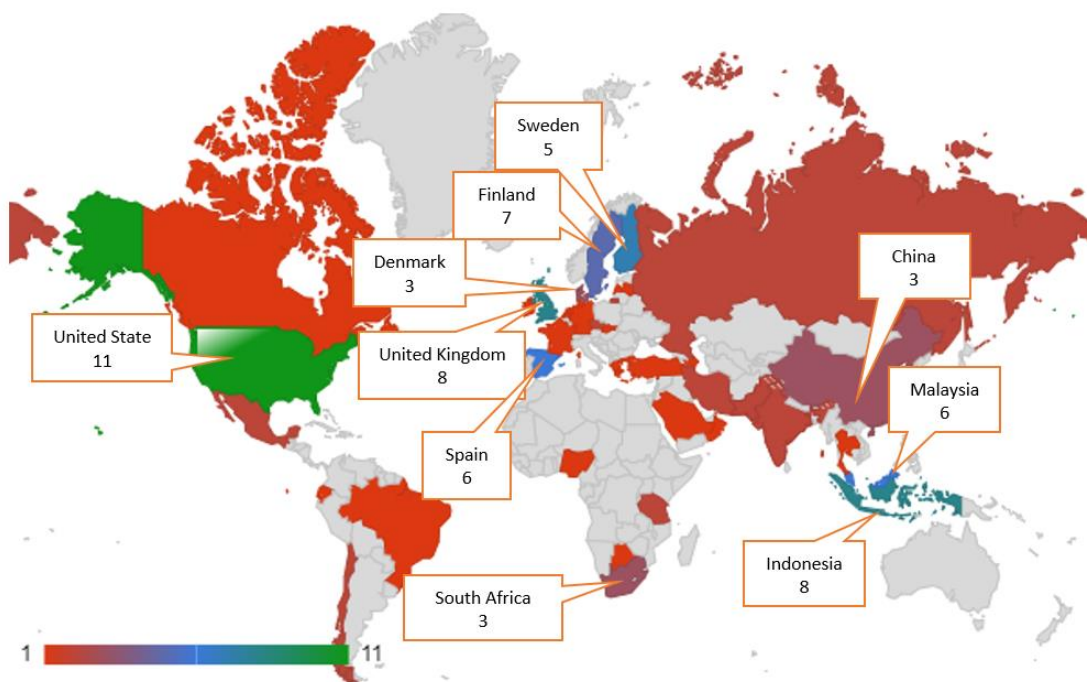
References	Year	Publisher	Cited by
(Keyhani & Kim, 2021)	2021	Entrepreneurship Education and Pedagogy	14
(San-Martín et al., 2021)	2021	International Journal of Management Education	20
(Ramírez-Montoya et al., 2021)	2021	Future Internet	33
(Ajayi, 2021)	2021	International Journal of Learning, Teaching, and Educational Research	2
(Maldonado Briegas et al., 2021)	2021	Frontiers in Psychology	2

(Ahmed & Ganapathy, 2021)	2021	Academy of Entrepreneurship Journal	20
(Gupta, 2021)	2021	Critical Studies in Education	29
(Zulfiqar et al., 2021)	2021	Sustainability (Switzerland)	23
(Slišāne et al., 2021)	2021	Sustainability (Switzerland)	6
(Pech et al., 2021)	2021	Journal on Efficiency and Responsibility in Education and Science	2

Geographical Distribution and International Relations

Figure 2 shows the countries of origin of the authors contributing to the publications. The geographical distribution shows the presence of the 37 countries with the highest number of publications..

Figure 2. Geographical distribution of the publications.



Based on the data presented in Figure 2 above, it is evident that the United States has the greatest influence on teacherpreneur research among the different countries. This is underscored by the 11 publications originating from the United States in this area, which places it in first place. Close behind is the United Kingdom, the second most influential country in teacherpreneur research, with 8 publications. The data distribution shows that many countries outside of the Americas and Asia have contributed fewer publications in this area and have minimal representation among the 37 countries mentioned. This underscores the dominance of the

Americas and Asia, particularly the United States, in publications related to teacherpreneurship.

Patterns of collaboration between countries are shown in Figure 3 below. At this point, the researchers did not set a threshold, so countries with only one document related to the field are included, regardless of their collaboration status with other nations. Countries linked to the 37 countries mentioned are shown in Figure 4 below.

Figure 3. Patterns of collaboration within each country

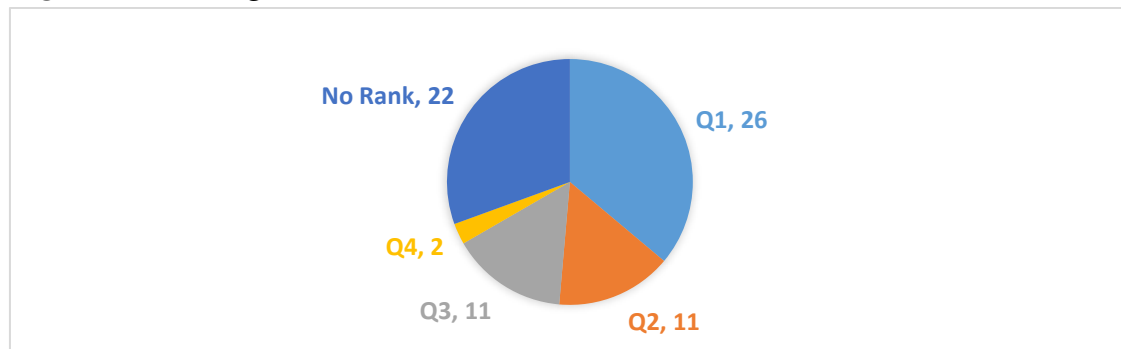


Figure 3 illustrates that the circles representing the United States, United Kingdom, Finland, and Indonesia are notably larger in diameter compared to other countries, suggesting extensive collaboration with other nations. The VOSviewer visualization reveals that among the 37 countries publishing articles on teacherpreneurs, only 13 have engaged in collaborations with other countries.

Journal Ranking of Teacherpreneur Publications

Journal rankings for publications related to teacherpreneurs are assessed using quartile (Q) values of education-related journals obtained from the Scimagojr website. The distribution of these journal rankings is shown in Figure 4 below.

Figure 4. Ranking based on Journal Quartile Score.



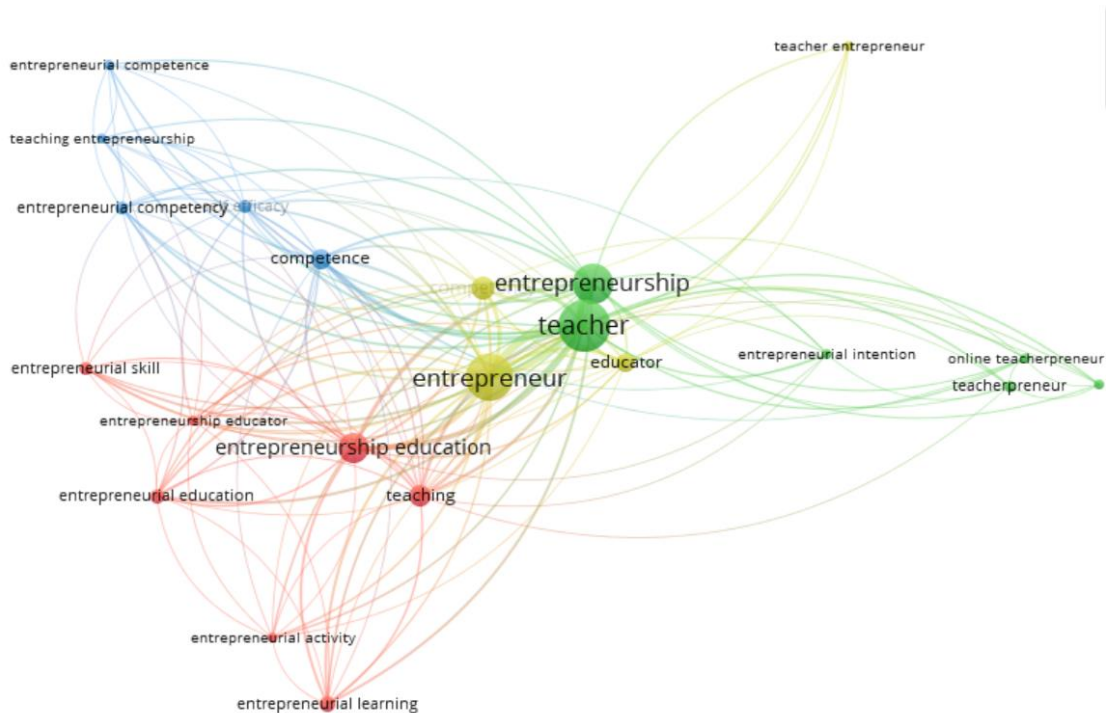
In Figure 5 above, journals dedicated to teacherpreneur research in education predominantly fall into the Q1 category, with 26 journals included. After Q1, there are 2 journals ranked as Q2. However, 22 journals have yet to receive a quartile score, indicating that there is still room for improvement in the writing related to teacherpreneurs in education to meet the standards for publication in journals with established quartile scores.

Research themes related to teacherpreneurs

For research topics related to teacherpreneurs, researchers set a threshold for

common keywords appearing in at least three publications to be displayed using VOSviewer. This resulted in a reduction from 197 keywords to only 22 keywords identified as common themes across publications.

Figure 5. Keyword co-occurrence (with a co-occurrence threshold of ≥ 3).



According to Figure 5, the first cluster (highlighted in red) includes 7 items related to entrepreneurship education, including teaching, entrepreneurial education, entrepreneurial learning, entrepreneurial educator, and entrepreneurial skills. The second cluster (in green) reflects the broader aspect of teacherpreneurship, with keywords such as teacher and entrepreneurship, teacherpreneur, online teacherpreneur, and entrepreneurial intention. The third cluster (in blue) highlights entrepreneurial competence in teaching, with keywords such as entrepreneurial competence and teaching entrepreneurship. The fourth cluster (in yellow), the last cluster, focuses on entrepreneurship as it relates to educators and the keyword teacherpreneur.

The four clusters in the dataset show that most publications are about teaching entrepreneurial competencies in entrepreneurship education, including entrepreneurial skills (cluster one), entrepreneurial interest (cluster two), and entrepreneurial competencies (cluster three). This means that education in general has considered teach-entrepreneur competencies as one of the important competencies a teacher needs to have, either as an entrepreneurship teacher or as a teacher in other fields (Kusumaningtyas et al., 2023). However, research on

teacherpreneurs mostly describes teachers who have entrepreneurial competencies and teach entrepreneurship education. Most of the discussion on teacherpreneurs is related to entrepreneurship education. The term teacherpreneur is still rarely researched, as seen from its small keyword circle and far from the keywords, teacher and entrepreneur. Therefore, this is an opportunity for researchers to further develop teacherpreneurs in different countries by developing existing research topics or creating new ones.

CONCLUSIONS

Currently, the number of publications on teacherpreneurship is still relatively small, but given its development over the past 23 years, it is predicted to increase. In education, teacherpreneurship is mostly associated with entrepreneurship education, and the term teacherpreneur itself is still rarely used. Teacherpreneurs are mostly related to teachers of entrepreneurship subjects and are associated with vocational high schools. The common theme in teacherpreneur implies that most of the research that has been published addresses the good practices in entrepreneurship education. This encourages other researchers to discuss how to improve entrepreneurship education and to find new ideas in entrepreneurship education. Regarding publications, international collaboration on Teacherpreneur needs to be strengthened to disseminate research results. No bibliometric analysis method can accurately describe a field's current state and evolution. This research and its results fall within this limitation. Because it used only certain search sources, it may not cover some important publications and topics. Therefore, future research should expand the database sources used (e.g., WoS, Google Scholar, or others) to provide a more complete picture of teacherpreneur research. Despite its limitations, this study is believed to provide an in-depth and relevant review of the teacherpreneur literature, especially in the context of education.

REFERENCES

- Ahmed, A. A. A., & Ganapathy, A. (2021). Creation Of Automated Content With Embedded Artificial Intelligence: A Study On Learning Management System For Educational Entrepreneurship. *Academy of Entrepreneurship Journal*, 27(3), 1–10. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85109429324&partnerID=40&md5=e172c2258e158d403a6a7add252b0fa5>
- Ajayi, O. B. (2021). Teachers' perceptions of the role of entrepreneurship education in the career choice decision-making of business studies learners

- in Gauteng South Africa. *International Journal of Learning, Teaching and Educational Research*, 20(6), 244–257. <https://doi.org/10.26803/IJLTER.20.6.13>
- Arruti, A., & Paños-Castro, J. (2020). International entrepreneurship education for pre-service teachers: a longitudinal study. *Education and Training*, 62(7–8), 825–841. <https://doi.org/10.1108/ET-04-2020-0098>
- Berry, B. (2013). Teacherpreneurs and the future of teaching & learning. *International Journal of Innovation, Creativity and Change*, 1(2). <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85020919937&partnerID=40&md5=81f5217b06682e4e64140e5760423eae>
- Epler, P. (2019). *Enhancing Teaching and Leadership Initiatives With Teacherpreneurs: Emerging Research and Opportunities: Emerging Research and Opportunities*. IGI Global. <https://books.google.co.id/books?id=JILUDwAAQBAJ>
- Fadil, Q. (n.d.). *Pemberdayaan Siswa Di Bidang Kewirausahaan (Studi Kasus Di Sekolah Alam School Of Universe Sou Parung-Bogor)*. Fakultas Ilmu Tarbiyah dan Keguruan, Universitas Islam Negeri (UIN) Syarif~....
- Feriady, M., . H., & Santoso, A. (2020). Teacherpreneurship Determination Toward Teacher Innovation and Competitive Advantage Tin the Disruption Era: Application of Strategic Entrepreneurship Theory in Educational Institutions. *KnE Social Sciences*, 2020(February 2018), 787–797. <https://doi.org/10.18502/kss.v4i6.6642>
- Gupta, A. (2021). Teacher-entrepreneurialism: a case of teacher identity formation in neoliberalizing education space in contemporary India. *Critical Studies in Education*, 62(4), 422–438. <https://doi.org/10.1080/17508487.2019.1708765>
- Han, J., Kang, H. J., Kim, M., & Kwon, G. H. (2020). Mapping the intellectual structure of research on surgery with mixed reality: Bibliometric network analysis (2000–2019). *Journal of Biomedical Informatics*, 109(January), 103516. <https://doi.org/10.1016/j.jbi.2020.103516>
- Handayani, D. F., & Ridlo, S. (2020). The Analysis of Creativity's Correlation and Contribution toward UNNES Biology Teacher Candidate Intention to Become Teacherpreneur. *Journal of Biology Education*, 9(1), 1–10. <http://journal.unnes.ac.id/sju/index.php/ujbe>
- Hernández-Torrano, D., & Ibrayeva, L. (2020). Creativity and education: A bibliometric mapping of the research literature (1975–2019). *Thinking Skills and Creativity*, 35(December 2019), 100625. <https://doi.org/10.1016/j.tsc.2019.100625>
- Keyhani, N., & Kim, M. S. (2021). A Systematic Literature Review of Teacher Entrepreneurship. *Entrepreneurship Education and Pedagogy*, 4(3), 376–395. <https://doi.org/10.1177/2515127420917355>
- Kusumaningtyas, E. D., Sulistiyaningsih, E. F., An, U., Purwodadi, N., & Tengah, J. (2023). *Teacherpreneur Implementation Seen from the Perceptions of Vocational*

High School Teachers in the 21st Era. 3(1), 34–44.

- Lasekan, O. A., Malik, R., & Alarcon, C. M. (2020). A conceptual research model for investigating the impact of online teacherpreneurship education on students' teacherpreneurial competencies and intentions in preservice teacher education. *International Journal of Learning, Teaching and Educational Research*, 19(12), 163–189. <https://doi.org/10.26803/ijlter.19.12.9>
- Listiningrum, H. D., Wisetsri, W., & Boussanlegue, T. (2020). Principal's Entrepreneurship Competence in Improving Teacher's Entrepreneurial Skill in High Schools. *Journal of Social Work and Science Education*, 1(1), 87–95. <https://doi.org/10.52690/jswse.v1i1.20>
- Mahendra, S., Sofyan, H., & Rohmantor, D. (2019). The teacherpreneur character of vocational high school teacher in Indonesia. *International Journal of Recent Technology and Engineering*, 8(2), 5877–5880. <https://doi.org/10.35940/ijrte.B3786.078219>
- Maldonado Briegas, J. J., Citarella, A., Sánchez Iglesias, A. I., Gonzáles Ballester, S., Alvarez Marínez, A. J., & Vicente Castro, F. (2021). Exploring Teachers' Satisfaction and Students' Entrepreneurial Competencies in Four Entrepreneurial Programs Carried Out in Extremadura (Spain) Schools. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.484103>
- Paños-Castro, J., & Arruti, A. (2020). Innovation and entrepreneurship in education, irreconcilable differences? A first approach through Spanish expert judgment. *International Journal of Innovation Science*, 13(3), 299–313. <https://doi.org/10.1108/IJIS-07-2020-0106>
- Parker, D. (1986). Teachers as Entrepreneurs: *Practicability or Pipe Dream?* *Economic Affairs*, 6(4), 40–41. <https://doi.org/10.1111/j.1468-0270.1986.tb01764.x>
- Pech, M., Řehoř, P., & Slabová, M. (2021). Students preferences in teaching methods of entrepreneurship education. *Journal on Efficiency and Responsibility in Education and Science*, 14(2), 66–78. <https://doi.org/10.7160/eriesj.2021.140201>
- Pilkita, L., Mariah, S., & Inayah, D. T. (2022). *Contribution of Organizational Activity to Teacherpreneur Student Teacher Candidates.* November, 29–36.
- Ramírez-Montoya, M. S., Loaiza-Aguirre, M. I., Zúñiga-Ojeda, A., & Portuguez-Castro, M. (2021). Characterization of the teaching profile within the framework of education 4.0. *Future Internet*, 13(4). <https://doi.org/10.3390/fi13040091>
- Rina, L., Murtini, W., & Indriayu, M. (2019). Entrepreneurship Education: Is It Important for Middle School Students? *Dinamika Pendidikan*, 14(1), 47–59. <https://doi.org/10.15294/dp.v14i1.15126>
- Roundy, P. T. (2022). Teacher entrepreneurial ecosystems: How local communities support teacher entrepreneurs. *Entrepreneurship Education and*

- Pedagogy*, 5(4), 627–657. <https://doi.org/10.1177/25151274211069032>
- San-Martín, P., Fernández-Laviada, A., Pérez, A., & Palazuelos, E. (2021). The teacher of entrepreneurship as a role model: Students' and teachers' perceptions. *International Journal of Management Education*, 19(1). <https://doi.org/10.1016/j.ijme.2019.100358>
- Sawyer, A. G., Dick, L. K., & Sutherland, P. (2020). Online mathematics teacherpreneurs developers on teachers pay teachers: Who are they and why are they popular? *Education Sciences*, 10(9), 1–21. <https://doi.org/10.3390/educsci10090248>
- Shelton, C., Geiger, T., & Archambault, L. (2021). Becoming a Better Teacher through Online Teacherpreneurship?: Factors Influencing Online Teacherpreneurs' Perceived Gains in Teaching Practice. *The Elementary School Journal*. <https://doi.org/https://doi.org/10.1086/715521>
- Shelton, C., & Archambault, L. (2018). Discovering how teachers build virtual relationships and develop as professionals through online teacherpreneurship. *Journal of Interactive Learning Research*, 29(4), 579–602. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85063092282&partnerID=40&md5=79e02eef070f2ff9ae8e90628362c1a8>
- Shelton, C. C., & Archambault, L. M. (2019). Who Are Online Teacherpreneurs and What Do They Do? A Survey of Content Creators on TeachersPayTeachers.com. *Journal of Research on Technology in Education*, 51(4), 398–414. <https://doi.org/10.1080/15391523.2019.1666757>
- Shelton, C. C. C. (2018). *Online teacherpreneurship: Shedding light on the practice, the individuals who pursue it, and the impacts they experience*. Arizona State University.
- Shetty, D., & Dhannur, V. (2020). Our Heritage Teacherpreneurship In Management Education A Momentous Vision for Teachers. *Zagazig Nursing Journal*, 19(January), 78–91.
- Singleton, A., Smith, F., & Hornung, R. (2000). Administrator, educator, entrepreneur, impresario, advisor, ringmaster, proxy learner or fall-guy? The many roles GP tutors play to accommodate obstacles in providing appropriate GP education. *Education for General Practice*, 11(3), 288–296. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-0033851258&partnerID=40&md5=e6b65b5ca8543c1d9e64a6d6630bfe0a>
- Slišāne, A., Lāma, G., & Rubene, Z. (2021). Self-assessment of the entrepreneurial competence of teacher education students in the remote study process. *Sustainability (Switzerland)*, 13(11). <https://doi.org/10.3390/su13116424>
- Suyudi, M., Rahmatullah, A. S., & Rachmawati, Y. (2020). Investigating the influence of entrepreneurial leadership on students' entrepreneurial intentions: Teacherpreneurship as a mediating variable. *European Journal of Educational Research*, 9(4), 1605–1614. <https://doi.org/10.12973/EU->

JER.9.4.1605

- Toding, M., Mädamürk, K., Venesaar, U., & Malleus, E. (2023). Teachers' mindset and attitudes towards learners and learning environment to support students' entrepreneurial attitudes in universities. *The International Journal of Management Education*, 21(1), 100769. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100769>
- Xu, F. A. N., & Hewlett, D. (2023). *Exploring the Landscape of Computational Thinking Resources on Teachers-Pay-Teachers : Resources Characteristics and User Evaluations*. 34, 9–36.
- Zhao, Y., & Watterston, J. (2021). The changes we need: Education post COVID-19. *Journal of Educational Change*, 22(1), 3–12. <https://doi.org/10.1007/s10833-021-09417-3>
- Zulfiqar, S., Al-Reshidi, H. A., Al Moteri, M. A., Feroz, H. M. B., Yahya, N., & Al-Rahmi, W. M. (2021). Understanding and predicting students' entrepreneurial intention through business simulation games: A perspective of covid-19. *Sustainability (Switzerland)*, 13(4), 1–27. <https://doi.org/10.3390/su13041838>