Original Research

Tutorial Action in Primary and Secondary Education: A Scientometric Study for the Period 2014 to 2024

Jennifer Serrano-García, University of Granada, Spain
Eva María Olmedo-Moreno, University of Granada, Spain
Fátima Zahra Rakdani-Arif Billah, University of Granada, Spain
Jorge Expósito-López, University of Granada, Spain

Abstract: Education, recognized as an essential human right, faces challenges in providing a comprehensive and adaptive learning environment. Tutorial Action (TA) emerges as a key tool in improving educational processes, with research highlighting its positive influence at all levels of education. Although challenges remain, such as the diversity of conceptualizations and the lack of a unified disciplinary framework, TA stands out as a collaborative and adaptive practice that focuses on the specific needs of students. This research aims to conduct a scientometric and bibliometric analysis using software such as Zotero, Excel, and VosViewer to better understand the current state of TA. Specific objectives are established, such as analyzing scientific production chronologically, identifying prolific authors and working groups, examining the specific topics addressed in TA and evaluating its impact index. It can be concluded that, first, international publications remain limited, indicating that TA research is emerging and requires more attention. In addition, no expert authors in the field were identified. Studies on ECI (European Citizens Initiative) on educational inclusion and integration but do not take a holistic approach. Finally, high-impact journals are receptive to TA research, underlining the importance of promoting quality in this field.

Introduction

Education, recognized as a universal right by the United Nations Organizations (n.d.-a, 1989) and supported by state regulatory frameworks such as the Organic Law amending the Organic Law on Education (LOMLOE 2020) in Spain, must transcend physical, mental, social, cultural, and any other barriers to facilitate a comprehensive, personalized, and adaptive education for future citizens. For this, however, it is imperative to make structural and functional adjustments and improvements to improve current teaching and learning processes.

Specifically, Tutorial Action (TA) is emerging as an increasingly relevant, visible, and recognized concept that allows the improvement of learning contexts and processes. In this sense, the TA encompasses all those actions that aim at the academic, personal, and professional development of students. Likewise, the support offered by tutoring in terms of counseling can influence not only psychological well-being but also academic performance (Dahal 2021; Huina Sng et al. 2017; Expósito-López et al. 2023).

COMMON GROUND

55

Thus, recent research has shown that the implementation of TA produces substantial positive effects on the teaching–learning process of students at all educational stages (Akifieva et al. 2021; Azevedo et al. 2021; Betthäuser et al. 2023; Eron 2021; Nickow et al. 2020; Romlah and Latief 2021). However, it is clear that there are many challenges posed by the use of TA as a catalyst for change processes: the multiplicity of conceptualizations of the term itself and the various functionalities that derive from them, the lack of a homogeneous disciplinary epistemological framework that allows a shared interpretation and development of mentoring practices, or the absence of evidence-based guidance and mentoring practices and a framework of practices based on diagnoses and refined research (Expósito-López 2014; Jacobs 2018; Dahal 2021; Guillén-Gámez and Mayorga-Fernández 2022; Al-Thani et al. 2023) suggest that TA needs a disciplinary rethinking before the responsibility for generating the educational change required in all dimensions of the training processes falls on its actions.

TA is characterized by being a social-reflective, collaborative, and contextualized practice, which takes place in both formal and informal contexts. Therefore, the use of TA by education professionals allows us to start with the needs and interests of students, contemplating the analysis of the different social, pedagogical, and psychological factors that influence their teaching–learning processes, with the aim of ensuring the integral development of the student population. Tools, resources, and strategies should be used to improve their personal development and well-being, their academic performance and learning outcomes, and their integration and social responsibility, promoting their competence for the development of a life and professional project that allows them to develop permanently in all stages of their lives and especially in times of transition to adulthood (Hobson 2016; Du and Wang 2017; Gunn et al. 2017; López 2013; Wexler 2019; Abdelrahman et al. 2021; Orland-Barak and Wang 2021; Expósito-López et al. 2023).

In this sense, TA initiatives not only improve well-being but also have a positive impact on improving the level of knowledge of curricular content, communication skills, decision-making, and problem-solving, among others (Alarcón et al. 2021; Alarcón and Prieto-Flores 2021).

Mentoring and tutoring practices, offered by educational institutions and centers, can have a wide range of formalities, from the most informal and occasional to the most formal and institutionalized (Du and Wang 2017; Abdelrahman et al. 2021); they can vary depending on the interaction and the number of participants involved, from a one-on-one collaboration between a mentor and a mentee or actions that involve the entire educational community in a transversal way (Ávalos 2016; Du and Wang 2017; Wexler 2019; Colazzo-Duarte and Cardozo-Gaibisso 2021); or they can be established from poorly founded initiatives or through methodologically recognized processes, such as action research processes (Kopackova et al. 2024; Smit et al. 2024), allowing for obvious potential for educational response.

Specifically, there are programs that address the integral development of students from group and individual tutoring, such as YWLP (The Young Women Leaders Program), which

allow problem-solving and encourage participation in sociocultural activities that promote individual development. The intervention thus positively influences academics, social skills, self-regulation, and self-understanding (Deutsch et al. 2017). On the other hand, another program, called COREMatters, improved adolescents' self-esteem, social inclusion, and support networks from peer tutoring (Cipra and Hall 2019), as well as CRP (Capital Resource Partners) programs, which relied on informal support to provide support in language acquisition and their social inclusion in the labor market and social capital. Furthermore, Nightingale improved the social, cultural, and linguistic inclusion of adolescents of foreign origin. Therefore, these initiatives were efficient in improving language, psychological and emotional well-being, knowledge of the cultural environment, and expansion of support networks (Alarcón et al. 2021; Sánchez-Aragón et al. 2021).

Also, the Nightingale, INTO, and Club Conversation interventions, which were based on community and group tutoring, led to an increase in support networks, collaborative learning, a sense of belonging, and a decrease in social isolation (Mahieu and van Caudenberg 2020; Pryce et al. 2018; Sánchez-Aragón et al. 2021). In addition, other tutoring plans such as SPARK, Referents, Nightingale, and Pathway to Independence were effective because they improved the level of knowledge of curricular content, communication skills, decision-making, problem-solving, and levels of emotional regulation and resilience (Green et al. 2021; Sánchez-Aragón et al. 2021), as well as promoting healthy development (social support, acculturation, mental health, etc.) through collaborative processes (Kvestad et al. 2021), including the family (Alarcón et al. 2021; Alarcón and Prieto-Flores 2021).

Pursuing the same line of argument, from youth mentoring, as in the case of the Big Brothers Big Sisters program, support and companionship also led to an improvement in emotional and behavioral well-being among the young population (Brady et al. 2017), as well as increased social cohesion and opportunities, a positive aspect of the Street Dance program, a tutoring intervention based on street dance (Gunay and Bacon 2019).

In this sense, tutoring has a personalized character that involves responding to the needs and interests of the students, thus favoring their integral development. Likewise, the tutor must promote individual actions that aim to promote the learning process, that is, it plays the roles of teacher, professional, and research. In particular, tutoring also implies taking into account a series of pedagogical and didactic practices, that is, an intentional, personalized, direct, and effective teaching–learning process, taking into account the characteristics of the student and its objectives. Therefore, TA constitutes a systematized process of evaluation, guidance, and intervention that follows the interests and potentialities of each individual through intervention programs (Mirabal and Caballero 2018).

Despite all these difficulties in the diversity of its conceptualization and the lack of recognition or specific regulation of some of its practices, TA is beginning to be recognized as a fundamental element in the process of educational regeneration and change (Jáspez and Sánchez-Moreno 2019; Orland-Barak and Wang 2021), for its ability to generate moments of

integrated action in all areas of learning, to propose transversal activities in a multidisciplinary way, or to serve as an element of connection between educational communities and the social and productive contexts in which they carry out their actions.

For this reason, and given the importance that the TA has been acquiring in recent years (Orland-Barak and Wang 2021), there is a need to carry out a bibliometric and scientometric study of scientific production that offers a disciplinary perspective of the state of the art and for which the general objective (GO) is to provide an overview of the scientific production of TA in the educational stages of primary education and compulsory secondary education between 2014 and 2024. Its related specific objectives are to analyze the scientific production on the subject from a chronological perspective (OE1); identify authors and groups producing works (OE2); examine the specific topics considered in scientific production related to TA (SO3); identify the sources of publication of the articles (SO4) and, finally, identify the relative quality of these sources of thematic publication (OE5).

Method

This study is descriptive and cross-sectional, based on the need to carry out a bibliographic review taking into account a series of different scientometric variables of the existing scientific production on TA in primary and secondary education. These descriptive variables are the date of publication, authorship, groups of authors or invisible schools, the study of the topics through the title words and keywords, and the identification of the sources of publication and their relative quality. On the other hand, the cross-cutting approach facilitates the need to incorporate cross-sectional aspects of the variables in the descriptive analysis, such as chronological temporal comparisons or the consideration of several simultaneous dimensions of the same variable. Thus, the combination of both approaches allows us to obtain a global and updated vision of the existing scientific production in TA in the last decade.

Population and Sample

The literature search in two databases, Web of Science (WOS) and SCOPUS, with the Boolean keywords and operators specified in this phase in the process section, yielded a total of 19,279 documents (WOS = 12,034; Scopus = 7,245). After the first phase, a screening by levels (C1, C2) was carried out. In the first screening (C1), all duplicate studies extracted from the different databases and stored in Zotero ($n = 5,332$) were eliminated, leaving 13,947 documents (72.34%).

The second screening (C2) focused on the application of the pre-established inclusion (CI) and exclusion (EC) criteria to the title and abstract. Five inclusion criteria were taken into account: (1) works related to TA topics; (2) studies focusing on the stages of primary and secondary education; (3) works must be articles; (4) The studies must be framed between the period 2014 and 2024; and (5) The studies must be in English and/or Spanish. On the other hand, there were also four exclusion criteria: (1) documents that did not deal with the subject

of the TA; (2) studies focused on other educational stages (vocational training, early childhood education, higher education…); (3) other types of documents such as reports, books, book chapters, conferences, among others; (4) studies framed in periods prior to 2024; and (5) written studies in languages other than Spanish and/or English. All studies that dealt with topics other than TA were eliminated (CE1 = 670, 4.80%), documents that were aimed at another population—higher education, children's education- (CE2 = 10,050, 72.06%), documents that referred to other types of documents (CE3 = 2,961, 21.23%), as well as studies framed in periods prior to 2014 (C4 = 13, 0.09%). The final sample selected and producing data amounts to a total of 253 documents, in which the data of the variables considered for the scientometric study are recorded.
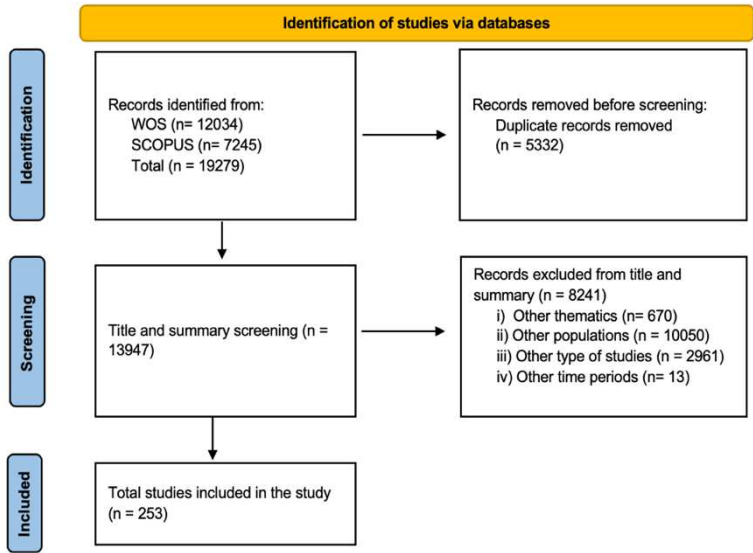

Figure 1: Step-by-Step Selection Process Implemented in the Study

Instruments and Procedure of Analysis

The overall search strategy is specified in the first phase described in the processes section. This data was recorded using the Zotero multiplatform bibliometric manager, which also facilitated the screening process (C1 and C2). Second, Microsoft Excel software was used to sort the metadata, also known as scientometric variables of the study: date of publication (year), authorship (last name and first name of the author), sources of publication (name of the journal), relative quality indices (Quartile, as consulted in *Scimago Journal* and Country Rank/SJR) and thematic words (words in the title and keywords). Third, the VosViewer software was used for the construction of bibliometric networks such as authors, working groups, and keywords–title–abstract. The procedure followed in this study is composed of

five fundamental steps framed in Figure 2. First, the document extraction was carried out on January 10, 2024, through the Scopus and WOS databases (1). This required the development of a comprehensive overall search strategy containing the essential terms for searching documents related to the TA.
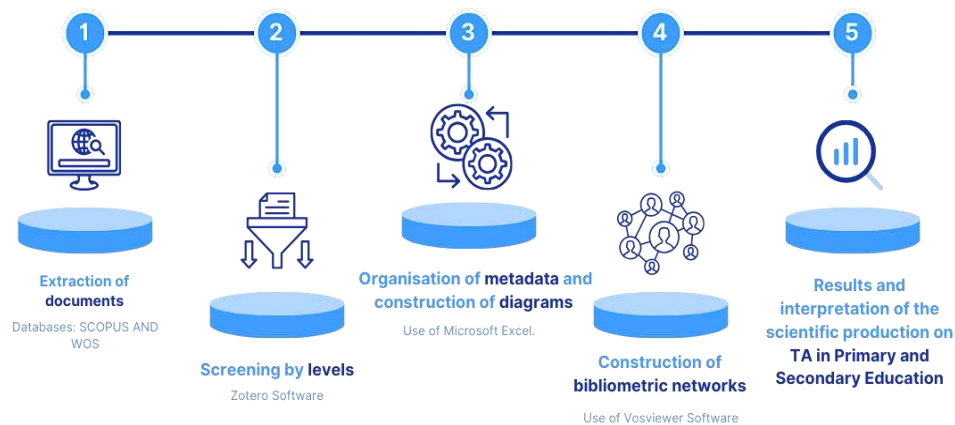

Figure 2: Simplified Description of the Study Steps

To narrow down the search for studies, we use the Boolean operator OR with the terms "tutorial action" and "tutorial action." To narrow down the population search, we used the Boolean operator AND NOT with the terms "university," "university," "graduate," "early childhood education," "nursery," "university," "undergraduate," "postgraduate," "early childhood education" and "kindergarten," which allowed us to exclude all documents referring to these educational stages. Next, an advanced search was carried out in order to identify documents within the period 2014 to 2024, which had to be articles written in English and/or Spanish. As shown in Figure 1, a total of 19,279 documents were retrieved from the Scopus and WOS databases.

Table 1: General Search Strategy for the Study

Acción tutorial	OR		AND NOT		OR		AND LIMIT TO		
				Universitarios		University			
		Tutoring		Universidad		Undergraduate			
		Tutorial action		Licenciatura		Graduates		Type of document	Article
		Mentoring		Graduados		Early Childhood Education		Language	Spanish/ English
				Educación Infantil		Kindergarten		Publication date	2014 to 2024
				Guardería					

Subsequently, a manual and stepwise screening was performed with Zotero software (2). At the first level (C1), duplicates of the total number of extracted documents were removed. In the second level (C2), a selection of titles and abstracts was made so that the inclusion and exclusion criteria pre-established for the study and mentioned in previous sections were applied, leaving a total of 253 articles included. Then, thanks to the Microsoft Excel software (3), the metadata of the scientific production was organized according to the year and the name of the journals along with the number of times they were repeated, and this last process was carried out with their quality index. Then, different figures were created to represent the results of scientific production according to the date of publication of the articles and another on the quality index of the journals. Subsequently, several bibliometric networks were built using VosViewer software (4) to analyze who are the most prolific authors and groups of works, as well as which topics are being addressed most prominently in the TA over the years. In the fifth and final stage, the results of each of the diagrams and bibliometric networks were elaborated, and an interpretation (5) of each of them was developed, in order to respond to the five SOs of the study and lay solid foundations of the term and elements that make up the TA in primary and secondary education (GO).

Results

The analysis of the results is based on the established objectives (OE). Taken together, they offer an illuminating vision of TA in primary and secondary education.
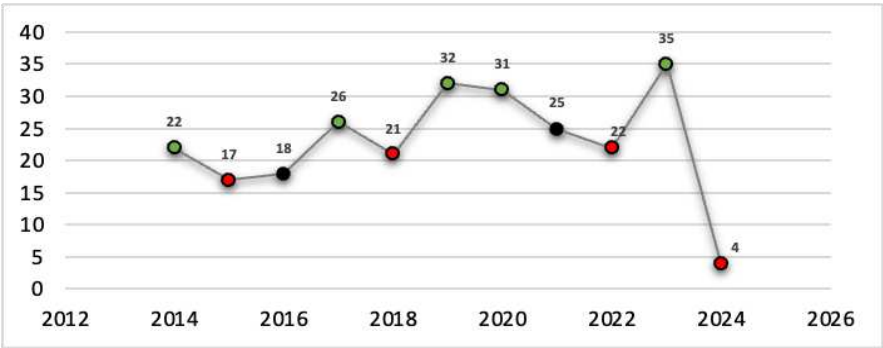

Figure 3: Scientific Production of Tutorial Action According to Years

Result 1 (SO1): Scientific Production over Time on the Topic of Tutorial Action

Figure 3 shows that the total number of articles included in the study is 253. Publications show positive growth and a logistical trend. However, scientific production can be differentiated into two parts: peaks and valleys. Increasing peaks (Figure 3) refer to the increase in scientific output in a given year or years compared to previous years. In particular, these peaks are perceived in the years 2014 ($n = 22$, 8.70%), 2017 ($n = 26$, 10.28%), 2019 ($n = 32$, 12.65%), 2020 ($n = 31$, 12.25%), and 2023 (13.83%). However, the decreasing peaks allude to a decrease in scientific production compared to previous years. Specifically, there are four decreasing peaks in 2015, 2018, 2022, and 2024 ($n = 17$, 6.72%; $n = 21$, 8.30%; $n = 22$, 8.70%; $n = 4$, 1.58%).

It should be added that the maximum value between the years 2014 and 2024, i.e., the highest point represented by graph 3, is 35. This means that the maximum number of publications of scientific articles on TA in the field of primary and secondary education took place in the year 2023. On the other hand, the opposite is true for the minimum value, which refers to the lowest point on the chart. Therefore, the year in which the fewest scientific publications have been produced is 2015 ($n = 17$, 6.72%) since, although it appears in the figure that it is the year 2024, technically speaking, this year is not yet over.

Result 2 (SO2): Authors and Working Groups in Studies on Tutorial Action

The total number of authors who have published at least one article on this topic is 619. However, the most prolific international author on this topic is Mark Bray ($n = 9$; 3.56%), followed by Karin Guill ($n = 5$, 1.98%) and then several authors with three publications (1.19%) on TA in primary and secondary education, such as Ora Kwo, Junyan Liu, Consuelo Vélaz-de-Medrano Ureta, Ana González-Benito, and Olaf Köller. This result is possible because the bibliometric network shows the most prolific authors in a larger font size. On the other hand, few (2.37%) authors have two publications ($n = 6$) on this line of research. However, 97.58 percent ($n = 604$) of the authors have only one publication on this line of research.

This fact supports Lotka's (1926) proposal, the so-called Law of the Productivity of Science, which proposes an inverse relationship of proportionality between authors who publish a certain number of articles and the square of the number of articles published or $P(n) = C/na$, and a good fit of the experimental distribution to the theoretical distribution proposed by this law, with a Chi-square X2 of 6.02 for 2 degrees of freedom and $p < 0.05$.
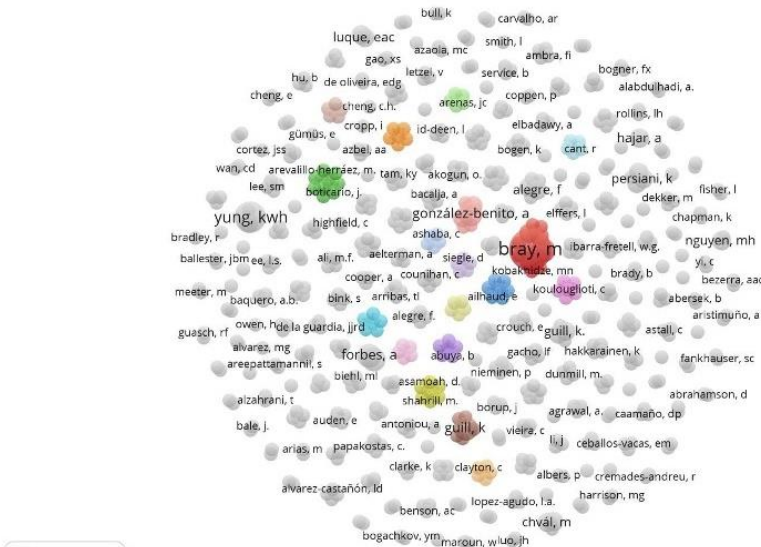

Figure 4: Bibliometric Network of the Most Expert Authors and Working Groups in This Line of Research

With reference to the most prolific international working groups (WGs) on this topic, Figure 4 shows an overview of this. The areas highlighted in different colors (red, green, yellow, blue, orange, pink, purple…)—excluding the color gray— as well as the transparency or sharpness with which these colors are found, show a logical arrangement of importance in the WGs working on this topic and, therefore, provide a general overview of this scientometric variable. Twelve main WGs that research and publish scientific articles on TA in the field of primary and secondary education are highlighted. These WGs are independent because there is no linking author. Therefore, Figure 5 details the participants in each of these WGs.
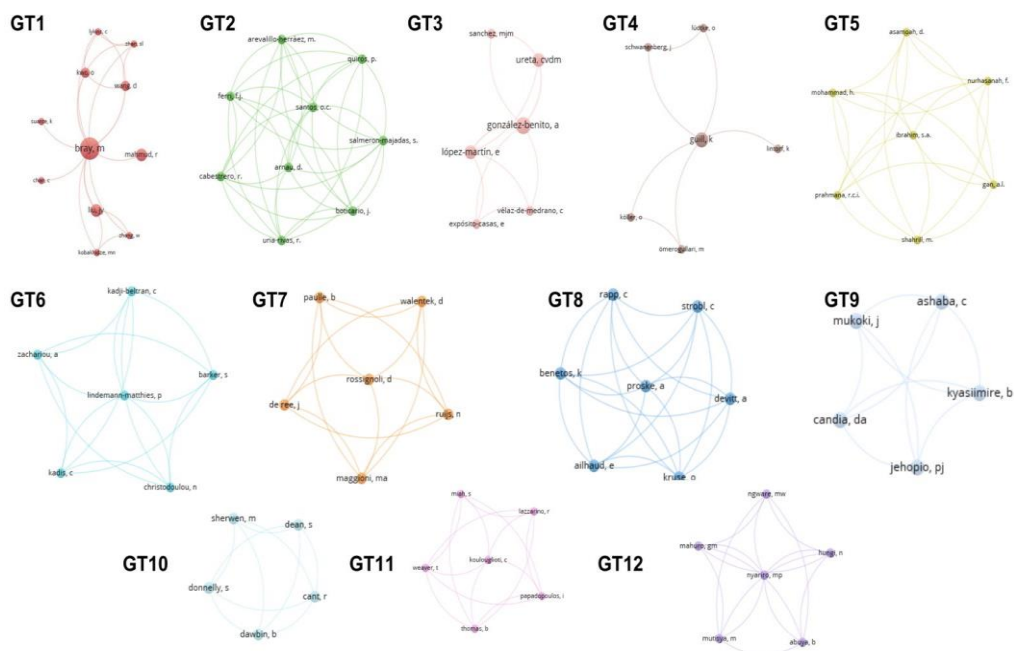

Figure 5: Expansion of the Bibliometric Network of Outstanding Working Groups in This Line of Research

WG1 is made up of eleven authors (Bray, Kwo, Liu, Wang, Suante, Ho Cheng, Zhan, Lykins, Mahmud, Suante, Kobakhidze and Chan); WG2 of nine (Cabestrero, Quirós, Santos, Salmerón-Majadas, Uría-Rivas, Boticario, Arnau, Arevalillo-Herráez and Ferri); WG8 (Strobl, Ailhaud, Benetos, Devitt, Kruse, Proske and Rapp); and the WT5 (Ibrahim, Shahrill, Nurhasanah, Prahmana, Asamoah and Mohammad & Gan) of seven authors. It is followed by WGs 4 (Guill, Köller, Lüdtke, Ömeroğulları, Lintorf and Schwanenberg), 6 (Kadji-Beltran, Christodoulou, Zachariou, Lindemann-Matthies, Barker and Kadis), 7 (de Ree, Maggioni, Paulle, Rossignoli, Ruijs and Walentek), 11 (Papadopoulos, Lazzarino, Miah, Weaver, Thomas and Koulouglioti), and 12 (Ngware, Mahuro, Hungi, Abuja, Nayriro and Mutisya), consisting of six authors. The rest of the groups are made up of five authors: WG3 (Vélaz-de-Medrano Ureta, González-Benito, López-Martín, Mudarra Sánchez and Expósito Casas);

WG9 (Candia, Mukoki, Ashaba, Jehopio and Kyasiimire); and WG10 (Dawbin, Sherwen, Dean, Donnelly and Cant). This grouping of authors shows what some call invisible schools or lobbies of scientific production.

Result 3 (SO3): Aspects and Elements Addressed in the Scientific Production

Figure 6 shows that the largest words and, therefore, the ones that overlap the most in scientific production on this topic are "shadow education," "mentoring," and "secondary education." They are followed by words such as "math," "instruction," "inclusion," "interventions," "leadership," "impact," "peer mentoring," "attitudes," and "educational guidance." However, it is especially important to point out that there are many words, and, therefore, the elements that are addressed in the TA appear in smaller size, such as "school failure," "e-learning," "strategies," "effectiveness," "teacher retention," "cooperative learning," "teaching practice," "teacher preparation," "intrinsic motivation," and others.
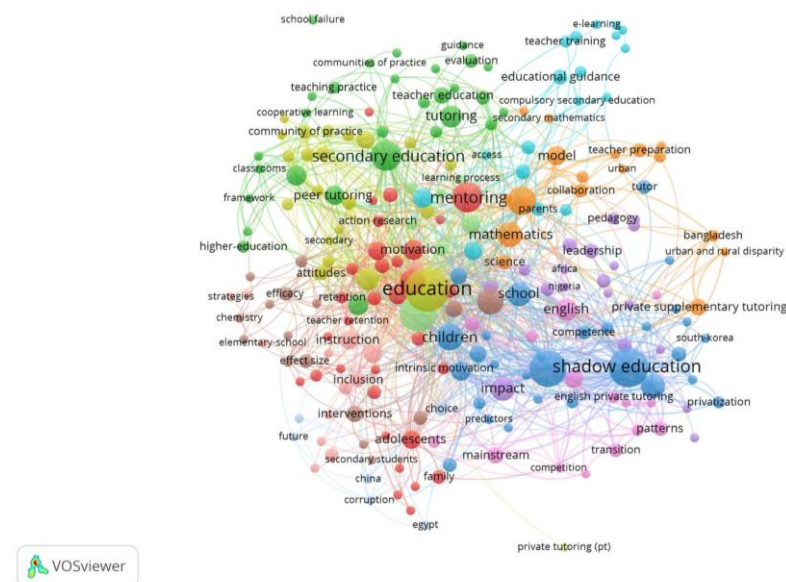

Figure 6: Bibliometric Network—Title–Abstract and Keywords According to Years

Result 4 (SO4): The Quality Index of Journals That Publish Articles

To evaluate the quality of journals, the SCImago Journal Rank (SJR) has been used, a metric that analyzes the importance and impact of scientific publications based on the quantity and quality of citations received. SJR classifies journals into four quartiles (Q1, Q2, Q3 and Q4), Q1 being those with the greatest impact and Q4 the least impact, which allows for relative comparisons between them.

Figure 7 shows that a total of 101 articles (39.92%) are in journals in the Q1 quartile, followed by seventy-five studies (29.64%) in Q2, thirty-seven (14.62%) in Q3, and, finally, fourteen (5.53%) in journals with an impact index of Q4. In addition, twenty-six articles are not assigned to any quartile, i.e., this information is not specified, or the information in the journal is not up to date.
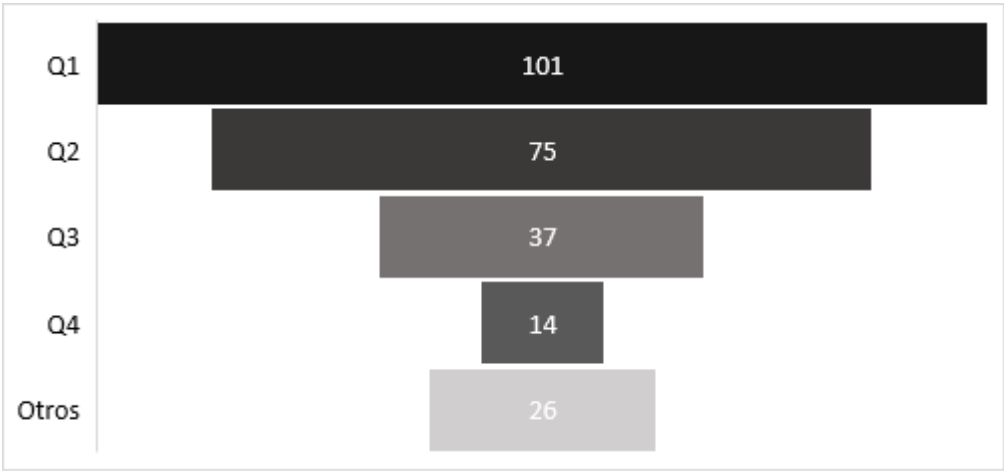

Figure 7: SCImago Journal Rank (SJR) in Quartiles

Notes: Q1 = Journals of greater prestige and influence in their field; Q4 = Journals of less prestige and impact; Others: The journal does not have updated or does not specify SJR (N/S).

Result 5 (SO5): Journals That Accept Scientific Production

Referring to the most prolific journals in this line of research, Table 2 shows the international journals with the highest number of articles related to TA in primary and secondary education. Among the most prolific are *Asia Pacific Journal of Education* and *International Journal of Educational Development*, each with a total of six articles (2.38%). They are followed by *Education Sciences*, *Frontiers of Education, and Research in Science Education*, with five articles published in each (1.98%). These are followed by the *International Journal of Education Sciences* and the *Interuniversity Interuniversity Electronic Journal of Teacher Training*, with a total of four articles (1.58%). In addition, eleven journals receive this line of research (*Australian Journal of Teacher Education, British Educational Research Journal, Education Siglo XXI, Education and Information Technologies, Education Research International, International Journal of Inclusive Education, International Journal of Mentoring and Coaching in Education, Professional Development in Education, Revista Complutense De Educación, Revista de Educación and RIE-Revista de Investigación Educativa*), with a total of three articles published (1.19%) in each of them.

Table 2: Most Prolific Journals on the Subject of
Tutorial Action in Primary and Secondary Education

Title of the Journals [Qnº]	Number of Articles Published
Asia Pacific Journal of Education [Q2]	6 items
Computers & Education [Q1]	
International Journal of Educational Development [Q1]	
Education Sciences [Q2]	5 items
Frontiers of Education [P2]	
Research in Science Education [Q1]	
International Journal of Education Sciences [N/S]	4 items
Interuniversity Electronic Journal of Teacher Training [Q2]	
Australian Journal of Teacher Education [Q2]	3 items
British Journal of Educational Research [Q1]	
21st Century Education [Q1]	
Education and Information Technology [Q1]	
Research in International Education [P3]	
International Journal of Inclusive Education [Q1]	
International Journal of Mentoring and Coaching in Education [Q2]	
Professional Development in Education [P1]	
Complutense Journal of Education [Q2]	
Journal of Education [Q3]	
RIE-Journal of Educational Research [Q2]	

Finally, it is worth mentioning that, when examining the distribution of articles in the 167 journals covering the 253 articles included in this study, a relationship with the principles of Bradford's Law (Brookes 1985) can be observed. Of these journals, 70.06 percent (n = 117) have published only one article related to the topic of TA in the educational stages addressed in this study. On the other hand, 18.56 percent (n = 31) accepted two publications, while 6.59 percent (n = 11) accepted three publications.

However, the picture changes significantly when considering the acceptance of several articles on the same topic in the same journal. Only 1.20 percent of journals (n = 2) exhibit four publications on this topic, and a similar phenomenon is observed in journals that compile five or six publications, since only 1.80 percent (n = 6) of them maintain this level of thematic concentration. This data shows the diversity in the distribution of publications, which indicates a poor adjustment to the Bradford Bibliometric Law, since there is no concentration of publication sources. This may be due to the lack of specialization of sources or the growing number of sources classified as multidisciplinary or multi-topical.

Discussion

Over the last decade, education has undergone a remarkable transformation in terms of both its conceptualization and implementation, adopting a renewed and updated direction characterized by personalization, digitalization (Abdelrahman et al. 2021; Al-Thani et al. 2023),

social inclusion (Eron 2021; López 2013), and the establishment of quality education. This change has been caused by the set of political, social, health, economic, and educational changes that have taken place in recent years and responds to Sustainable Development Goal 4 set out in the 2023 Agenda (United Nations Organizations, n.d.-b), the Universal Declaration of Human Rights, the Convention on the Rights of the Child (United Nations Organizations n.d.-a, 1989) and the LOMLOE (2020).

This has significantly influenced the change in perspective that primary and secondary education professionals have experienced with respect to ECI. Consequently, STI today is conceived as a set of continuous, dynamic, and multifaceted activities or actions aimed at preventing and mitigating possible difficulties or needs of students. This approach is based on the collaborative work of the entire educational community. However, this study aims to obtain a global understanding of the international scientific production published on ECI in primary and secondary education in the period 2014 to 2024.

First, and in response to SO1, there is a growing trend in scientific production on this topic during the period analyzed. Specifically, in 2014, 2017, 2019, and 2023, there was a notable increase in international scientific production on TA, caused by key events that took place on these dates. In 2014, it was the adoption of the 2030 Agenda for Sustainable Development (United Nations Organizations, n.d.-b), the introduction of educational policies that address aspects of equity, equality, and integration (Schurch S. 2015; Ministry of Education Peru 2014; Merino-Merino et al. 2012) and the incessant technological advances (Van Praag and Sánchez 2015). From 2017 onward, education professionals began to have an educational perspective based on inclusion and equity (Fernández Batanero and Rodríguez-Martín 2017). In 2019, it was the incorporation of new learning assessment strategies and the promotion of STEM education (York et al. 2019). In 2020 and during the COVID-19 pandemic, there was a methodological renewal in compulsory education centers, which accelerated the pace of adoption of educational technologies in schools and generated debates on educational equity in the midst of the health crisis (Cabrera et al. 2020; Sánchez Lissen and Sianes Bautista 2021). In 2023, significant progress was observed in the implementation of educational programs aligned with the Sustainable Development Goals (United Nations Organizations, n.d.-b). In addition, new policies were introduced to address the new challenges in education.

However, scientific output in this period is limited in this area, suggesting that there is still a lack of significant international attention on the topic. Therefore, it can be considered as an emerging line of research with great potential for development and growth in the near future. It is essential to continue to drive research and academic debate in this field to move toward a more complete and in-depth understanding of ECI and, in this way, effectively address current challenges in education.

In response to SO2, the most prolific international author on this topic is Mark Bray (Liu and Bray 2020a, 2020b; Bray et al. 2014; Suante and Bray 2022; Liu and Bray 2020b) Chan and Bray 2014; Mahmud and Bray 2017; Bray et al. 2016; Kwo and Bray 2014; Wang and Bray 2016),

followed by Karin Guill (Guill et al. 2020; Guill et al. 2020; Ömeroğulları et al. 2020; Guill et al. 2022; Guill and Lintorf 2019) (Figure 5). Of the twelve featured WGs, these authors stand out as the most productive authors in WGs 1 and 4. However, many authors have produced few publications on TA in primary and secondary education (Figure 4), a phenomenon supported by the theory proposed by Lotka (1926), known as the Law of Scientific Productivity. This law states that most authors have low productivity in a specific subject area, as is the case in this study, while only a few show significantly higher productivity. This finding suggests that there are no expert authors and, therefore, internationally specialized in TA.

In response to OE3, authors who are dedicated to publishing articles on TA in primary and secondary education raise doubts about whether this subject is considered an integral part of education or whether, on the contrary, it remains in the shadows, acting in a parallel and invisible way to the teaching of curricular content. It is recognized that TAs in formal education are closely linked to instruction, guidance, intervention, leadership, and facilitation of a guided educational process, with the aim of promoting educational inclusion and generating a real impact on the teaching–learning process of students. This approach is materialized through various actions, such as peer tutoring and the promotion of attitudes toward mentoring by both students and teachers.

However, the need to promote scientific production aimed at addressing school failure is identified, as well as the need to implement innovative strategies in the teaching–learning process, such as the adoption of emerging methodologies, e-learning, and cooperative learning. It also highlights the importance of developing transversal competences, such as effectiveness and intrinsic motivation, and of training teachers in aspects related to tutoring.

In response to SO4 and according to the SJR metric, most scientific articles on this topic are published in journals with a high quality index (Q1–Q2), with fewer articles being found in less prestigious journals (Q3–Q4–S/N). These findings confirm that work done in this line of research has been rigorous and of a high level of scientific-academic recognition. However, it is important to continue promoting diversity in the publication of scientific results, ensuring the inclusion of diverse voices and perspectives in this line of research. It is also essential to continue promoting quality and excellence in research, maintaining high ethical and methodological standards to contribute significantly to the advancement of knowledge in this area.

Finally, in response to SO5, the journals that have shown the greatest receptivity to scientific articles related to TA are *Asia Pacific Journal of Education* [Q2] (Suante and Bray 2022; Harrison and Lim 2022; Mahmud and Bray 2017; Yung 2021), *Computers & Education* [Q1] (Strobl et al. 2019; Papadopoulos et al. 2020; Dolenc and Aberšek 2015), and *International Journal of Educational Development* [Q1] (Yung 2020; Šťastný and Chvál 2023; Ille and Peacey 2019). Their scientific prominence suggests that these topics are considered important and relevant within international journals with a high quality index and, therefore, in the international scientific community. The identification of these journals as the main

recipients of articles on TA provides valuable insights into current trends in educational research and highlights the importance of further exploring and discussing this topic in the international academic community. In addition, the analysis of the concentration of articles on the same topic in quality academic journals offers an interesting perspective on the distribution of research in the field of TA. The low concentration of publications in a few journals suggests that research in this field is dispersed across a variety of publications, rather than being centralized in a few prominent journals. It is also in line with the principles of Bradford's Law, which provides for a concentration of articles in a small number of journals.

Conclusion

This study reveals five main conclusions about the existing scientific production collected in the Scopus and WOS databases on this topic in the primary and secondary education stages:

During the period 2014 to 2024, an increasing trend was witnessed in scientific production related to ECI in primary and secondary education. However, despite this growth, the number of publications internationally remained limited. This data suggests that TA is an emerging line of research, which has not yet reached its full potential in terms of global attention and recognition. This points to the importance of continuing to drive research in this field, as well as the need to address existing gaps to move toward a more complete and robust understanding of TA and its impact on education.

The most productive researchers in this field are Mark Bray and Karim Guill, who have excelled in their contributions. Twelve distinct thematic clusters have been identified. However, according to the Law proposed by Lotka (1926), no expert authors in this field have been identified.

Current TA is an emerging line of research that is still in its early stages of scientific development. Currently, the authors who investigate this topic focus on aspects related to educational inclusion and integration. However, a paradigm shift is essential to address this issue from a renewed perspective and consider aspects such as personal, academic, and social development holistically.

Journals with a high-impact index are receptive to this line of research. This fact highlights the need to promote quality and excellence in TA research. The attention and support provided by high-impact journals can further stimulate the interest and participation of researchers in this line of research, which, in turn, can contribute to the development and evolution of educational research.

The identification of these journals (Table 2) as the main recipients of articles on TA provides important insight into the current trends dominating the field of educational research. This fact not only gives a clear idea of where researchers are focusing their efforts but also highlights the growing interest in the study and analysis of TA in primary and secondary educational contexts. Moreover, by identifying the most relevant scientific publications in this field, it emphasizes the

need to expand research on this topic, which is crucial for the development of effective and equitable educational practices. This landscape reflects the international academic community's commitment to addressing issues related to educational guidance and support. Therefore, it is essential to continue exploring this subject, delving deeper into the implications that TA has for students, teachers, and families. By doing so, the existing knowledge can be enriched, and new proposals can be generated that promote a more inclusive and participatory education.

Limitations and Future Directions

This study had several limitations, the first of which was identified in the second step (2) of the research process, as detailed in Figure 2. Throughout the research, we have emphasized that we perform a thorough screening of two levels (C1 and C2) using the Zotero software, manually. The main consideration is the time needed to carry out both stages of the selection, addressing the elimination of duplicates (C1) and the implementation of the inclusion and exclusion criteria of the study (C2), given the considerable number of documents extracted from the databases ($n = 19{,}279$). Another limitation evidenced in the bibliographic management was the lack of information or the presence of erroneous data in some metadata of the documents, also known as variables used in the study, such as the names of the authors, the titles of the scientific journals and the abstracts. As a result, it was necessary to search for missing information or correct inaccurate data in Zotero to allow for deeper analysis, all manually.

In addition, a final limitation arose in the fourth step of the study process (4). During the construction of the bibliometric network of authors using the VosViewer software, a manual review was carried out to correct spelling errors in the full names of the authors, as well as a manual review prior to the construction of the bibliometric network, including title, abstract, and keywords. This was due to the existence of repeated words that required correction or elimination. Taken together, these limitations resulted in a significant increase in the time spent by the researchers in the study.

The execution of this research lays the foundations for the exploration of new and future lines of research in the field of the design and implementation of Guidance and Tutoring Action Plans (GTAP), especially for the care of minors at risk of social exclusion and unaccompanied foreign minors. Therefore, the results obtained not only provide a deeper understanding of the current scientific production on TA in primary and secondary education but also offer a vision of the future to the work of current aspects such as artificial intelligence, the study of learning trajectories, and the implementation of methodologies characterized by digitalization.

In addition, these findings provide a valuable opportunity to promote research focused on specific aspects of TA that are essential for the integral development of primary and secondary education students. Among these aspects are motivation, self-esteem, and self-image, which are key elements for students' emotional and academic well-being. These factors directly influence

their ability to face learning challenges and adapt to the current educational environments. Moreover, the development of social skills is becoming increasingly relevant in the context of the twenty-first century, where teamwork, empathy, conflict resolution, and effective communication are essential competencies for both academic and personal success. Therefore, fostering more in-depth research in these areas will not only enrich theoretical knowledge but also allow for the implementation of more holistic, student-centered educational practices, which will have a positive long-term impact on their overall development.

The information collected serves as a basis for the development of practical interventions and training programs aimed at improving the quality of TA in the educational context. This study, therefore, not only contributes to existing knowledge but also opens the door to innovation and continuous improvement in the field of TA and educational guidance.

Practical Implications

Given the relevance of TA in the educational context, the actions that can be carried out cover various areas. Thus, through personalized strategies and continuous support, it addresses students' academic difficulties. In addition, tutors are guides and motivators of students in the choice of their academic and professional future, offering them guidance that facilitates decision-making in relation to their skills and interests.

On the other hand, the tutor–student relationship influences the way in which students perceive themselves and the construction of their identity, that is, improvement of self-esteem, as well as the development of social and emotional skills. In this sense, mentoring programs are interventions that seek to create significant changes in the social support that young people receive. Likewise, socio-educational projects must provide students with consolidated support networks, employability skills, reflection on the value of education, construction of their life projects, and labor insertion through insertion programs. These programs must take into account the culture, the socio-economic context, and their maturity in order to provide an appropriate educational response.

Therefore, some of the initiatives that can be implemented are peer mentoring, which has the potential to raise awareness of the relevance of supporting others and of the needs of multicultural societies, and group mentoring, which allows for a better approach to social issues, as well as encouraging participation. Sociocultural activities should be designed to foster personal development and the holistic growth of individuals. In this way, the intervention positively influences academics, social skills, self-regulation, and self-understanding. Apart from that, therefore, some practices that can be included in both the school and research settings are as follows: (1) Provide peer-to-peer group interventions; (2) Offer interactive peer-to-peer training activities; (3) Align interventions with the level of service; (4) Intentionally select peers for leadership roles.

In this sense, in order to improve the quality of education, it is especially important to offer recommendations to both educational and political agents. For the former, they should be continuously trained in the implementation of personalized tutoring plans that respond to the specific needs and interests of each student, as well as in the use of monitoring programs to assess the extent to which progress has been made in order to adjust interventions. On the other hand, in relation to the latter, they must offer resources for the implementation of intervention programs of territorial action, thus guaranteeing quality education based on equity for all students.

Acknowledgment

AI Acknowledgment

The authors declare that generative AI or AI-assisted technologies were not used in any way to prepare, write, or complete this manuscript.

Informed Consent

The authors declare that informed consent was not required as there were no human participants involved.

Conflict of Interest

The authors declare that there is no conflict of interest.

REFERENCES

Abdelrahman, Nahed, Beverly Irby, Rafael Lara-Alecio, Fuhui Tong, Zhou Chen, and Janice Koch. 2021. "Virtual Mentoring and Coaching: The Perceptions of the Main Candidates." *Texas Journal of Women School Executives* 6 (1): 75–98. https://issuu.com/tasanet/docs/jtwse-2021.

Akifieva, Larisa, M. Nechaeva, Mikhail Polyakov, N. Sidorova, and G. Gruzdev. 2021. "Factors for the Development of Social Infrastructure in Rural Areas." *IOP Lecture Series: Earth and Environmental Sciences* 857 (1): 012005. https://doi.org/10.1088/1755-1315/857/1/012005.

Alarcón, Xavier, and Óscar Prieto-Flores. 2021. "Transnational Family Ties and Networks of Support for Unaccompanied Immigrant Youths in Spain: The Role of Youth Mentoring in Barcelona." *Children and Youth Services Review* 128: 106140. https://doi.org/10.1016/j.childyouth.2021.106140.

Alarcón, Xavier, Magdalena Bobowik, and Óscar Prieto-Flores. 2021. "Mentoring for Improving the Self-Esteem, Resilience, and Hope of Unaccompanied Migrant Youth in the Barcelona Metropolitan Area." *International Journal of Environmental Research and Public Health* 18 (10): 5210. https://doi.org/10.3390/ijerph18105210.

Al-Thani, Noora J., Malavika E. Santhosh, Jolly Bhadra, and Zubair Ahmad. 2023. "The Prominent Roles of Undergraduate Mentors in an Online Near-Peer Mentoring Model." *Sustainability* 15 (4): 3020. https://doi.org/10.3390/su15043020.

Ávalos, Beatrice. 2016. "Learning from Research on Beginning Teachers." In *International Handbook of Teacher Education*, edited by John Loughran and Mary Lynn Hamilton. Springer.

Azevedo, Joao P. W. D., F. Halsey Rogers, Nicolas J. Reuge, Matt Brossard, and Jessica L. Bergmann. 2021. *The State of the Global Education Crisis: A Path to Recovery*. The World Bank.

Betthäuser, Bastian A., Anders M. Bach-Mortensen, and Per Engzell. 2023. "A Systematic Review and Meta-Analysis of the Evidence on Learning During the COVID-19 Pandemic." *Nature Human Behaviour* 7: 375–385. https://doi.org/10.1038/s41562-022-01506-4.

Brady, Bernadine, Pat Dolan, and John Canavan. 2017. "'He Told Me to Calm Down and All That': A Qualitative Study of Forms of Social Support in Youth Mentoring Relationships." *Child & Family Social Work* 22 (1): 266–274. https://doi.org/10.1111/cfs.12235.

Bray, Mark, Magda N. Kobakhidze, Junyan Liu, and Wei Zhang. 2016. "The Internal Dynamics of Privatised Public Education: Fee-Charging Supplementary Tutoring Provided by Teachers in Cambodia." *International Journal of Educational Development* 49: 291–299. https://doi.org/10.1016/j.ijedudev.2016.04.003.

Bray, Mark, Shengli Zhan, Chad Lykins, Dan Wang, and Ora Kwo. 2014. "Differentiated Demand for Private Supplementary Tutoring: Patterns and Implications in Hong Kong Secondary Education." *Economics of Education Review* 38: 24–37. https://doi.org/10.1016/j.econedurev.2013.10.002.

Brookes, B. C. 1985. "'Sources of Information on Specific Topics' by S.C. Bradford." *Journal of Information Science* 10 (4). https://doi.org/10.1177/016555158501000406.

Cabrera, Leopoldo, Carmen N. Pérez, and Francisco Santana. 2020. "¿Se incrementa la desigualdad de oportunidades educativas en la Enseñanza Primaria con el cierre escolar por el coronavirus?" [Is Inequality of Educational Opportunity in Primary Education Increasing with the Coronavirus School Closures?]. *International Journal of Sociology of Education* 8 (4): 27–52. https://doi.org/10.17583/rise.2020.5613.

Chan, Claudia, and Mark Bray. 2014. "Marketized Private Tutoring as a Supplement to Regular Schooling: Liberal Studies and the Shadow Sector in Hong Kong Secondary Education." *Journal of Curricular Studies* 46 (3): 361–388. https://doi.org/10.1080/00220272.2014.883553.

Cipra, Alli, and LaTreese Hall. 2019. "COREMatters: A Bullying Intervention Pilot Study." *RMLE Online* 42 (4): 1–13. https://doi.org/10.1080/19404476.2019.1599244.

Colazzo-Duarte, Lorena, and Lourdes Cardozo-Gaibisso. 2021. "Teacher Professional Insertion: Study of the Perceptions of the Actors Involved in the Processes of Pedagogical Accompaniment During the Pandemic." *Cuaderno de Pedagogía Universitaria* 18 (36): 7–26. https://doi.org/10.29197/cpu.v18i36.421.

Dahal, Tara N. 2021. "ICT Resources Availability in Rural Community Schools in Nepal: An Exploration and Analysis." *Journal of Art and Social Sciences* 3 (1): 1–10. https://artechjournals.com/uploads/documents/file_807_157.pdf.

Deutsch, Nancy L., Cristina L. Reitz-Krueger, Ángela K. Henneberger, Valerie A. Futch Ehrlich, and Edith C. Lawrence. 2017. "'It Gave Me Ways to Solve Problems and Ways to Talk to People': Outcomes from a Combined Group and One-on-One Mentoring Program for Early Adolescent Girls." *Journal of Adolescent Research* 32 (3): 291–322. https://doi.org/10.1177/0743558416630813.

Dolenc, Kosta, and Boris Aberšek. 2015. "TECH8 Intelligent and Adaptive e-Learning System: Integration into Technology and Science Classrooms in Lower Secondary Schools." *Computer Science and Education* 82: 354–365. https://doi.org/10.1016/j.compedu.2014.12.010.

Du, Fengning, and Qi Wang. 2017. "New Teachers' Perspectives of Informal mentoring: Quality of Mentoring and Contributors." *Mentoring y Mentoring: Partnership in Learning* 25 (3): 309–328. https://doi.org/10.1080/13611267.2017.1364841.

Eron, Lawrence. 2021. "Tutor Capacity Building Efficacy in Preservice Teacher Preparation for Inclusive Schools: An Exploratory Study." *Open Journal of Social Sciences* 9 (7): 398–413. https://doi.org/10.4236/jss.2021.97029.

Expósito-López, Jorge, Coord. 2014. *Tutorial Action in Current Education*. Synthesis.

Expósito-López, Jorge, Ramón Chacón-Cuberos, Fátima Zahra-Rakdani, and Jennifer Serrano-García. 2023. "Actitudes y componentes de la tutoría y acción tutorial y su influencia en la mejora del desempeño académico" [Attitudes and Components of Mentoring and Tutoring and Their Influence on Improving Academic Performance]. *RELIEVE: Revista Electrónica De Investigación Y Evaluación Educativa* 29 (1): M5. https://doi.org/10.30827/relieve.v29i1.27360.

Fernández-Batanero, José M., and Alejandro Rodríguez-Martín. 2017. "ICT and Functional Diversity: Knowledge of the Teaching Staff." *European Journal of Investigation in Health, Psychology and Education* 7 (3): 157–175.

Green, Amy L., Stephen Ferrante, Timothy L. Boaz, Krista Kutash, and Brooke Wheeldon-Reece. 2021. "Social and Emotional Learning During Early Adolescence: Effectiveness of a Classroom-Based SEL Program for Middle School Students." *Psychology in the Schools* 58: 1056–1069. https://doi.org/10.1002/pits.22487.

Guill, Karin, and Katrin Lintorf. 2019. "Private Tutoring When Stakes Are High: Insights from the Transition from Primary to Secondary School in Germany." *International Journal of Educational Development* 65: 172–182. https://doi.org/10.1016/j.ijedudev.2018.08.001.

Guill, Karin, Melike Ömeroğulları, and Olaf Köller. 2022. "Intensity and Content of Private Tutoring Lessons During German Secondary Schooling: Effects on Students' Grades and Test Achievement." *European Journal of Educational Psychology* 37 (4): 1093–1114. https://doi.org/10.1007/s10212-021-00581-x.

Guill, Karin, Oliver Lüdtke, and Jasmin Schwanenberg. 2020. "A Two-Level Study of Predictors of Private Tutoring Attendance at the Beginning of Secondary Schooling in Germany: The Role of Individual Learning Support in the Classroom." *British Educational Research Journal* 46 (2): 437–457. https://doi.org/10.1002/berj.3586.

Guill, Karin, Oliver Lüdtke, and Olaf Köller. 2020. "Assessing the Instructional Quality of Private Tutoring and Its Effects on Student Outcomes: Analyses from the German National Educational Panel Study." *British Journal of Educational Psychology* 90 (2): 282–300. https://doi.org/10.1111/bjep.12281.

Guillén-Gámez, Francisco D., and María J. Mayorga-Fernández. 2022. "Measuring Rural Teachers' Digital Competence to Communicate with the Educational Community." *Journal of New Approaches in Educational Research* 11 (2): 323–341. https://doi.org/10.7821/naer.2022.7.1053.

Gunay, Amber, and Alison M. Bacon. 2019. "Experiences of Youth Mentoring Through Street Dance." *Youth Justice* 20 (3): 235–251. https://doi.org/10.1177/1473225419879248.

Gunn, Frances, Seung Hwan Lee, and Madelyn Steed. 2017. "Student Perceptions of Benefits and Challenges of Peer Mentoring Programs: Divergent Perspectives from Mentors and Mentees." *Marketing Education Review* 27 (1): 15–26. https://doi.org/10.1080/10528008.2016.1255560.

Harrison, Mark G., and Lianne Lim. 2022. "Mentors' Experiences of a School-Based Mentoring Programme in Hong Kong." *Asia Pacific Journal of Education* 44 (2): 277–289. https://doi.org/10.1080/02188791.2022.2074371.

Hobson, Andrew J. 2016. "Judgementoring and How to Avert It: Introducing ONSIDE Mentoring for Beginning Teachers." *International Journal of Mentoring and Coaching in Education* 5 (2): 87–110. https://doi.org/10.1108/IJMCE-03-2016-0024.

Huina Sng, Julia, Yiying Pei, Ying Pin Toh, et al. 2017. "Mentoring Relationships Between Senior Physicians and Junior Doctors and/or Medical Students: A Thematic Review." *Medical Teacher* 39 (8): 866–875. https://doi.org/10.1080/0142159X.2017.1332360.

Ille, Sebastian, and Mike W. Peacey. 2019. "Forced Private Tutoring in Egypt: Moving Away from a Corrupt Social Norm." *International Journal of Educational Development* 66: 105–118. https://doi.org/10.1016/j.ijedudev.2018.12.003.

Jacobs, Steven. 2018. "An Analysis of the Evolution of Mentorship in Nursing." *International Journal of Mentoring and Coaching in Education* 7 (2): 155–176. https://doi.org/10.1108/IJMCE-06-2017-0042.

Jáspez, Juan F., and Marita Sánchez-Moreno. 2019. "Induction to Teaching Profession: Problems of Beginner Teachers in the Dominican Republic." *Education Policy Analysis Archives* 27: 73. https://doi.org/10.14507/epaa.27.3891.

Kopackova, Hana, Stanislava Simonova, and Irena Reimannova. 2024. "Digital Transformation Leaders Wanted: How to Prepare Students for the Ever-Changing Demands of the Labor Market." *International Journal of Management Education* 22 (1): 100943. https://doi.org/10.1016/j.ijme.2024.100943.

Kvestad, I., S. B. Randal, N. Sayyad, S. Lehmann, and T. Boe. 2021. "Study Design: Pathways to Independence—A Study of Unaccompanied Minor Refugees Settled in a Norwegian City Municipality." *Scandinavian Journal of Public Health* 51 (3): 323–329. https://doi.org/10.1177/14034948211025446.

Kwo, Ora, and Mark Bray. 2014. "Understanding the Nexus Between Mainstream Schooling and Private Supplementary Tutoring: Patterns and Voices of Hong Kong Secondary Students." *Asia Pacific Journal of Education* 34 (4): 403–416. https://doi.org/10.1080/02188791.2014.961900.

Liu, Junyan L., and Mark Bray. 2020a. "Accountability and (Mis)trust in Education Systems: Private Supplementary Tutoring and the Ineffectiveness of Regulation in Myanmar." *European Journal of Education* 55 (3): 361–375. https://doi.org/10.1111/ejed.12409.

Liu, Junyan, and Mark Bray. 2020b. "Evolving Micro-Level Processes of Demand for Private Supplementary Tutoring: Patterns and Implications at Primary and Lower Secondary Levels in China." *Educational Studies* 46 (2): 170–187. https://doi.org/10.1080/03055698.2018.1555452.

López, Ann E. 2013. "Collaborative Mentorship: A Mentoring Approach to Support and Sustain Teachers for Equity and Diversity." *Mentoring y Mentoring: Partnership in Learning* 21 (3): 292–311. https://doi.org/10.1080/13611267.2013.827836.

Lotka, Alfred J. 1926. "The Frequency Distribution of Scientific Productivity." *Journal of the Washington Academy of Sciences* 16 (12): 317–323. https://www.jstor.org/stable/24529203.

Mahieu, Rilke, and Rut Van Caudenberg. 2020. "Young Refugees and Locals Living Under the Same Roof: Intercultural Communal Living as a Catalyst for Refugees' Integration in European Urban Communities?" *Comparative Migration Studies* 8: 12. https://doi.org/10.1186/s40878-019-0168-9.

Mahmud, Rafsan, and Mark Bray. 2017. "School Factors Underlying Demand for Private Supplementary Tutoring in English: Urban and Rural Variations in Bangladesh." *Asia Pacific Journal of Education* 37 (3): 299–309. https://doi.org/10.1080/02188791.2017.1321525.

Merino-Merino, Begoña, Pilar Campos Esteban, María Santaolaya Cesteros, and Ana Gil Luciano. 2012. "Methodological Guide to Mainstreaming Equity in Strategies, Programmes and Strategies, Programmes and Health Strategies, Programmes and Activities." Ministry of Health, Social Services, and Equality.

Ministry of Education Peru. 2014. *Logros de aprendizaje de los estudiantes de Educación Básica Regular-Pela* [Learning Achievements of Students in Regular Basic Education-Pela]. Ministry of Education Peru.

Mirabal, Diane G., and Gustavo E. A. Caballero. 2018. "Tutorial Work and Its Impact in Professor's Research Scientific Formation." *Educacao e Pesquisa* 44: e165094. https://doi.org/10.1590/s1678-4634201844165094.

Nickow, Andre, Philip Oreopoulos, and Vicent Quan. 2020. *The Impressive Effects of Tutoring on PreK-12 Learning: A Systematic Review and Meta-Analysis of Experimental Evidence*. National Bureau of Economic Research.

Ömeroğulları, Melike, Karin Guill, and Olaf Köller. 2020. "Effectiveness of Private Tutoring During Secondary Schooling in Germany: Do the Duration of Private Tutoring and Tutor Qualification Affect School Achievement?" *Learning and Instruction* 66: 101306. https://doi.org/10.1016/j.learninstruc.2020.101306.

Organic Law 3 of 2020. 2020. Amending Organic Law 2/2006, of 3 May, on Education. December 29, 2020. OJ № 340. https://www.boe.es/eli/es/lo/2020/12/29/3.

Orland-Barak, Lily, and Jian Wang. 2021. "Teacher Mentoring in Service of Preservice Teachers' Learning to Teach: Conceptual Bases, Characteristics, and Challenges for Teacher Education Reform." *Revista de Formación del Profesorado* 72 (1): 86–99. https://doi.org/10.1177/0022487119894230.

Papadopoulos, Irena, Runa Lazzarino, Syed Miah, Tim Weaver, Bernadette Thomas, and Christina Koulouglioti. 2020. "A Systematic Review of the Literature Regarding Socially Assistive Robots in Pre-Tertiary Education." *Computers & Education* 155: 103924. https://doi.org/10.1016/j.compedu.2020.103924.

Pryce, Julie M., Michael S. Kelly, and Mary Lawinger. 2018. "Conversation Club: A Group Mentoring Model for Immigrant Youth." *Journal of Youth & Society* 51 (7): 879–899. https://doi.org/10.1177/0044118X18780526.

Romlah, Oom Y., and Suryawahyuni Latief. 2021. "Improving the Quality of School Resources to Improve the Quality of Education." *Science Education Bulletin* 1 (1): 27–44.

Sánchez Lissen, Encarnación, and Alicia Sianes Bautista. 2021. "Construyendo un nuevo sistema educativo en la India" [Building a New Education System in India]. *Revista Española de Educación Comparada* 37: 356–370. https://doi.org/10.5944/reec.37.2021.29048.

Sánchez-Aragón, Anna, Ángel Belzunegui-Eraso, and Óscar Prieto-Flores. 2021. "Results of Mentoring in the Psychosocial Well-Being of Young Immigrants and Refugees in Spain." *Journal of Healthcare* 9 (1): 13. https://doi.org/10.3390/healthcare9010013.

Schurch S., Roberto, coord. 2015. "Estadísticas de la Educación 2014" [Education Statistics 2014]. Chilean Ministry of Education. https://centroestudios.mineduc.cl/wp-content /uploads/sites/100/2017/06/Estad%C3%ADsticas-de-la-Educaci%C3%B3n-2014.pdf.

SCImago. n.d. "SCImago Magazine Ranking." https://www.scimagojr.com/.

Smit, Ben H. J., Dineke E. H. Tigelaar, Amanda K. Berry, and Wilfried F. Admiraal. 2024. "Teacher Educators' Views on Educating Pre-Service Teachers for Participatory Action Research in Secondary Schools." *Teaching and Teacher Training* 141: 104460. https://doi.org/10.1016/j.tate.2023.104460.

Šťastný, Vít, and Martin Chvál. 2023. "Different Subjects, Different Incentives: Private Tutoring and Perceived Instructional Quality in Czech Lower-Secondary Schools." *International Journal of Educational Development* 98: 102737. https://doi.org/10.1016/j.ijedudev.2023.102737.

Strobl, Carola, Emilie Ailhaud, Kalliopi Benetos, et al. 2019. "Digital Support for Academic Writing: A Review of Technologies and Pedagogies." *Computers & Education* 131: 33–48. https://doi.org/10.1016/j.compedu.2018.12.005.

Suante, Kamtungtuang, and Mark Bray. 2022. "Displacing the Schools: Default Privatization and 'School-Less' Arrangements for Shadow Education in Myanmar." *Asia Pacific Journal of Education 42:* 1–14. https://doi.org/10.1080/02188791.2022.2122022.

United Nations Organization. 1989. "Convention on the Rights of the Child." https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child.

United Nations Organization. n.d.-a. "Universal Declaration of Human Rights." Accessed September 12, 2023. https://www.un.org/en/about-us/universal-declaration-of-human-rights.

United Nations Organization. n.d.-b. "Goal 4: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All." Accessed September 12, 2023.

Van Praag, Benjamin, and Hugo S. Sánchez. 2015. "Mobile Technology in Second Language Classrooms: Insights into Its Uses, Pedagogical Implications, and Teacher Beliefs." *ReCALL* 27 (3): 288–303. https://doi.org/10.1017/S0958344015000075.

Wang, Dan, and Mark Bray. 2016. "When Whole-Person Development Meets Social Stratification: Teachers' Ambivalent Attitudes Toward Supplemental Private Tutoring in Hong Kong." *Asia Pacific Education Researcher* 25 (5): 873–881. https://doi.org/10.1007/s40299-016-0307-0.

Wexler, Lindsay J. 2019. "Working Together Within a System: Educative Mentoring and Novice Teacher Learning." *Mentoring y Mentoring: Partnership in Learning* 27 (1): 44–67. https://doi.org/10.1080/13611267.2019.1583406.

York, Sarah, Rea Lavi, Yehudit Judy Dori, and MaryKay Orgill. 2019. "Applications of Systems Thinking in STEM Education." *Journal of Chemical Education* 96 (12): 2742–2751. https://doi.org/10.1021/acs.jchemed.9b00261.

Yung, Kevin W. H. 2020. "Comparing the Effectiveness of Cram School Tutors and Schoolteachers: A Critical Analysis of Students' Perceptions." *International Journal of Educational Development* 72: 102141. https://doi.org/10.1016/j.ijedudev.2019.102141.

Yung, Kevin W. H. 2021. "Shadow Education as a Form of Oppression: Conceptualizing Experiences and Reflections of Secondary Students in Hong Kong." *Asia Pacific Journal of Education* 41 (1): 115–129. https://doi.org/10.1080/02188791.2020.1727855.

ABOUT THE AUTHORS

Jennifer Serrano-García: PhD Student and Lecturer, Department of Research and Diagnostic Methods in Education, Faculty of Education Sciences, University of Granada, Granada, Spain
Corresponding Author's Email: jenniserrano@ugr.es

Eva María Olmedo-Moreno: Coordinator of the Doctoral Programme in Educational Sciences and Full University Professor, Department of Research and Diagnostic Methods in Education, University of Granada, Granada, Spain
Email: emolmedo@ugr.es

Fátima Zahra Rakdani-Arif Billah: PhD Student and Lecturer at the University of Granada, Department of Research and Diagnostic Methods in Education, Faculty of Education Sciences, University of Granada, Granada, Spain
Email: rakdani@ugr.es

Jorge Expósito-López: Full University Professor and Head of the Department, Department of Research and Diagnostic Methods in Education, Faculty of Education Sciences, University of Granada, Granada, Spain
Email: jorgeel@ugr.es