



Research productivity as a predictor of professional performance in higher education teachers: A scoping review

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ABSTRACT

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Valuing the importance of research production in achieving effective teaching performance represents a significant challenge for higher education. Both activities enable us to delve into the core of teaching and understand its role in the university education system. This article aimed to map scientific evidence on the relationship between research productivity and teaching performance in higher education. A scoping review was conducted according to the principles of the Joanna Briggs Institute and the PRISMA methodology. For this purpose, the Scopus, WoS, and EBSCO databases were used. The eligibility criteria were determined to include studies focused on higher education teachers, studies published in English or Spanish, which are open access, and whose publication period is between 2015 and 2025. The final sample was composed of 16 articles. Likewise, Scopus was the most used database for the publication of studies, and the most frequent language for publishing such research was English. Additionally, 14 studies with a quantitative approach were identified, one was qualitative, and one consisted of a systematic review of the literature. It is concluded that, although there are few studies that relate research productivity to effective teaching performance, the information obtained shows a contrast between the two positions. One position asserts that research productivity influences effective teaching performance, while the other shows that this relationship does not exist.

Contribution/Originality: The main contributions of the study focus on establishing the relationship between research productivity and teaching performance in higher education, as well as highlighting that there is insufficient research addressing both variables or relating them. Both are important and relevant when it comes to contributing to scientific work.

1. INTRODUCTION

Explaining the role of research in universities over time is a task that needs to be developed with precision. Higher education (HE) in the last century differed from that of the 19th century, especially in terms of accessing information, student performance, and teaching pedagogy. These differences are because in the 21st century, the demands in the field of education are significantly greater, as universities are considered generators of new

knowledge, which is achieved through research (Anthony et al., 2022; Broo, Kaynak, & Sait, 2022; Verón, Marcolini, & Sader, 2023). Studies on research productivity are not new; since 1980, they have been carried out more profoundly, and the interest of the scientific community has become more latent. In 2008, one of the first studies on the effectiveness of science education programs in higher education was published in the United States (Barrow, Settlege, & Germann, 2008). Many of these studies succeeded in identifying the link between research production, modernization, and economic development of a country (Agasisti & Petrenko, 2024; Maia, Ikboljon, & Dilbar, 2021; Papadimitriou, 2020). In this sense, Bindé (2005) considering that the role of the teacher was not limited to teaching, pointed out that the transfer of knowledge through research productivity was essential to improve and strengthen social welfare. Research allows teachers to analyze their skills (Su & Wang, 2022) and provides them with a better understanding of their discipline, which is of utmost importance for effective teaching. Teachers' published research provides them with several benefits, ranging from a better salary package to longer tenure (Iqbal & Mahmood, 2011; Main, Wang, & Tan, 2021; Mu & Hatch, 2021; Wang, Yu, Wang, & Dai, 2024). However, to what extent does a research teacher perform well in his or her teaching practice? Is it possible for a teacher with high research productivity to be efficient during the teaching-learning process? For Centra (1983) teacher performance as a researcher generally only receives the most attention when it comes to determining rewards and promotions in higher education. However, all university professors must include both research and teaching in their professional work, as their work in the area of research will help them achieve quality teaching (Cadez, Dimovski, & Zaman Groff, 2017; Montoya, 2018; Paredes-Pérez, Ramírez-Arellano, Cardenas-Tapia, Palomino-Crispín, & Alania-Contreras, 2023; Prince, Felder, & Brent, 2007). Much has been said about teaching and its relationship with research. In this regard, Kyvik and Smeby (1994) argue that this relationship is indirect, and their association is quite weak; they even rely on several studies that show that research generates greater profits for teaching than this research. However, for Anwer and Reiss (2023) and Cao, Postareff, Lindblom-Ylänne, and Toom (2023), it is possible to link them, for which there must be collaboration in universities through dissemination centers, to connect research departments with teacher education departments. The study by Schlicht-Schmälzle et al. (2024) provides a major contribution, as they argue that research-practice partnerships are necessary as a communication initiative between research and teaching. These partnerships argue that the long-term involvement of practitioners in collaborative research is essential to build bridges effectively and sustainably (Araya-Pizarro, Verelst, Pallero-Castillo, & Vásquez-Ángel, 2024; Bandono, Mukhlis, Susilo, Prabowo, & Maksum, 2023). Another study, by Palali, Van Elk, Bolhaar, and Rud (2018), showed that master's students whose teachers have high-quality publications obtain better grades. Also, no effect was found in the fact that teachers had published studies or a certain number of publications (productivity). Likewise, the authors observed that the quality of teaching research is important when observing an impact on student performance, and the number of publications is considered when their quality is good, since published studies that are of higher quality positively affect student grades. Given the above, it is observed that a significant part of the scientific community contradicts those studies that relate teaching research and teaching performance. Among them are Marsh and Hattie (2002), for whom effective teaching and producing more research are barely correlated and are rather independent constructs. In that sense, they point out that good researchers are not necessarily better teachers than bad researchers, nor are good teachers more likely to be more productive researchers than bad teachers. Similarly, Braga, Paccagnella, and Pellizzari (2014) conducted research at Bocconi University in Italy, in which they found that those teachers who are most productive in research are probably less effective in their professional work. This is ratified by the study conducted by Coccoresse, Dell'Anno, and Restaino (2024), who established that those professors who seek higher quality and productivity in research are forced, in many cases, to neglect teaching, which highlights a disjunction between them.

Faced with this clash of two positions, it is necessary to delimit the current state of the literature concerning research productivity and its possible link with teaching performance in higher education. There are a few studies whose methodology is a review that studies the relationship between both aspects in HE. Therefore, this analysis is

justified, since its objective is to map scientific evidence on the relationship between research productivity and teaching performance in HE.

2. METHOD

A review was conducted in accordance with established guidelines by the Joanna Briggs Institute (JBI) for scoping reviews (Peters et al., 2020). In addition, the Prisma-ScR checklist for reports was used to support the search process (Page et al., 2021). The JBI methodology was developed following the following stages: formulation of research questions; formulation of article inclusion and exclusion criteria; development of a search strategy and selection; analysis and organization; and discussion of important findings. The guiding questions were: what are the characteristics of the documents reviewed in terms of authors, year of publication, country, title, name, and indexing of the journal, and what are the positions that defend the influence of research productivity on teaching performance?

2.1. Inclusion and Exclusion Criteria Used in the Review

The selection process considered the following inclusion criteria: Studies published in journal articles or papers resulting from conferences; the range of publication had to be between 2015 and 2025; and they had to be related to topics such as higher education, research productivity, university teaching, quality, teaching performance, and scientific production. The databases chosen were Scopus, WoS, and EBSCO. In the search process, only documents in English and Spanish were reviewed to obtain complete information on research productivity and teaching performance in HE. In addition, for inclusion, the availability of the full text was established as a requirement. In turn, the exclusion criteria were as follows: articles that were not written or available in English or Spanish; studies that were not published between 2015 and 2025; articles specific to elementary and secondary school teachers, because the review focused on university teachers; and commentaries, editorials, gray literature, letters, and book chapters, because the focus was on primary data sources of published articles. On the other hand, the quality of the studies was not assessed, as evaluations of this type are generally not necessary in scoping reviews (Arksey & O'Malley, 2005).

2.2. Search

The search was focused on the title, abstract, and keywords using the search terms "Research productivity", "Teaching performance", "University education", and "Scientific production", without additional restrictions. This approach was considered because there are very few documents that include the study of both terms; therefore, it was done in this way to avoid overlooking relevant research on the topic. It should be noted that in order to validate the search strategy, confirmation from each of the researchers was necessary, using the Peer Review of Electronic Search Strategies (PRESS) checklist (McGowan et al., 2016; Neilson, 2021). The search began in November 2024 in the WoS, Scopus, and EBSCO databases. This choice was made because all of them together have an extensive collection of publications in various thematic areas. During the search process, the following were used as descriptors according to subject matter. Table 1 shows the strategies adopted in this review.

Table 1. Database search strategies.

Database	Search Terms
WoS	("teaching performance") OR "Research productivity*" OR "higher education*" OR researchers*) AND ("university teachers ") OR "teaching performance*" OR "Research productivity*") AND ("Education+") OR quality * OR researchers * OR "university teachers *"
Scopus	("Research productivity" OR "teaching performance*" OR "higher education*" OR "production OR " teachers *) AND ("university teachers " OR "teaching performance" * OR production*) AND ("teaching performance " OR education* OR quality * OR "Research productivity * "OR "higher education *")
EBSCO	(" Research productivity " OR "teaching performance*" OR quality * OR "higher education" OR " teachers *) AND ("university teachers " OR quality * OR production*) AND ("higher education " OR "Research productivity*" OR quality * OR "teaching performance * "OR quality *)

Note: * used to retrieve documents containing an unspecified number of these terms.

Data collection began on February 15, 2024. The search in the WoS, Scopus, and EBSCO databases yielded 380 documents; the researchers then filtered them by adjusting titles, keywords, and abstracts. Forty-nine documents were excluded from this process (Table 1). The studies were then compiled using the reference management application Zotero, and the data were grouped into a table containing the most relevant information, both about the study and the journal where it was published.

2.3. Prisma Analysis

According to the studies obtained as a result of the previous process, the Prisma analysis was performed. The initial search data related to the topic showed 284 journal articles and conference papers published between 2015 and 2025. Of the 331 studies identified, 22 papers were excluded because they were duplicates. For evaluation or screening, 309 documents remained, with 79 excluded for being outside the established period and 24 for being in languages other than English or Spanish. Of this total, 190 were excluded for not belonging to the studied subject, for lacking full access, or for not focusing on university professors. Additional exclusions included commentaries, editorials, gray literature, letters, and book chapters. Ultimately, 16 articles were included and accepted for the review (Figure 1).

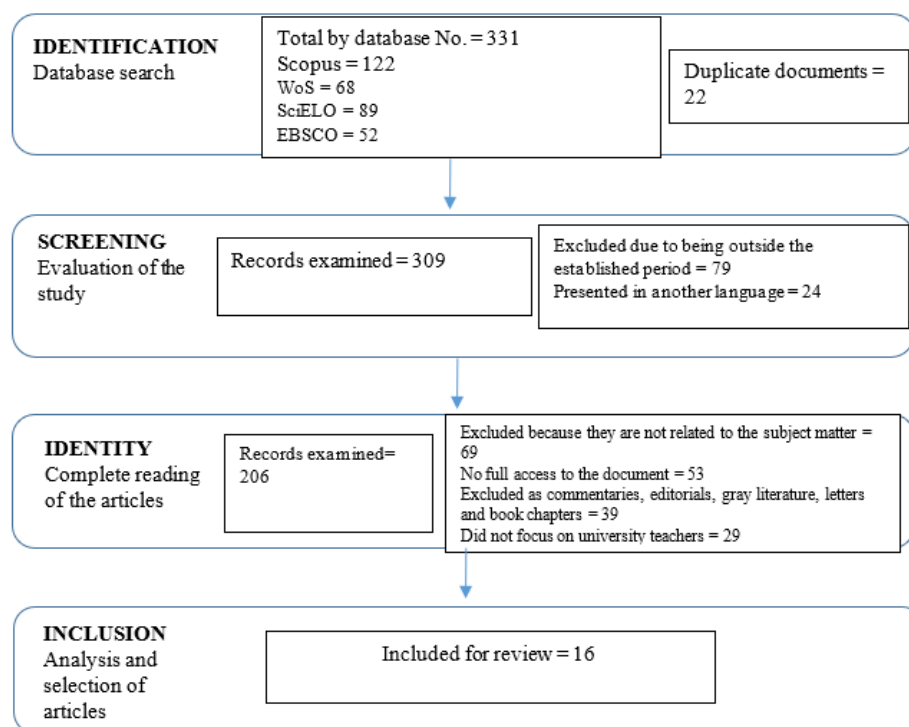


Figure 1. Conceptual framework with parameters.

3. RESULTS AND DISCUSSION

Using the Prisma methodology, 16 articles were obtained and evaluated according to the findings reported in each of them. Of the total number of articles constituting the final sample, 8 were published in the Scopus database (Albert, Davia, & Legazpe, 2016; Artés, Pedraja-Chaparro, & Del Mar Salinas-Jiménez, 2017; Bak & Kim, 2015; Coccorese et al., 2024; Morales, Grineski, & Collins, 2017; Rodríguez & Rubio, 2016; Tesouro & Puiggalí, 2015; Tight, 2016); 4 articles were published in journals presenting double indexing in the Scopus-WoS databases (Albert, Davia, & Legazpe, 2018; Cuenca, 2025; Leišytė, 2016; Maharjan, Stoermer, & Froese, 2022); one article was published in EBSCO-Scopus (Bhatti, Alyahya, & Alshiha, 2022); 2 studies in Scopus-WoS- EBSCO (Albert et al., 2018; Ramirez-Montoya, Ceballos, Martínez-Pérez, & Romero-Rodríguez, 2023); and only one in the EBSCO database (Gaikwad, 2021).

Of the total number of studies examined, 14 (87.7%) were published in English and 2 in Spanish (12.5%). In addition, the countries with the highest scientific production referring to research productivity related to teaching performance in higher education were Spain with 5 publications (Albert et al., 2016, 2018; Artés et al., 2017; Rodríguez & Rubio, 2016; Tesouro & Puiggalí, 2015) and the Netherlands with 2 studies (Leišytė, 2016; Palali et al., 2018) while other countries, such as the USA, Saudi Arabia, Mexico, the Philippines, Italy, Peru and Korea only had one published article referring to the topic. Similarly, only one study focused on a sample of teachers worldwide.

On the other hand, 14 investigations presented a quantitative approach, 1 was qualitative, and 1 consisted of a systematic review. Regarding the content of the studies reviewed, it was observed that there was no uniformity in the results mapped, since the information obtained on the relationship between research productivity and teaching performance in HE, in some cases, did not show such a link. Table 2 presents the characteristics of the publications examined, namely: authors, year of publication, country, journal name, and journal indexation are presented below.

Table 2. Characteristics of the articles reviewed.

Author(s)/year/country	Methodology	Name of magazine	Database	Language
Cuenca (2025), Peru	Quantitative	Iberoamerican Journal on Quality, Effectiveness, and Change in Education	Scopus-WoS	Spanish
Maharjan et al. (2022), Worldwide	Quantitative	European Management Review	Scopus-WoS	English
Bhatti et al. (2022), Saudi Arabia	Quantitative	Educational Sciences: Theory and Practice	EBSCO-Scopus	English
Albert et al. (2018), Spain	Quantitative	Studies in Higher Education	Scopus-WoS	English
Ramirez-Montoya et al. (2023), Mexico	Quantitative	Publications	Scopus-WoS-EBSCO	English
Gaikwad (2021), Philippines	Qualitative (Case study)	Journal of Higher Education Theory and Practice	EBSCO	English
Morales et al. (2017), USA	Quantitative	CBE-Life Sciences Education	Scopus	English
Albert et al. (2016), Spain	Quantitative	European Journal of Education	Scopus-WoS-EBSCO	English
Leišytė (2016), Netherlands	Quantitative	Studies in Higher Education	Scopus-WoS	English
Tesouro and Puiggalí (2015), Spain	Quantitative	Procedia - Social and Behavioral Sciences	Scopus	Spanish
Coccorese et al. (2024), Italy	Quantitative	Socio-Economic Planning Sciences	Scopus	English
Rodríguez and Rubio (2016), Spain	Quantitative	International Review of Economics Education	Scopus	English
Palali et al. (2018), Netherlands	Quantitative	Economics of Education Review	Scopus	English
Tight (2016), England	Systematic review	European Journal of Higher Education	Scopus	English
Artés et al. (2017), Spain	Quantitative	Research Policy	Scopus	English
Bak and Kim (2015), Korea	Quantitative	Research in Higher Education	Scopus	English

3.1. Positions that Defend the Influence of Research Productivity on Teaching Performance in Higher Education

Studies have shown that the main responsibilities of teachers in HE are teaching and research (Albert et al., 2016; Bhatti et al., 2022; Gaikwad, 2021). Nowadays, all teachers are expected to be active researchers, as research has become the fundamental indicator of quality in HE. However, fulfilling both functions sometimes does not have the expected results, and the following question arises about the good performance or not of teachers who seek promotion through their research productivity: Does an adequate environment and research productivity provide a better learning experience for students, and does research productivity affect good teaching performance?

To answer these questions, there are different positions, which have been demonstrated by empirical studies, although so far, they have not reached a consensus in their appraisals. However, this possible discrepancy does not

detract from both approaches; on the contrary, it enriches the research carried out. Among the studies that defend the existence of a connection between research productivity and teaching performance is the one conducted by Bhatti et al. (2022). This research demonstrated the importance of teachers participating in scientific research, as it is beneficial for improving their work performance and modifying their work behavior. They also state that scientific research represents a significant element of the success of HE institutions (Maia et al., 2021), which is achieved when teachers improve their teaching and research performance.

Another aspect addressed in this approach was that of collaborative research, which, in general terms, helps the teacher to have good academic performance. In this sense, Morales et al. (2017) established that the most productive teachers in terms of publications work with more undergraduate students, and, generally, were their teachers for more than one year on average. It was established that professor's biomedicine faculty who taught research courses with a greater enthusiasm for this activity were more productive in publishing collaborative studies with their students. In contrast, students had a positive influence on faculty research productivity. This aspect is supported by Gaikwad (2021), who asserts that those faculty who showed higher research productivity managed to balance this with teaching, through certain ways: They linked research and teaching, considered both tasks important, and focused their research on their area of expertise. Teachers who thought of balancing both aspects shared that research and teaching are important (Smith, 2022).

Artés et al. (2017) make a significant contribution with their study conducted in Spain on research performance and the scores achieved by teaching staff, demonstrating that there is a positive correlation between the two. In addition, they established that in teacher evaluations, teachers who achieve better results have a medium or high level of research intensity, compared to teachers with little dedication to research. They also pointed out that these results were not linear, since the staff in the first group did not necessarily achieve better evaluations than those teachers with a medium level of research intensity.

The results of the paper showed that teachers who are relatively active in research are high-quality professionals. The authors point out that this may be due to theories that support the positive relationship between research and teaching, as research activity allows teachers to stay up to date in their professional field, resulting in a more effective educational process. Similarly, another reason that explains these results is the innate ability that each teacher has (Artés et al., 2017). That is, a good teacher has certain characteristics that also allow them to be a good researcher, for example, creativity, technical knowledge, motivation, and organization, among other characteristics. Thus, a harmonious relationship between research and teaching is oriented towards people with such characteristics and who can better perform both activities.

Ramirez-Montoya et al. (2023) establish that teaching and research can take place in HE institutions and point out that research productivity is increasingly promoted through publications. This leads teachers to be more effective in their professional performance. For university professors, research represents the basis for teaching. In contrast to this approach, Leišytė (2016), supported by different studies, asserts that the university itself often alters the connection between research and teaching, separating one from the other. This orientation can certainly negatively impact the research productivity of Dutch higher education. In this case, a role reversal is observed, as the "teaching-research balance" favors research productivity.

Concerning studies that disagree with those that support and defend a relationship between research productivity and teaching performance, the one conducted by Coccoresse et al. (2024) in Italy stands out. The results achieved in the research showed that students considered that teachers who actively publish articles in journals are clearer when teaching a class. However, those teachers who achieve a higher quality of research and publish with many co-authors receive a worse rating. Consequently, it was established that the desire to improve the quality of research can lead teachers to neglect their pedagogical work.

The studies that have been conducted so far have not reached a consensus in relation to the existing link between research quality and effective education in HE. Thus, Coccoresse et al. (2024) point out that the scientific excellence

of teachers can be fundamental for the improvement of student performance; however, dedicating more time to students often interferes with research. That is, both time and resources are required for both tasks (Coccorese et al., 2024). Another aspect analyzed was the strong research-oriented incentives. The presence of incentives in an Italian university caused teachers to shift their interest and allocation of effort between tasks. As a result, it was observed that the number of published articles increased, while their teaching performance decreased significantly. Thus, it is evident that encouraging teachers to be more productive in publishing articles has a positive impact on their teaching performance in one way or another.

The quality of research represents a highly valued aspect in the studies examined, since it is the measure that characterizes teachers' publication records. But the quality of teaching is reflected in the students' grades and in the students' evaluations of the professors. In this sense, Palali et al. (2018) establish that master's degree students who have professors with high-quality publications obtain the highest grades, but having any publication or a number of these does not impact students. This shows that the quality of publications is more important for student performance, while quantity is only relevant if the quality is good. In other words, the number of the best publications positively affects students' grades.

Albert et al. (2016) found a balance between research and teaching; that is, PhDs who devote less time to teaching produce more successful publications. In turn, Cuenca (2025) found an important difference between the role of teaching and research, influenced by institutional policies that seek to achieve the effectiveness of both in the university context. Faced with this reality of transformations, faculty have implemented modes of production and reduction of teaching hours to manage research productivity.

The situation pointed out by Cuenca (2025) occurs during different university administrations; for example, in private institutions, labor links with faculty have diversified. Thus, it is possible to observe teacher-researchers who do not teach, but only focus on scientific production, i.e., their work is merely research and publication in high-impact journals. This is evidence of the presence of parallel activities in higher education, which in some way helps to reduce the workload of the researcher-teacher, but at the same time establishes a segmentation between professors who teach and those who do research.

It should be noted that the literature examined shows that the elements related to research productivity were oriented to the personal and institutional spheres (Albert et al., 2016, 2018; Cuenca, 2025; Gaikwad, 2021; Ramirez-Montoya et al., 2023). In the words of Ramirez-Montoya et al. (2023), scientific productivity is related to positions in international rankings, institutional accreditations, and obtaining patents; all of this serves as an incentive for teachers to be more productive in their research results. It also leads many universities to prioritize research to create professional profiles, relegating teaching work to a secondary role.

Another aspect that stood out was that of salary and compensation for research productivity. The researchers demonstrated the link between research productivity and salary. Teachers who wish to be productive in the area of research are motivated, among other things, by networking, personal satisfaction, monetary incentives, and ranking (Gaikwad, 2021). In this regard, Bak and Kim (2015) go a step further and explain that incentive goals for research over teaching (Jørgensen & Hanssen, 2018; Xu, Oancea, & Rose, 2021). In other words, when considering a compensation system, research is more valuable than classroom work, which would lead to a certain neglect of teaching practice and generate poor faculty performance.

Finally, Albert et al. (2016) state categorically that it is necessary to learn more about the determinants of productivity to create incentive systems in all areas. They suggest designing research support to increase productivity throughout the academic career of teachers. This suggestion was made after observing how younger academics are more productive than their older counterparts, and this would probably not be the case if the design of incentives were not capped, i.e., once researchers have reached a certain number of publications, they stop researching, as their ranking and salary will not improve.

4. CONCLUSION

This review is one of the few attempts to map scientific evidence on the relationship between research productivity and teaching performance in HE. Through a rigorous review methodology, 16 relevant studies were identified, and it became evident that, although there is a lot of literature on teaching performance and a considerable number of studies on research productivity, there is not enough research that addresses both variables and establishes a relationship between them. The database with the largest scientific production on the subject is Scopus, and English is the language most used for the publication of these articles.

Furthermore, in studies that do not defend the relationship between research productivity and teaching performance, it was found that time devoted to teaching negatively affects the production of publications. In contrast, some research that supports this relationship shows that time management is considered an important factor by teachers who motivate themselves. However, it was seen as an inhibiting factor by teachers who do not engage in research productivity. Furthermore, as a point in favor of this relationship, certain studies established that the generation of knowledge, resulting from research work, influences the teacher's work performance, including job performance, contextual performance, and counterproductive work behavior, all through a research culture.

Given the discrepancy between the positions observed in the studies reviewed, HE institutions must recognize the participation of teachers in one or both activities, without forgetting that the simple fact of giving more time to research activity does not make them good teachers, but to some extent, improves their research productivity. Thus, it is hoped that the findings of this review will support educational policies for valuing both aspects with the same level of importance.

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