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## TEACHER EDUCATORS IN PORTUGAL: WHAT IS THE RESEARCH PROFILE? WHAT ARE THE RESEARCH CONDITIONS?

*Formadores de profesores en Portugal: ¿cuál es el perfil investigador? ¿cuáles son las condiciones de investigación?*



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### Abstract:

Acknowledging the importance of teacher educators being highly involved in education research in higher education, a study was conducted that characterizes the research profile of these teachers who in Portugal are responsible for curricular units strongly related to teaching practices. As a methodological procedure, CVs were analysed of all who teach courses, both in private and public institutions, for basic and secondary education, i.e. teachers to teach from the first to the twelfth grade of schooling. The data of this documentary analysis, treated by simple statistics, was complemented by case studies, where course coordinators were interviewed. The reports of the interviewees were interpreted through content analysis. Among other aspects, it was focused on participation in research projects and publications. The results show that, in general, involvement in research is low as well as the number of publications, especially in journals indexed in Scopus or on

the Web of Science. This situation is justified by the lack of conditions for teacher educators to have time to conduct research, which shows the need for higher education institutions to invest in situations that contribute to professional development activities in association with research related to professional practice.

**Key Words:** higher education; research profile; teacher educators; teaching and research

## Resumen:

Reconociendo la importancia de que los formadores de profesores se impliquen en la investigación educativa en la enseñanza superior, se ha realizado un estudio que traza el perfil investigador de estos profesores, que en Portugal, se encargan de unidades curriculares fuertemente relacionadas con la práctica docente. Como procedimiento metodológico, se analizaron los currículos de todos los formadores de profesores que imparten cursos, tanto en instituciones privadas como públicas, para ser profesor de educación primaria y secundaria, es decir, profesores que enseñan de primero a duodécimo grado de escolaridad. Los datos de este análisis documental, tratados mediante estadística simple, se complementaron con estudios de casos, donde se entrevistaron a los coordinadores de los cursos. Los informes de los entrevistados se interpretaron mediante un análisis de contenido. Entre otros aspectos, se centró en la participación en proyectos de investigación y publicaciones. Los resultados demuestran que, en general, tanto la participación en la investigación, como el número de publicaciones es bajo, especialmente en revistas indexadas en Scopus o en la Web of Science. Esta situación se justifica por la falta de condiciones para que los formadores de docentes tengan tiempo para realizar investigaciones, lo que muestra la necesidad de que las instituciones de educación superior inviertan en situaciones que contribuyan a las actividades de desarrollo profesional en asociación con investigaciones relacionadas con la práctica profesional.

**Palabras clave:** enseñanza superior; formadores de profesores; enseñanza e investigación; perfil de investigación.

## 1. Introduction

A high level of involvement in research, capable of producing new knowledge worth publishing, is required from higher education institutions (HEI) and the teachers who are part of them. This is one of the missions of this level of education (Bourdoncle & Lessard, 2002; Magalhães, 2006), considered not only when ranking institutions and teachers, but also in the evaluation and accreditation of the respective courses and classification of research centres. Primary and secondary school teachers, i.e. those who teach the twelve years of compulsory education, are also expected to back their curricular practices with research data. Teachers are expected to adapt their pedagogical work so that no student is left behind, basing this work on diagnostic processes that allow characterization of the contexts in which they teach and the students they teach, as well as through the effects that occur.

Considering these requirements, which are very evident in Portugal's policies regarding these two levels of education, the importance of higher education teachers, training future primary and secondary education teachers, to be strongly involved in educational research is acknowledged. It is expected that having this professional profile, teacher educators will be capable to insert students/future teachers into data

collection and interpretation activities related to what happens in the day-to-day schools and to teaching-learning-evaluation processes.

Aligned with this idea, a study was conducted with the objective of characterizing the research profile of higher education teachers in Portugal that teach curricular units (CUs) which are strongly related to teaching practices in initial teacher training courses. In parallel, we sought to know the relationship between the research teachers' conduct and the CUs they teach, and their availability to be involved in research activities. In sum, the study that this article reports answers the following research questions:

- What is the research profile of higher education teachers that teach CUs strongly related to teaching practices during future teachers' initial training? How is the research they conduct connected to those CUs?
- What working conditions make it easier or harder for these teachers to be involved in research processes?

It is believed that the existence of this institutional culture, focused on research and on processes that consider teaching and research to be inseparable (Leite, 2019; Robertson, 2007), socializes students/future teachers to be involved in learning communities focused on education research practices. In this sense, the importance of teacher educators that teach CUs strongly related to teaching practices having a research profile aligned with what is desired of professional training must once again be stressed. This is the focus of the article that, after laying out the theoretical reference that justifies the aforementioned position, will present the methodological procedures of data collection and interpretation. These are discussed and interpreted in the final conclusions.

## **2. Theoretical positioning**

In the pedagogical model of higher education, the teaching-research relationship is considered the essential component, because it expresses the way teachers mobilize knowledge produced through research, how they involve students in the production of new knowledge, and how they use the information they collect to improve quality of education (Obwegeser & Papadopoulos, 2016; Sousa et al., 2020). When this training is intended for students/future teachers, the importance of this relationship is amplified, particularly in CUs strongly related to teaching practice, i.e., with those in which "practical knowledge" is mobilized (Popkewitz, 2021). As recalled by this latter author, it has become a goal, the "discovery of what teachers do and how they do it", as the "initial teacher training should help novice teachers to discover how to do teaching..." (Ball et al., 2009, p. 459, op. cit. Popkewitz, 2021, p. 246).

Following this idea, it is considered that the teaching research prepares students to be able to recontextualize the prescribed curriculum at the national level in their future professional activity, in order to adapt it to real school contexts and to students with whom they work (Leite et al., 2019; Marinho & Delgado, 2019). It is also



in this sense that Gutman (2021) points out that teaching with research allows one to integrate knowledge from research into teaching practices and has positive repercussions on the training of students/future teachers. As stated by La Velle and Flores (2018), it favours a foundation that promotes transformation, by preparing them for the role of influencers in contexts of practice.

Teaching practices that intend to break with technical and/or expositive orientation require teachers to master knowledge that allows them to make the best decisions when using their agency power (Priestley et al., 2015; Santos & Leite, 2020) given the diagnoses they perform. It is in a similar sense that Yinon & Orland-Barak (2017) refer to the contributions that emerge from the teaching-research relationship to the empowerment of the teachers' agency and in the construction of a professional conscience in students/future teachers aligned with what is required of them. Some authors (Dockerty, 2019; La Velle & Flores, 2018) go as far as saying that this type of agency can encourage students in initial teacher training to mobilize learning related to teaching practices developed in research processes, thus promoting innovation. Perhaps that is why Agud and Ion (2019) propose that the great majority of activities linked with research that students carry out during initial teacher training are related to learning guided by research. According to Smith (2015), this research oriented toward practice provides preparation for practical problem-solving and decision-making. The study conducted by Ezquerro Martínez et al. (2015) also concluded that teachers who mobilize students towards research work tend to centralize their teaching practice on the reflection of real classroom situations, an aspect that prepares them for exercising their profession.

Initial teacher training courses offer students opportunities to become acquainted with the profession by encountering real situations (Brouwer & Korthagen, 2005; Ferguson, 2021; Gutman, 2021; Leite et al., 2017; Nóvoa, 2009; Rivas Flores et al., 2015). This process of acquaintance, when well conducted, provides opportunities for the construction of know-how that enhances the production of new knowledge and integration in learning and research communities (Aktar & Oxley, 2019; Diery, et al., 2020; Lunenberg et al., 2007; Mági & Beerkens, 2016; Yogev & Yogev, 2006). Involving students in research processes during initial training is a way to foster this culture, focused on teaching-related topics and provide opportunities for them to learn how to teach (Böttcher-Oschmann et al., 2021; Oolbekkink-Marchand et al., 2020). In addition, and as was remembered by Yogev and Yogev (2006) among others, the involvement of teacher educators in research processes represents to students/future teachers a model of how to be a teacher-researcher.

It is through the deliberation of these arguments that we consider important that teachers conduct research focused on teaching practices (Cao et al., 2021; Cochran-Smith et al., 2020; Czerniawski et al., 2017; Lunenberg, 2010). When this happens, they improve their understanding of teaching, since what they study/research and what they teach correspond to the same content (Cao et al., 2021). In summary, and appealing to the thesis defended by Cochran-Smith and Demers (2008), teachers that train future teachers to be involved in research about teaching

practices improves not only the knowledge of teacher educators but also the training they provide (Perines, 2020; Woore, et al., 2020). However, as Loughran (2014) points out, when teacher educators aim at simultaneously fulfilling both “teacher educator” and “researcher” roles, research activities can encounter conflicts between roles, namely when perceptions regarding these roles are contradictory and when teacher educators have a hard time fulfilling them (Kyaw, 2021; Smith, 2015). An example of this is the study conducted by Cao et al. (2021), which explored the teaching-research relationship of 101 Finnish teacher educators and found that 48.5% of them considered themselves teachers more than researchers and that 64.7% reported teaching as their main activity. Other studies have revealed other types of weaknesses, such as the one by Agud and Ion (2019), conducted in Catalonia, Spain, which showed that students in teacher training courses are more researcher consumers than producers, which highlights the importance of empowering them not only to consume research but to produce it, namely, to develop professionally. The same position is taken by Smith (2015) when she affirms that initial teacher training would benefit if the educators and the students/future teachers acknowledged that they were both consumers and producers of research.

Another aspect to be considered when thinking about the teaching-research relationship is related to the reasons at the base of teachers not recognizing themselves as researchers. Some studies have highlighted conditions that have not favoured the development of research profiles. In Griffiths et al.’s (2010) study, teacher educators indicated lack of time as a barrier, including intensive teaching workloads and family commitments. As challenges for supporting an active institutional research culture, they mentioned the need to be supported, due to a lack of self-confidence and collaborative networking with researchers, that is, a lack of support mechanisms within an institutional learning community. These proposals are in line with the ideas presented in the study by Guberman and Mcdossi (2019), focused on the perceptions of Israeli teacher educators regarding their career development path in teaching, research, and institutional leadership. In this case, the results indicate that although research promotes teaching and institutional leadership, teachers struggle to find a balance between these three paths. These researchers also consider that the problem is aggravated when institutions do not support career planning and when they attribute teacher educators’ professional development to personal responsibility and not to something that requires a collective institutional effort. Kyaw (2021), in a study developed in the Asian context, demonstrates that personal and institutional factors related to policies and associated with the training system also influence the involvement of teacher educators in research processes. According to this author, the research activities are not hindered so much by heavy teaching workloads, but particularly by a diversity of institutional tasks.

Ulvik and Smith (2019) consider that the understanding of teacher educators about what research is and the relationship between research and teaching can promote positive attitudes towards the research they carry out and provide a clear understanding of what being a teacher-researcher entails.

### 3. Methodology

Regarding methodological procedures, the study<sup>1</sup> began with a documentary analysis (Cellard, 2012) of the CVs of teacher educators of all courses that provide initial teacher training and that grant qualification for teaching from the first to the twelfth year of schooling. These teachers are responsible for CUs strongly connected to future teaching practices, i.e., specific didactics, initiation to professional practice; supervised teaching practices/internships; evaluation of learning. To do this, all courses accredited by the Agency for Assessment and Accreditation of Higher Education (A3ES) - that is, the entity that evaluates and accredits higher education courses in Portugal - were identified. This analysis allowed the conclusion that there are a total of 148 courses, 79 offered by the university subsystem and 69 by the polytechnic. Out of this total, 127 courses are from public HEIs and 21 from private HEIs. It also allowed knowing that these courses include 2878 CUs related to teaching practice, taught by 1736 teachers.

The A3ES was contacted to obtain the CVs, anonymized, of these teacher educators, which includes, for each of them, information about the curricular units taught, socio-professional characterization data, academic qualifications, high-level professional development activities and publications. The analysis was conducted with the support of a table constructed to map these teachers' research profiles and the data were treated by simple statistics. The confidentiality of the data has been guaranteed, including the identification of specific institutions to which these teacher trainers report. For this article, considering its focus, data relating to the following indicators of analysis were mobilised: involvement in research projects; belonging to research centres; publications; connection between these publications and the CUs taught.

The intention was to find conditions that facilitate or hinder the involvement of teachers in research. Thus, after characterizing the teacher educators' research profiles through documentary analysis, HEIs in which a high or low level of research activity was identified and that symbolize situations from different geographical areas (north, centre, south, coastal, interior) were selected as case studies (Yin, 2018). Applying these criteria, 13 public HEIs and eight private were selected and identified the coordinators of the 21 teacher education courses. These coordinators were asked for a semi-structured interview (Fontana & Frey, 2003), via e-mail, and for reasons related to the pandemic, carried out in an online format ensuring subsequent anonymity. These interviews were held from April to October 2021 and recorded after the interviewees' signed the informed consent. Among other aspects, course coordinators were questioned about: the existence of institutional conditions for the

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involvement of teachers and students in research activities associated with the courses and curricular units; difficulties, and possibilities/strategies for research-oriented teaching. The interview protocol was previously submitted to critical validation (Boa et al., 2018) using the “jury agreement” technique. For this, an analysis was requested from two academics with relevant knowledge and experience in the study topic. The interviews, after being transcribed and identified by a code, were interpreted using thematic content analysis (Bardin, 2008; Tharenou et al., 2007).

#### 4. Results

The data collected via interviews and documentary analysis were presented in connection to the research questions

##### 4.1. Teacher educators’ research profiles in connection with the courses and CUs that they teach

The documentary analysis of the CV records of teachers who are responsible for teaching CUs strongly related to curricular practice in initial teacher training courses shows that mentions of **participation in national and/or international projects** are residual. Project participation is only reported by 13% of public university teachers whose courses provide qualifications to teach the first six years of schooling and by 19% of those who teach in courses that grant qualifications for teaching the third cycle of basic education and secondary education, that is, from the seventh to the twelfth year of schooling. Regarding teachers who lecture in courses that provide qualifications for teaching the first six years of schooling in polytechnic HEIs, participation in research projects is mentioned by around 4% of public HEI teachers and by 14.5% of private HEI teachers.

Despite these percentages, it cannot safely be said that there is little involvement in national or international projects since not mentioning projects can be a consequence of the CV model supplied by A3ES, which does not contain a specific area for this kind of information. It is asked for a description of five professional development activities of reference that are relevant to the course. Many teacher educators complete this information stating organizational management positions they hold. As such, given the importance that involvement in projects may have in teacher education, it would be justified to add a specific area to the CVs that would include that systematization. If that information was provided, opportunities for teacher educators to be within education research environments, related to the exercise of teaching, would be known. On the other hand, it would make it possible, when teacher educators were compiling their CVs, to become aware of the level of involvement in projects related to the CUs they teach.

Being a member of research centres (RC) related to the subject matter of the courses was one of the other items analysed and it was shown that a large number of teacher educators mention it. In the case of public university HEIs, it is mentioned by 84% of teacher educators who teach in courses that provide qualifications for teaching

in the first six years of schooling and by 94.7% who teach in courses that train teachers to lecture in the third cycle of basic education and secondary education (from the seventh to the twelfth year of schooling). Regarding polytechnic HEIs, 66% of public institutions, that provide qualifications to teach the first six years of schooling, mention it, and 64.5% in the case of private polytechnic HEIs. However, in most cases the type of participation in research centres is not specified, i.e., it is not stated if it is an integrated member or just a collaborator. Participation as an integrated member provides immersion in active communities of research and involvement in projects and collaborators are generally not implicated in project conception or in activities that involve the collection and interpretation of data and its systematization into publishing. Therefore, it cannot be concluded that a high level of participation in the activities of these centres exists.

Another important factor to deliberate on these teachers' research profiles was mentions of publications. The CVs supplied by A3ES asks the indication of five scientific publications released over the last five years in international circulation peer-reviewed journals related to the course's field, as well as books or book chapters. It also asks five other relevant publications, namely of a pedagogical nature, published over the last five years. Therefore, the type of publications presented by these teacher educators was also analysed, namely scientific articles, books or book chapters, conference proceedings, e-books, school workbooks, or textbooks, to include both publications of a markedly scientific nature and others of a more pedagogical nature.

Concerning **articles**<sup>2</sup>, although most teacher educators refer to this type of publication, related to their respective teaching areas, the volume of individual publications is predominantly low. Over the five years preceding the completion of the CV, in the case of HEI courses that grant qualifications for teaching the first six years of schooling, the situation is described as follows:

- Out of 207 **public university** teachers, 74.9% (n = 155) refer to publishing articles, but about half (43.5%) published only up to three articles and 26% between four and six articles; the percentage that published more than seven articles over the last five years is residual (5.3%). When it comes to **public polytechnic** institutions, out of 491 teacher educators, 64.2% (n = 315) mention articles, but once again about half have published only up to three articles (43.4%) over the last five years, and some teacher educators between four and six articles representing 17.7% of the total (with only 3% publishing seven or more articles).
- Out of 476 **private polytechnic** HEI teachers, almost all (90.8%; n = 432) refer to published articles, but about half (49.3%) mentioned only up to three articles and 23.5% between four and six articles; the percentage of teacher educators that published more than seven articles over the last five years is residual (5.3%)

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<sup>2</sup> The values presented refer to publications where teachers of these courses are authors or co-authors, and not to the number of articles. Since a lot of the publications are co-authored, the same reference is presented in several teachers' CVs.



The analysis carried out allow to know that, in addition to the relatively low volume of article publications, there are considerable asymmetries among the teacher educators of these courses. In the case of public HEIs, about 25% of university teacher educators and about 36% of polytechnic do not report any articles published in the last five years. In private polytechnic HEI courses, this percentage is lower: about 9% of teacher educators do not report any published articles. This shows that private HEIs are choosing their teaching staff strongly based on the publications that they mention in their CV in calls.

In the case of public university teacher educators who teach in courses that provide qualifications for teaching in the third cycle of basic education and secondary education (from the seventh to the twelfth year of schooling), there is a balance between what is considered to correspond to a low level and an average level of volume of published articles per teacher. To clarify:

- a large portion of teacher educators (95.3%) mention **publications of scientific articles** related to their respective teaching fields. However, the individual publication volume is predominantly low, since 44% have published only up to three articles over the last five years. Despite that, 35.2% that teach the selected CUs have published between four and six articles, and 16.2% of them have seven articles or more. An analysis of these numbers shows that these teacher educators publish more than those who teach CUs in courses related to the first six years of schooling. But there is still a percentage (4.7%) that do not mention any published articles over the last five years.

If we establish a relationship between the number of publications that are supposed to be accomplished by each teacher educator (five peer-reviewed articles of international circulation, books, or book chapters, plus five publications, namely of a pedagogical nature) and what is registered in their CVs, we find that several teacher educators fill in these information fields in the form predominantly indicating presentations of academic work.

This situation leads to the assumption that these teacher educators have not met the number of publications the CV requests over the last five years. Furthermore, if one analyses mention of published articles considering journal indexation, they show that publishing in indexed journals, like Scopus or Web of Science (WOS), is minimal. Regarding HEI courses that qualify for teaching the first six years of schooling, and over the period of five years to which the CV form refers, we see that:

- in **public universities**, out of 1080 articles, 446 are publications in indexed journals in Scopus or WoS (of which 35 in national journals), corresponding to 41.3% of articles published and, on average, about two articles per teacher educator in this higher education subsystem. However, publications in journals

with other indexations total 634 articles (of these, 231 articles were published in national journals and 403 in international journals) are also mentioned.

- in **public polytechnic** HEIs, out of 1278 articles, only 344 are publications in indexed journals in Scopus or WoS (37 in national journals), corresponding to 26.9% of articles published and, on average, to less than one article per teacher educator in this subsystem. Publications in journals with other indexations total 934 articles (of these, 522 articles were published in national journals and 412 in international journals).
- in **private polytechnic** HEIs, out of 630 articles, only 181 correspond to publication in indexed journals in Scopus or WoS (of which 24 in national journals). This situation corresponds to 28.7% of articles published and, on average, to less than half an article per teacher educator in this subsystem. Publications in journals with other indexations number 449 (of these, 299 articles were published in national journals and 150 in international journals).

An analysis focused on the authorship of the published articles shows that, in general, they correspond to co-authored publishing. Articles published by teacher educators of the polytechnic subsystem in national journals, with indexations other than Scopus or WoS, which correspond, in greater numbers, to individual publications, are an exception to this characteristic. This leads to the assumption they are not associated with research projects that usually involve a team.

In courses that provide qualifications for teaching in the third cycle of basic education and secondary education (from the seventh to the twelfth year of schooling) provided by **public universities**, the numbers of publications in indexed journals in Scopus and WoS are also low. To clarify, over the five years, in the CV forms analysed:

- Out of 2034 article mentions made by public university HEI teacher educators, only 650 are published in indexed journals in Scopus or WoS, which corresponds to roughly 32% of published articles. On average, this number corresponds to one article per teacher; publishing in journals with other indexations corresponds to a total number of 1384 articles.

An analysis of these publications in indexed journals in Scopus and WoS shows that they correspond mostly to international journals. This can be explained by the lack of Portuguese journals in the field of education (there are only two journals indexed in Scopus and none in WoS). In sum, this data deserves special attention regarding indexation, given that, on the one hand, requiring publications in journals indexed in Scopus or WoS, of more robust and theoretically very well sustained research, is an indicator of their quality; on the other hand, it is increasingly difficult for them to be accepted, pushing some teacher educators to submit to journals with less demanding indexing bases, which will have less impact on academic recognition.

Table 1 systematises the data concerning the volume of publication of articles, in the five years prior to the completion of the CV, of the teacher educators who ensure the CUs under study.

Table 1.  
*Scientific article publication*

PUBLISHING ARTICLES (Over the five years preceding the completion of the CV)		Universities		Polytechnic	
		public HEI	private HEI	public HEI	private HEI
Teacher educators of courses preparing for teaching in the first six years of schooling	Articles related to respective teaching areas:				
	. up to 3 articles;	43,5%	---	43,4%	49,3%
	. between 4 and 6 articles;	26%	---	17,7%	23,5%
	. 7 or more articles;	5,3%	---	3%	5,3%
	. articles published in journals indexed in SCOPUS or WoS.	446 articles = 41,3% of published articles	---	344 articles = 26,9% of published articles	181 articles = 28,7% of published articles
Teacher educators of courses preparing for teaching from the 7th to 12th years of schooling	Articles related to respective teaching areas:				
	. up to 3 articles;	44%	---	---	---
	. between 4 and 6 articles;	35,2%	---	---	---
	. 7 or more articles;	16,2%	---	---	---
	. articles published in journals indexed in SCOPUS or WoS.	650 articles = 32% of published articles	---	---	---

Regarding books or book chapters, conference proceedings, and e-book publishing, the analysis showed that both in public (universities or polytechnics) and private (polytechnics) HEIs with courses that offer qualifications to teach the twelve years of compulsory schooling, most teacher educators report publications of this type, and almost always directly related to the CUs they teach.

Didactic publishing such as textbooks and workbooks is also mentioned in the CVs, but very little. Regarding textbooks, the percentage is around 4% of teacher educators. With workbooks that percentage rises to 10%. However, it should be stressed that these numbers might be due to this type of activity being undervalued when talking about research in higher education. Nonetheless, it is a type of publishing that may have significant meaning to initial teacher education as, generally, the scientific rigour of the field in which future teachers are being trained with the adequate pedagogical component for each level of schooling is associated with it. At the same time, it presupposes conducting research about ways of teaching and learning at the levels of schooling for which the students/future teachers are being trained.

#### 4.2. Conditions that facilitate or hinder teacher educators' involvement in research processes

As already mentioned, to know which conditions facilitate or hinder the involvement of teacher educators in research activities, semi-structured interviews were conducted with 21 course coordinators. When asked whether institutional conditions and/or requirements existed for teacher educators and students to engage in research activities associated with courses and CUs, most course coordinators (n=17) answered yes, although three considered that there are conditions only in part and one of the coordinators considered that there aren't the necessary conditions. The reasons



why course coordinators considered conditions and/or demands that exist for the exercise of research are related to being member of a research centre funded by the FCT or with the evaluation conducted by the Agency for Assessment and Accreditation of Higher Education (A3ES). They stated:

In order to belong to the research centre, and to be an integrated member, we must have an article published in a journal with a certain indexation per year (...) So a percentage of our time, usually 30%, must be dedicated to research. (Public university HEI - Course that provides qualifications to teach the first six years of schooling)

We didn't have a research centre. As you know, polytechnics cannot attribute PhDs, so issues connected to research are always much more complicated (...). One of the consequences of the first external evaluations (A3ES) was that the institution did a great effort to create a research centre (...). (Public polytechnic HEI - course that provides qualifications to teach the first six years of schooling)

As a result of an A3ES requirement, right now, in the distribution of teaching services, we seek to ensure a relationship between the profile of teacher educators and the CUs and there is a requirement to develop research on the themes of the CUs taught. (Public university HEI, Course that provides qualifications to teach the third cycle of basic education and secondary education, between seventh and twelfth years of schooling)

Course coordinators who say they do not have conditions to be involved in research or that they have them only partially mentioned reasons associated with lack of time and working conditions. They stated:

We were strongly incentivized to invest in research and to join research centres. Virtually all colleagues are associated with research centres, but then, in fact, the working conditions of research are very fragile. Of course, if I want to go to a congress, they let me, for example, not teach classes on the days that are planned, but I then have to compensate for classes. (Public polytechnic HEI - course that provides qualifications to teach the first six years of schooling)

Objective, operational conditions do not exist effectively to carry out research, except for some reduction that happens with funded projects. (Public polytechnic HEI - course that provides qualifications to teach the first six years of schooling)

We have a research centre recognized by the FCT. Unfortunately, last year it did not rank high enough to be funded, but it keeps going... This last classification did not happen by chance, it happened because teacher educators have little time to do research. What I mean by this is that the management body of this research centre is constantly sending us information about what is happening, about where we can publish this or that, but the truth is we keep having the same problem: lack of time. (Private polytechnic HEI - a course that provides qualifications to teach the first six years of schooling)

Regarding involvement in research, the course coordinators also mentioned strategies that HEIs use to promote it, both for teacher educators and students. They claim:

Linking research of teacher educators with what is being done in PhDs is encouraged. (Public university HEI - course that provides qualifications to teach the first six years of schooling)

Supervised teaching practice has been working as a strategy for research development. (Public university HEI - course that provides qualifications to teach the third cycle of basic education and secondary education, between seventh and twelfth years of schooling)

There's the incentive of research connected to internship contexts. (Private polytechnic HEI - course that provides qualifications to teach the first six years of schooling)

There is a culture of encouraging research to be carried out by students by awarding initiation scholarships for research. (Public university HEI - course that provides qualifications to teach the first six years of schooling)

Despite mentioned strategies and conditions, in the sense of linking what is researched and what is taught, the coordinators interviewed stress the difficulties that stem from the work overload, which leaves no time left to conduct research. They referred:

I must prepare classes, evaluate work, monitor student work, ensure the management of the institutional positions assigned to me, contact cooperative schools and teachers, etc., etc. I ask: what time do I have left to conduct research? (Public polytechnic HEI - course that provides qualifications to teach the first six years of schooling)

Academic life is increasingly overloaded and the pandemic, with the changes that had to be made, has further filled it. So, it's much harder, not to say impossible, to find the time to do research. (Public university HEI - course that provides qualifications to teach the third cycle of basic education and secondary education, between the seventh and twelfth years of schooling)

In sum, the course coordinators interviewed recognize that conducting research related to the CUs and the courses they are managing is important. They also recognize that course evaluation by the A3ES has had the effect of greater care on the part of HEIs in the distribution of teaching services and in the establishment of relationships between the academic and research profile of each teacher educator and the CUs. Nevertheless, along with the recognition of the existence of some institutional conditions facilitating the involvement of teacher educators and students in research activities associated with courses and CU, some constraints can be highlighted. In particular, the lack of time and the breadth of tasks that each teacher educator must perform are identified as great difficulties for involvement in research capable of producing knowledge to be published.

## **5. Discussion and Conclusions**

The article brings to debate reasons that have justified the importance of higher education teachers to be involved in research. It provides an account of a study

that identifies the profile of teacher educators who teach CUs strongly related to teaching practices in Portugal, as well as the conditions they have available to perform research. Regarding the category of analysis “research profile of teacher educators, in relation to the courses and the CUs they teach”, the study showed that references to participation in national and/or international projects are residual. Although most of them mention belonging to research centres, it is not explicit whether there is participation as an integrated member, active in research activities and project development of these centres, or only as a collaborator. To deliberate on the research profile of these teacher educators, the references on production and publications of a scientific nature were analysed. In this context, the analysis showed that, both in public HEIs (universities or polytechnics) and in private HEIs (polytechnics) that have courses that enable teaching in the twelve years of compulsory schooling, most teacher educators refer to publications of books or book chapters, conference proceedings, and e-books, almost always directly related to the CUs they teach. The same is true of publication in the form of articles, although in this case, the study shows the existence of a relatively low volume of publications and considerable asymmetries among teacher educators, in relation to the number of articles that each publishes. To be clear, although several of them refer to some publications, there are others that have none mentioned in their CV over the last five years. On the other hand, the numbers of publications in journals with an impact factor indexed in Scopus or WoS are low, which may indicate, on the one hand, problems regarding the relationship between the quality levels of the articles and the levels required by the journals, but, on the other hand, the difficulties experienced in being able to publish in these journals.

Interpreting this data and considering the theoretical framework, it can be inferred that the small number of mentions, whether regarding participation in research or scientific production, might reflect what Smith (2015) and Agud and Ion (2019) found in their studies in which they point out that teacher educators and students/future teachers are still much more consumers than producers of research. Naturally, by not acquainting students with this professional culture, future teaching practices supported by research processes will not be favoured. This situation could enhance the continuous improvement of the quality of teaching and teaching practice (Cochran-Smith & Demers, 2008; Gutman, 2021; La Velle & Flores, 2018) since, as argued by Ferguson (2021), research-informed school practices contribute not only to improving teacher education but also to their future action in the context of practice.

As shown by several studies, it is important for teachers and teacher educators to be involved in research processes related to the CUs they teach and that their students be part of this. This procedure contributes not only to teachers’ professional development but also to students’ empowerment and broadening of their scientific knowledge and learning to guide teaching practices supported by research (Perines, 2020; Sousa, Lopes, & Boyd, 2020; Woore, Mutton, & Molway, 2020). This strategy, on the one hand, encourages students/future teachers to think reflexively, both in action and about the action taken, while acquiring “practical knowledge” (Popkewitz, 2021) that they mobilise for pedagogical purposes and teaching practice (Böttcher-Oschmann, Ophoff, & Thiel, 2021; Gutman, 2021). As further supported by some



studies (Cao et al., 2021; Ezquerro Martínez et al., 2015) it also favours the production of knowledge relative to emergent situations and fosters the resolution of practical/real problems in the classroom.

Regarding work conditions that facilitate or hinder teacher educators' involvement in research processes, as mentioned by most course coordinators, there are requirements for conducting research and even being a part of a research centre. However, in some cases, that membership does not seem real, since it is not related either to projects in which these teacher educators are involved or to the production of publishable knowledge. As for the conditions to carry out research, the study showed that the main obstacle is the lack of time and working conditions. This work is very dispersed and demanding, especially when it comes to organisational management activities. This agrees with the studies (Griffiths et al., 2010; Kyaw, 2021) that also indicated the lack of time and intensive workloads as barriers to the development of a researcher profile, as sufficient time and space to develop a strong research culture is not allowed.

In summary, in view of the data of the study, it is deemed urgent that initial teacher training be present on the political agenda and in the agenda of institutions. Thus, a vigorously committed debate can be fostered about issues related to training quality and with the effective creation of support mechanisms for a teacher-researcher profile, linked to whatever subject each teacher educator works with. This agenda, if properly guided, can nurture reconfigurations and resignifications of organizational space-times, individual and collective, that translate into the promotion of concrete support for the understanding and action of being a teacher-researcher (Ulvik & Smith, 2019). Simultaneously, it can trigger active and effective learning and research communities (Aktar & Oxley, 2019; Diery, et al., 2020; Lunenberg et al., 2007; Mági & Beerkens, 2016; Yogev & Yogev, 2006).

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