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INITIAL TEACHER EDUCATION AND THE RELATIONSHIP WITH RESEARCH: STUDENT TEACHERS' PERSPECTIVES

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Abstract

During the past few years, higher education institutions have been working to strengthen the link between research and teaching, which is widely referred to as the research–teaching (RT) nexus. This nexus is important because engagement with research is a distinctive feature of learning in higher education and because, in the specific case of teacher education, it is a crucial element for the professional development of teachers, contributing to enhancing their professional practices and, at the same time, improving the status of the teaching profession. The aim of this paper is to identify the perspectives of student teachers regarding the RT nexus within initial teacher education. To accomplish this, data were collected through semi-structured group interviews with Portuguese and English student teachers in different initial teacher education programmes in order to highlight their perspectives and their contributions to understanding and strengthening the RT nexus. The analysis shows that national contexts play a significant role in the way initial teacher education programmes are organized, the way research is valued, and, consequently, how student teachers are engaged with research.

Keywords

research–teaching nexus, initial teacher education, student teachers, professionalism

Introduction

A current cornerstone of European politics is making the sectors of higher education and research more competitive (Ivan, 2011), which makes it an excellent opportunity to rethink the relationship between teaching and research. In fact, there have been significant developments to strengthen the links between teaching and research, and this is widely referred to as the research–teaching (RT) nexus.

The way in which research and teaching relate may assume a variety of meanings regarding the value that is given both to research and to teaching. So far, however, the existing body of research focused on the nexus has: i) tended to ignore differences among subject disciplines, or ii) focused on traditional areas of study within the university. The strong partnership between student teachers and professional practitioners provides a rationale for investigating the RT nexus within a professional field such as teacher education. Furthermore, the importance of research within teacher education is also linked with aspects related to professionalism and the quality of teaching and the status of the teaching profession.

The case of teacher education is distinctive because university-based teacher educators are teaching students to teach and this provides opportunities to model the development of research-informed teaching (Boyd, 2014). In addition, national and institutional contexts play a very significant role in the way initial teacher education (ITE) is organized and may influence the way research is present and valued (Sousa et al., 2018).

This paper provides new insights into how student teachers perceive the way research is present in teacher education programmes and how different teaching and learning experiences may have an impact on student teachers' perspectives regarding the RT nexus. The next section considers the development of a framework for understanding the RT nexus generally and also within the professional field of teacher education. Then a framework is developed for understanding student perspectives and the potential contribution of students to the development of teaching and learning in higher education, with a particular focus on ITE. These two areas of literature are combined to form the basis for an empirical study investigating the RT nexus in the professional field of teacher education, considering the perspectives of student teachers from different ITE programmes in Portugal and England.

The RT nexus

A central issue regarding higher education nowadays is the need to reaffirm the relationship between teaching and research and to underline that the uniqueness of higher education institutions in Europe is that the teaching–learning process is often based on research findings (Bologna Process, 2009). The current conjuncture is thus an excellent opportunity to rethink the relationship between teaching and research (Geraldo et al., 2010) and to try to delineate a model able to explain the relationship between teaching and research in a changing higher education context and understand and guide how we can bring research and teaching closer together to enhance both (Brew, 2003). Definitions and conceptualizations of the RT nexus are numerous, for example Willcoxson et al. (2011), referring to the work of McLean and Barker (2004), described two dominant conceptualizations of the RT nexus: one that emphasizes the role of inquiry-based learning in enabling both researchers and students to build knowledge and negotiate meaning, and one which emphasizes curriculum design leading to the development of students’ research capacity (McLean & Baker, 2004), with the latter also related to the work of Healey and Jenkins (2006). Although different concepts may be understood as synonyms—such as research-informed teaching, a research oriented-approach, research-based learning—their definitions may differ.

In recent years, the growing body of literature on the RT nexus has mainly focused on traditional subject disciplines rather than investigating professional fields within higher education (Lopes et al., 2014). This highlights the need for more research that acknowledges different higher education disciplines and institutional contexts. As a professional field, one of the features that characterizes ITE concerns the close link that should be established between higher education institutions and schools (Boyd, 2013). ITE is, in this sense, imbued with specific conditions and characteristics that provide particular challenges for students—as new practitioners—but also for academics, which may also be especially relevant when considering the variant ways in which research and teaching may be interlinked.

It is well recognized that teaching content in ITE programmes plays a crucial role in the development of a knowledge base that teachers can draw upon when performing their profession (Rasmussen & Bayer, 2014). However, although there may be arguments defending the importance of research in the teaching profession by suggesting that the effectiveness of teaching in schools would be substantially improved if it were a research-based profession and that educational research should and could have much more relevance for, and impact on, the professional practice of teachers than it has (Hargreaves, 1997), there are others that believe educational research can play

only a fairly limited role in resolving the problems of teachers' practices because research can highlight and analyse them, attempting to provide some understanding, but school problems are "practical business that necessarily depends on professional expertise of a kind that is not reducible to publicly available evidence, even that provided by research" (Hammersley, 1997, p. 156). So the value given to research and its presence in ITE programmes needs to be further studied.

Since teachers are seen as a key resource in ensuring the development of each nation state's education service, the importance of how teachers are prepared is highlighted (Furlong, 2013). Finding ways to support and develop teachers and student teachers remains a strategy worth pursuing with some urgency (Gore et al., 2017).

Perspectives regarding professionalism and theories of teaching and learning are linked with conceptualizations of teacher competences (Dotta & Lopes, 2015; Pereira et al., 2015; Sachs, 2001). It has been established that effective professional learning is not necessarily narrowed to intentional and planned development opportunities. There are several authors who have stated that professional development is often "situated," occurring through day-to-day social interactions including through communities of practice (Evans, 2010; Wenger, 1998). Effective approaches to professional development, which may be defined as what happens when teachers attempt new practices and processes in their work (Saunders, 2014), involve teachers as both learners and teachers (Darling-Hammond & McLaughlin, 1995). In this sense, the promotion of the relationship between teaching and research seems an important way to affirm and develop teachers' professionalism (Zabalza, 2004).

The relationship between research and teaching is complex because the components that constitute this relationship may have different meanings and interpretations (Sousa et al., 2018). For example, there can be conceptions of research with an orientation towards external products where the intention is to produce an outcome, and conceptions that are holistic and analytical with an orientation towards internal processes where the intention is to understand (Brew, 2003). According to Brew (2003), the latter may more readily be "subsumed under the notion of inquiry and result in curricula designs focusing on engaging students in various forms of investigation" (p. 6). In ITE, this appears to be a more transversal concept of research. There are also some key factors influencing this relationship, namely, the nature of the institution, the individual characteristics of each person, and the area of knowledge (Robertson, 2007; Taylor, 2008; Wood, 2009).

National and institutional contexts have an influence on the way ITE is organized. For instance, it is possible to identify, within and outside Europe, contradictory trends with, on the one hand, movements for teacher certification

to require master's level education (in, e.g., Finland, France, Portugal), which are therefore likely to have a greater emphasis on the research component, and, in contrast, a trend towards the development of more pragmatic, shorter, and more school-based programmes (in, e.g., England, the USA, and Australia; Flores, 2017). This seems likely to shape the way student teachers engage with research. Institutional contexts also have an impact on this relationship, with more traditional universities aiming to educate their students in more fundamental types of research to become professional scholars, while institutes of professional higher education aim to train their students in more practice-based or evidence-based types of research (Griffioen, 2013).

It may be stated that the influence of national and institutional factors and the nature of the subject discipline should be considered in studies related to the RT nexus (Taylor, 2008).

The RT nexus as a pedagogical strategy

Over the past few years, higher education has seen a growth in research and practice focused on students becoming active partners in the processes of learning and teaching. Overall, inquiry and research-based learning has appeared to be assuming greater importance. Research-based teacher education aims for an inquiry orientation in the work of a teacher (Byman et al., 2009). In fact, when the RT nexus is enacted through a research-based curriculum design by engaging students in problem-based (or inquiry-based) learning, students potentially become co-learners and co-researchers alongside academics (Robertson, 2007).

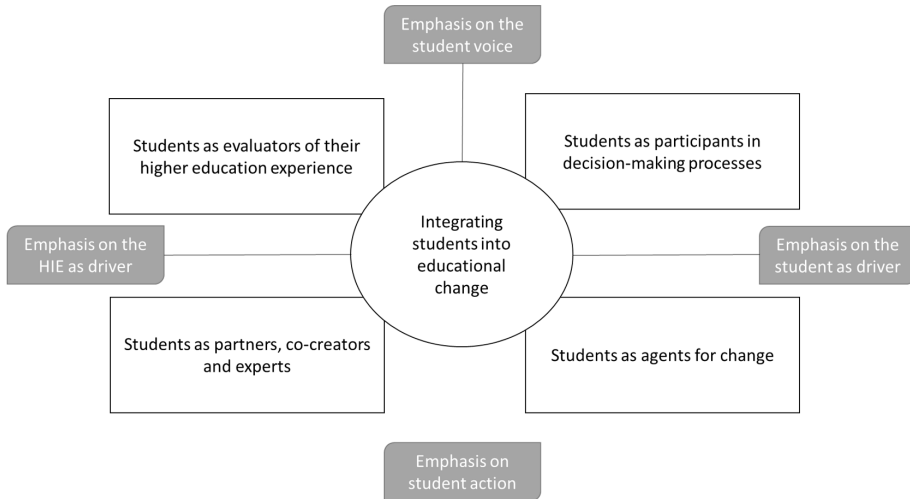
The literature includes a variety of terms to describe the relationship between higher education institutions and students, such as “consumers,” “active participants,” “community of learning,” “students as change agents,” “students as partners,” and “students as co-creators of learning and teaching” (Bovill et al., 2016; Cook-Sather et al., 2014; Dunne & Zandstra, 2011; Matthews et al., 2018).

Efforts to actively involve students in their learning experience through engagement in research and collaborative forms of pedagogical relationships between academics and students are, indeed, important elements to improving teaching and learning. This involvement of students may be accomplished by implementing research-based teaching through problem-based learning, which is a student-centred teaching approach where the role of the academic/teacher is to facilitate learning rather than “transfer knowledge” and to provide guidance and information (Willcoxson et al., 2011). Students and academics would, in this sense, work in a more horizontal and collaborative way, creating communities of learning.

However, highlighting students' involvement and building learning communities present significant challenges to existing ways of being, doing, and thinking (Healey et al., 2014). A useful framework (see Figure 1) was developed through action research and presents four approaches by which students can be integrated into educational change to enhance their own learning (Dunne & Zandstra, 2011; Kay et al., 2010). These approaches show how there are differences in the ways in which students are encouraged to engage with academics in improving their experiences and the extent to which they can be proactive in bringing about change (Figure 1).

Figure 1

Framework for students as change agents (adapted from Dunne & Zandstra, 2011)



The development of a learning community in which students are enabled to gain membership is underpinned by the concept of a “community of practice” developed by Wenger (1998), who advocated the idea that learning is social and derives largely from the personal experiences of everyday life. A community of practice is organized around groups of people who share common interests or concerns and who are able to deepen their knowledge about a specific subject by interacting regularly (Wenger, 1998, 2007). In this sense, learning in these communities takes “place through experience (meaning), doing (practice), belonging (community) and becoming (identity)” (Healey et al., 2014, p. 27).

Nevertheless, to conceptualize higher education in a community of practice where both teaching and research are intertwined requires receptiveness from teachers and also from students as well as a significant change in the type of relationship established between them (Brew, 2003). In most countries, ITE programme guidelines require the development of student teachers' knowledge and skills in educational research as well as their understanding of research, methodologies, and close-to-practice research (Eurydice, 2011). In most cases, however, students are not aware of the research work developed by their teachers, especially in their early years, so it is important to explicitly invite students to connect with researchers and research as an integral part of their learning journey (Fung, 2017). According to Fung (2017), students ideally need regular opportunities to learn about their institution's research as well as other research relevant to their studies, and so they can become affiliated with research groups or investigate the work of one researcher in depth. It is therefore imperative to better understand current practices and perspectives, notably students' perspectives, to design and develop strategies for the promotion of research as a learning strategy.

Methodology

This paper aims to identify the perspectives of student teachers regarding the relationship between teaching and research within ITE. Specifically, the paper seeks to address three key questions:

- What are student teachers' perspectives about the presence of research within their ITE programme?
- What do student teachers value as the most relevant activities contributing to their learning?
- What are the perspectives of student teachers about the importance of research in their professional education?

To accomplish this, data were collected through semi-structured group interviews with student teachers from higher education institutions in Portugal and England. In England, there are a variety of routes of entry into teaching, such as a postgraduate certificate in education, an undergraduate teaching degree, a School Direct programme, school-centred initial teacher training, and Teach First. For this study, we chose a teaching-led university with a strong vocational bias (often referred to in the UK as a "post-1992 institution"), where the research context is less delineated (Gale, 2011). In Portugal, ITE takes place exclusively in higher education institutions and corresponds to master's level qualifications, which implies a three-year bachelor's degree programme followed by a two-year master's degree programme, and can take place at universities or polytechnic institutes.

This may suggest that ITE programmes in Portugal are more associated with theory and research, carrying out more intensive and advanced scientific research than, for instance, ITE programmes at teaching-led institutions (such as the English ITE programme chosen for this study). However, the difference in the number of curricular units explicitly related to research (meaning, the curricular units with names referring to research) between the two national ITE programmes is not significant (see Table 1).¹ Considering the Portuguese and English higher education institutions studied within the scope of this paper, the most significant difference is the duration of the ITE programmes—three years for the English programme and five years for the Portuguese one—and the contact with the practicum, which in the English context has a strong presence right from the first year.

Table 1

Curricular units linked to research

Curricular units explicitly linked to research	
Portugal	England
<ul style="list-style-type: none"> – Scientific Research Methodologies (4th year/1st of master's studies) – Seminar of Educational Research (5th year/2nd of master's studies) 	<ul style="list-style-type: none"> – Developing Reflection on Professional Practice (2nd year) – Successful Reflective Practitioners (3rd year)

The selection of semi-structured group interviews as the data collection technique was based on the intention to engage directly with student teachers and to explore their perspectives. Group dynamics can impact interaction and response patterns within a group and contribute to more substantial debate and, consequently, data. Overall, a total of 14 English students and 13 Portuguese students were enrolled in this study. All students were at their final year, which for the English students corresponded to their 3rd year, and for the Portuguese students to their 5th year. The same schedule was used in all the cases and the approached topics were organized in order to respond to the research questions that guide this paper. The line of questions followed topics such as: academic experience, research and learning, the teaching and learning process, the RT nexus, and teachers and research.

¹ For ethical reasons, more detailed information could not be provided in order to guarantee anonymity.

The data collection took place within the higher education institutions of the student teachers and ethical clearance was obtained within the given institution's set process. The group interviews took approximately 1.5 hours. All participants provided informed consent, with confidentiality and anonymity assured and pseudonyms being used. Identifying information was not made available to anyone who was not directly involved in the study. All data were audio recorded and transcribed verbatim (Halcomb & Davidson, 2006). Data analysis followed an established method of thematic analysis (Braun & Clarke, 2006). We used an inductive analysis, which involved discovering patterns, themes, and categories in the data: "findings emerge out of the data, through the analyst's interactions with the data" (Patton, 2015, p. 542). Creating categories is not simply bringing together observations that are similar but also providing a means of describing the phenomenon (Elo & Kyngäs, 2008). To accomplish this, the transcripts were read several times to identify categories, which were then conceptualized into broad themes. Segments of the interviews were classified, enabling an analysis of interview segments on a particular theme. Through cross-case analysis, it was possible to discover common and specific themes within each group of student teachers. The data were then organized around two key themes that are discussed in the next section: "Research within an ITE programme – are students engaged?", and "Students and research – how is research perceived?".

Findings

The themes generated by the data analysis are presented in this section and interlinked with the key research questions identified in the previous section. The first theme "Research within an ITE programme – are students engaged?" addresses the research questions: "What are student teachers' perspectives about the presence of research within their ITE programme?", and "What do student teachers value as the most relevant activities contributing to learning process?". The theme "Students and research – how is research perceived?" directly answers the research question "What are the perspectives of student teachers about the importance of research in their professional education?". Illustrative quotations are used to provide insight into the voices of student teachers.

Research within an ITE programme – are students engaged?

Data analysis enabled exploration of the perspectives of student teachers regarding the presence of research within their ITE programme as well as whether and how student teachers are engaged with/in the research work

developed by their teacher educators. This may shed some light on the relevance of research in the students' academic experience. Regarding the curricula of the two studied programmes, there are only few curricular units that explicitly mentioned research (see the Methodology section). Of course, this does not mean that research is not "used" in other curricular units, but it is interesting to note its apparent absence. One of the moments when research is explicitly present in the student teachers' ITE programmes is when they have to write an extended research project (in the English case) or a master's thesis (in the Portuguese case), which occurs at the end of their ITE programme. Although this takes place at different times (for the English students in their 3rd year and for the Portuguese students in their 5th year), there were complaints from students in both countries about the moment when this happens, illustrated here by a quote from Samantha:

It would have been helpful to have done a bit more beforehand. Like, because we were expected to go into a school in our final year to get the research for the dissertation but we've never had any formal experience of doing research before, so I think that would have been a bit more helpful. (Samantha, English student)

In fact, although the students had the opportunity to engage with research, they tended to believe it should appear earlier in their ITE programmes. However, some activities that were similar or that imply some kind of research were mentioned:

I don't think we've done any formal research, but in the first year, do you remember we had to do the maths games? ... The module was about using resources in maths and we had to design our own resource and then use it in a school and then we had to feedback and say how it worked and why it didn't work and things like that. So that was quite useful. I would say that was sort of research, wasn't it? (Samantha, English student)

I think there were disciplines in which we already did research without knowing that this was what we were doing. ... More formal ... in the master's only. (Filipe, Portuguese student)

It is interesting to see that students tried to relate different activities as research activities, almost suggesting that there are different types of research. This difficulty in having a clear definition of what research is could be related to the way in which (and how explicitly) research is present in their ITE programmes. Also, it may raise the question: what is research in teacher education? Portuguese students perceive a clear distinction between the two study cycles, with a more predominant presence of research in the 2nd cycle. This separation between the two study cycles is an issue that raises concerns: on the one hand, in the Portuguese context, the master's level implies a higher qualification that also contributes to raising the status of the teaching profession; on the other hand, the way in which the two cycles are organized

may contribute to a separation between the content that is developed in each cycle, contributing to a greater gap between theory and practice, for instance.

Although, in general, the student teachers would have liked more intense contact with research throughout their ITE programme, which is a sign they value its importance, research was not referred to as the most relevant activity within their ITE programmes. By “most relevant” we mean the activities that were identified by the student teachers as having more impact on their teaching and learning process. But what were these activities? For English students, placements were considered to be the number one activity when referring to positive impacts and benefits for their learning and experience as future teachers: “I think the most valuable aspect will probably be the placement experience because you get a direct experience of what we will eventually do as a job. I think that has been the most valuable experience for us” (Mary, English student).

This quote from Mary is a clear example of how much student teachers value their placement experience and why. The fact that English students get practical experience from their first year at the university was considered one of the most beneficial things about the course since it grants them contact with students and the reality of professional contexts early on. For the Portuguese students, this is slightly different since their practical experience gains more emphasis after their 4th year, which is when they enter the second cycle of the course corresponding to master’s studies:

We do not have much contact with practice; this is something that we can highlight from the start. So, our learning process is very theoretical, which is very frustrating because we are now on the practical side and we feel that we’re not ready to take the leap. ... I think that my most outstanding learning experiences were those in which, in the classes themselves, they made us question and ask the reasons for certain subjects being taught in that way. (Madalena, Portuguese student)

From these two illustrative quotes, it is possible to state some differences regarding the ITE programmes under study. However, the importance given to practical experience—and its impact on the students’ professional development as future teachers—is transversal to both contexts, whether because its presence is meaningful (English students) or because students would have preferred to have had practical experience early on (Portuguese students). One question that may be asked is how to articulate this practical experience with research.

From the perspective of the Portuguese students, the relationship among teacher educators, student teachers, and research was not always clear and started from the individual interest of students in questioning their teachers about their research activities: “I realized that they have to publish a certain number of papers annually, just to be teachers at university” (Natália,

Portuguese student). The relationship between teacher educators and scientific publication was transposable to their concern with students also being able to publish: “[a teacher] wanted us to participate in a conference. We had a teacher now who wants us to publish an article ..., but not everyone asks for it” (Bárbara, Portuguese student). Most of the English students referred to being aware of their teachers’ research, namely of their teachers conducting their master’s studies. One student mentioned explicitly knowing that one of her teachers was involved in different research projects and publishing. However, more than an accurate notion of the kind of research their teachers are involved in, they had a general idea of what the teachers eventually do in their day to day activities as teachers, as we can see from Bethany’s statement: “Obviously they’ll have to research because they’re teaching us and everything is changing so they need to do research in order to be up to date” (Bethany, English student).

The advantages of developing a research-based ITE programme and of including and involving student teachers in and with research, creating a true partnership involving co-learning, co-inquiring, co-developing, co-designing, and co-creating, are well-recognized (Healey et al., 2014; Sterenberg et al., 2018) and also related to the professional practice of teachers. However, there are still considerable challenges hindering the wide adoption of those practices by researchers and teachers in the ITE field.

Students and research – how is research perceived?

Through data analysis, it was possible to better understand the perspectives of student teachers about the importance they give to research and how it may be perceived as a relevant element regarding their professional development. As previously stated, what is understood by research within ITE programmes may be very broad – see, for instance, the model from Healey (2005) regarding the way research is present in the curriculum.

In a field such as teacher education, it seems important for student teachers to do research because it involves the selection of relevant research, critical evaluation, research skills, and application to real world contexts (Sousa et al., 2018). One of the most prominent references to research is related to the increased need to be a reflective professional. Research-based teacher education aims for an inquiry orientation in the work of the teacher. In fact, in order to educate inquiry-oriented teachers, a research-based teacher education approach in their ITE is needed (Byman et al., 2009). Moreover, the idea of ITE implies a sense of promoting and developing critical thinking and, although student teachers do not consider reflective thinking to be proper research, it can be seen as a way to accomplish this kind of competence as well as a way to be up to date and able to respond to daily challenges:

I think it's more – it is, it could be a form of research but more informal. I wouldn't call it a proper, you know, I'd call it a type of – like, maybe because I'm not using, like, literature to back up it's just self-reflection: "What did this child learn? They both struggled with this so next lesson I'll focus on that" and that will be, like, my research for my teaching. Maybe I didn't get the decimals right. Maybe when I teach decimals again I need to teach how to use the full stop again. (Samantha, English student)

The students' discourse shows how crucial it was for them to develop competences that allow them to reflect on practice and also on education in a broader way. Being skilled in problem solving and critical reflection as well as being able to keep up to date was also mentioned as something vital when being a teacher:

I think so. First, I think it is inseparable; a teacher, if not a researcher, will stop in time and will not be able to keep up with the new generations. (Carlos, Portuguese student)

Yes, because the curriculum changes all the time and there's always loads of new books out and new ideas that could really benefit us when we're teaching so of course we need to keep researching because we need to be engaged in what is out there. (...) I mean the children of today are changing, everything is changing all the time so we need to be equipped and ready when we're teaching. (Bethany, English student)

Research appeared directly associated with reflection, which may be linked with the idea of teachers as researchers (Schön, 2000; Zeichner, 1993). According to Zeichner (2003), teachers should conduct research about their own practice as a form of professional development because by conducting research teachers will become better at what they do and the quality of learning for their students will be higher. Moreover, teacher research may also stimulate positive changes in the culture of schools and raise the status of teaching in society (Zeichner, 2003). In this study, research emerged as something that is interlinked with teaching and being a teacher, in the sense that it is through research – their own or someone else's – that teachers develop and update their knowledge:

The teacher is always a researcher. And their place of research, their laboratory, is the classroom or the activity room. (Susana, Portuguese student)

I think research comes hand in hand with reflection, really. So once you're engaged in a lesson, what went well, what didn't, and maybe you should research different teaching styles which may affect different children, ... you've got to do research and you've got to engage with that in order to be a better teacher because you're teaching loads of different children and I think that's important. To have research and reflection time in order to develop yourself, I think that's important. (Mary, English student)

The idea of “education” in ITE implies a sense of promoting and developing critical thinking, which is considered a crucial competence when things are generally changing so quickly in education. Although the results in these two categories may seem contradictory—since in the first category placements appeared as more relevant than research (theory) and in the second research is seen as a crucial component of teaching—it may not be the case. In fact, the theory–practice gap is a well-known idea in ITE because, among other things, teaching is a profession with a strong practical component. In this sense, we would say that student teachers value the kind of research (and theory) that is linked with or could improve their practice as teachers. In this sense, we highlight the value of research as a way to accomplish this kind of competence, as a way to be up to date and able to respond to daily challenges, and as an important means by which they maintain the value and credibility of their contribution to teacher education (Sousa et al., 2018) and teacher status.

Discussion and Conclusions

The analysis undertaken enables us to come to some interesting conclusions. First, it allowed us to perceive that research was not mentioned as, or related to, any relevant activities within the student teachers’ ITE programmes, at least not as a crucial moment in their learning process. This enables us to conclude that, although there are significant structural differences between the ITE programmes chosen for this study—one corresponding to a bachelor’s degree with qualified teacher status and the other to a master’s degree—in both of them research proved to be weakly embedded in teaching activities (see also Griffiths, 2004). According to Buchberger et al. (2000), the reality of ITE in Europe is full of contradictions and often the intentions expressed are not translated into concrete actions. For instance, in the Portuguese case, and contrary to what would be expected, although there has been an increase regarding the level of qualification for teachers to a master’s degree and this would initially imply a more relevant role for research, it does not appear to be the case, at least from the student teachers’ perspectives. Increasing the number of institutions studied in different national contexts could contribute to a better picture of the presence of research in ITE programmes across Europe.

As already mentioned in this paper, national and institutional contexts may play a significant role in the way ITE is organized; in addition, different teaching and learning experiences may influence the way research is valued and consequently how student teachers are engaged with research. The design of this study only gives a global picture of student teachers’ perspectives regarding this matter. In this sense, it would be interesting to understand

student teachers' perspectives at different stages of their ITE programmes to identify any possible development.

Within the scope of this paper, it is important to understand and reflect on the different ways in which students can be engaged within their institution. A wide variety of terms have been used to describe the process of engaging students as partners: i) student engagement in learning, teaching, and research; and ii) student engagement in the quality enhancement of learning and teaching practice and policy (Healey et al., 2014). Healey et al. (2014) stated that although there is common ground, each of these two strands has "its own strategic implications, scholarly underpinning and different impact on the student learning experience" (p. 23). The movement of teachers as researchers is well known, with the importance of reflection and inquiry-based orientation in teachers' work being highlighted (Hargreaves, 1997; Zeichner, 2003). From the present analysis, it can be perceived that the student teachers only directly engaged with research in their last year. This suggests that while the inclusion of research in teacher education curricula has gained wide acceptance within the teacher education community (Reis-Jorge, 2005), the nature, purpose, and timing of such research engagement is a topic for further study (Sousa et al., 2018). A deeper study regarding what is developed, and how, in each of the curricular units of each ITE programme could also help to shed light on this topic. In general, student teachers within this study revealed some collaborative practices among peers. However, in addition to the importance of rethinking these collaborative practices—since in most cases they are brought up by (imposed) group work—it is also important to promote models of meaningful student engagement that go further and beyond collaboration among students and that may contribute to "an inclusive academic community where learners, teachers and researchers are all seen as scholars and collaborators in the common pursuit of knowledge" (Taylor & Wilding, 2009, p. 3).

A research-based environment is believed to contribute to the optimal learning experience in many different ways. If research is weakly embedded in teaching – which can be seen by analysing ITE programmes and consulting with key actors (teachers and students) –, student teachers will consequently be less involved or seen as research partners. It may also have consequences regarding the way in which student teachers may perceive the importance of research in their future professional activity – especially when we are referring to future teachers. Involving students as partners implies a significant change in the mindset that still prevails in many higher education institutions where the learning process is teacher centred. In fact, less open teachers and researchers might lack the will to implement methods that enhance student learning through research. The institution itself also plays a significant role and needs to have and promote opportunities to engage students in research activities.

Despite some of the limitations previously mentioned, this research provides interesting insights that can be used in the future to develop means to allow students and teachers/researchers to work alongside one another.

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