



Developing Knowledge, competences and a research stance in initial teacher education in the Post-Bologna context: Reflections on the Portuguese case

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Abstract

This paper draws on previous empirical work and reflections on initial teacher education after the implementation of the Bologna process in Portugal. It focuses on issues of knowledge and competences developed under the new legal framework, particularly as far as the research component is concerned. As initial teacher education occurs at a Master level, the research dimension was assumed as a key feature of the new model being practicum one of its key distinctive and most innovative elements. The need to enhance the quality of initial teacher education and to reinforce the link between theory and practice and between research and teaching was at the forefront of the restructuring process at the University of Minho, particularly regarding practicum. The paper concludes with a summary of the positive aspects and issues that deserve further attention.

Keywords: initial teacher education, knowledge, competences, practicum, research stance

Introduction

The purpose of initial teacher education (ITE) has been discussed internationally from a variety of perspectives. The need to prepare preservice teachers for life in schools and classrooms has been identified as one of the key goals of ITE. However, a complex and highly interrelated set of elements is to be considered within a systemic view of ITE, namely its philosophy, rationale, curriculum and goals, the nature and goals of school curriculum itself, the conception of the teacher as a professional, the view of education or training that is advocated, and the political, economic, social and cultural context in which it is embedded (Flores, 2016).

As Cochran-Smith and Fries (2008, p. 1051) argued, “teacher education has been a contested enterprise, and research has often played a prominent role in disputes by documenting the current status of the profession, suggesting directions for change, and providing ammunition for major debates”. Also, Townsend (2011), taking an international perspective, discussed several factors which impacted education, and as a result, teacher education: rapid technological change, increasing globalisation and movement from one country to others, and

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a focus on standards for schools, for teachers and teacher education. In other words, teacher education has been clearly affected by both globalisation and governmental pressure to enhance the quality of teachers and teaching (Flores, 2016).

The kinds of knowledge and competences required of a teacher as well as the role of professional practice have been reiterated as key elements in reflections about the nature, focus and aims of ITE. Concerns about the quality of ITE programmes have also been identified in the international arena although it is possible to find different understandings of quality (Flores, 2016; Flores, 2019; Tatto & Pippin, 2017). Issues such as the globalisation of standards and the increased marketisation of education have led to a greater focus on the quality of teacher education which has become, at the same time, a prominent and contested field (Tatto & Pippin, 2017). Quality is seen as an “elusive concept”, therefore, there is no single definition of quality that applies universally nor is there a single recipe for improving quality in initial teacher education programmes (Russell & Martin, 2016). Thus, understanding ITE entails the need to consider its political, social and cultural context as well as prevailing definitions of professionalism.

In this paper, I look at how policies in ITE were enacted in the Portuguese context. As a result of the implementation of the Bologna process, ITE programmes were restructured to meet the requirements of the three-cycle structure (Bachelor, Master degree and PhD). As such, the new model for ITE implied given ways of looking at teachers’ role and the kinds of knowledge and competences required of them, including the place of coursework and fieldwork in the education of preservice teachers. In this paper, I analyse the main changes and their underpinning assumptions by drawing upon several reflections and empirical studies conducted after the implementation of the new model in Portugal, particularly in my institution. Thus, I this paper aims to provide an overview of the key elements of the ITE model currently in place in my institution, in particular as far as practicum is concerned, based on the legal and theoretical framework and on research conducted by myself and other colleagues focusing on ITE in my institution (whose details are beyond the scope of this paper). The overall goal is to identify and discuss its positive features as well as issues that deserve further consideration in the future.

Educating preservice teachers in the Post-Bologna Context: What’s new?

The Bologna process has instigated changes in initial teacher education programmes both in its structure and content (Decree-Law 43/2007). The focus and pace of change as a result of the Bologna process varied across European countries. In Portugal, a consecutive model was adopted. It included a first three-year degree (*Licenciatura*) followed by a master degree in teaching (usually a two-year degree). According to the legal framework currently in place (Decree-Law No. 79/2014, 14 May), the first degree focuses on content knowledge as the basis for teaching. As for the master programme, it complements the first degree by deepening the academic training focusing on the required knowledge to teach (content knowledge) and the general educational knowledge, specific didactics, the cultural, social and ethical dimensions as well initiation to professional practice (including the practicum).

Training in school subjects aims to consolidate and further student teachers' knowledge and academic training in the field in which they are going to teach. General education training includes knowledge, skills and aptitudes required of teachers and relevant to their work in schools and classrooms. It includes developmental psychology, curriculum and assessment, the school as an organisation, special educational needs, and classroom organisation and management. Specific didactics relates to the pedagogy of a given subject and level of teaching. As for the professional practice, it includes classroom observation, collaboration in teaching under supervision, planning, teaching and evaluation from the angle of trainees' professional development. The cultural, social and ethical dimension is intended to "raise awareness of the big problems of the contemporary world, including key values of the Constitution such as liberty, the freedom of speech and religion, respect for ethnic minorities, and the equality of gender" (Decree-Law No. 79/2014, 14 May). Under the new legal framework, emphasis is placed on specific didactics and professional practice. For instance, for secondary school (Master degree in Teaching with 120 credits in total) ITE programmes include the following credits: subject matter (minimum of 18 credits); general education (minimum 18 credits); specific didactics (minimum 30 credits); and, professional practice (minimum 42 credits). The cultural, social and ethical dimension receives no credits and it is to be developed within the context of the other components of the programme.

In general, the new configuration of the post-Bologna context – which was implemented for the first time in 2007/2008 – was marked by a clear focus on a higher qualification for teaching (Master's level for all sectors of teaching: from pre-school to secondary school). It entailed at the same time new and old challenges and problems, namely the link between theory and practice and the fragmentation of the curriculum components of ITE (mainly due to the separation between the first degree focusing on content knowledge and the second degree – master's level – focusing on knowledge acquisition about curriculum, pedagogy, specific didactics, etc. but also on learning about professional practice, including practicum), the place of the practicum and the role of research (see, Flores, 2011, 2018; Flores et al, 2014; Flores et al., 2016; Vieira et al., 2019). The existing national legal framework (Decree-Law No. 79/2014, 14 May) is to be adopted by all ITE institutions but the ways of operating it are up to them. In my institution, issues such as a transformative view of education, a research approach to practicum and the valorisation of the professional practice were some of the key features of the new model after the implementation of the Bologna process. In other words, the main concern in my institution was to bring teaching and research together by designing a cross-disciplinary practicum model in which research is at the service of pedagogy. This approach was developed under a transformative view of education based on humanistic and democratic values. It was a result of a local supervision project based on action research aimed at developing a reflective teacher education strategy for promoting a pedagogy for autonomy in schools (Moreira & Vieira, 2012; Vieira & Moreira, 2008). As such, under the model currently in place in my institution, student teachers have to develop small-scale, learner-centred pedagogical projects during practicum to combine teaching and research within a praxeological epistemology perspective to which I will turn later in the paper (Vieira et al., 2019).

What kind of teacher is to be educated?

The process of restructuring ITE programmes in the post-Bologna context has included changes in its structure and content. This was seen as a challenge but also as an opportunity to rethink the core features of the previous model (Vieira et al., 2020). Among other issues were the design of a more structured and sustained model for the practicum, a view of the teacher to be trained as a professional who makes informed decisions about his/her practice, and a solid knowledge base for teaching including not only content knowledge, specific didactics and general educational knowledge, but also a research stance entailing the development of classroom-based inquiry.

The European Commission's policy document 'Common European Principles for Teacher Competences and Qualifications' (2005) specified the common European principles for teachers' competence and qualifications, namely that teaching must be: i) a graduate profession; ii) a profession within the context of lifelong learning; iii) a mobile profession; and, iv) a profession based on partnerships. As for the key competences for teachers, the same document stressed that teachers need to be able to: i) work with information, technology and knowledge; ii) work with their fellow human beings (learners, colleagues and other partners in education); and, iii) work with and in society at local, regional, national, European and broader global levels. These issues were reiterated in Education and Training 2020 (ET, 2020), the strategic framework for European cooperation in education and training. Its main goals are i) to make lifelong learning and mobility a reality; ii) to improve the quality and efficiency of education and training; iii) to promote equity, social cohesion and active citizenship; and, iv) to enhance creativity and innovation, including entrepreneurship, at all levels of education and training.

The focus and organisation of ITE are also linked to how the role of the teacher is understood as well as to approaches to education, teaching and learning. A teacher can be viewed as a subject expert "whose main responsibility is to transfer subject knowledge to the students" or as a "learning process expert, whose main responsibility is to foster active, self-regulated and collaborative learning in the students" (Vermunt et al., 2017, p.143). Menter, Hulme, Elliott, and Levin (2010), for instance, in reviewing teacher education in Scotland, identified four "influential paradigms" of teacher professionalism: "the effective teacher" – associated with a standard-based approach to teaching; "the reflective teacher" – related to the teacher as an active participant in his/her learning and improvement with colleagues; "the enquiring teacher" – linked to the reflective paradigm but with an emphasis on improving teaching and learning through systematic inquiry; "the transformative teacher" – associated with the promotion of equity and social change in classrooms and beyond.

In Portugal, and particularly at the University of Minho, changes in initial teacher education represented an opportunity to discuss and reflect upon the kind of teacher to be educated within the new legal framework. The questions revolved around knowledge and competences but also around a clear definition of the professional profile of the teacher in the Post-Bologna context. For instance, at the University of Minho, the view of the teacher as an intellectual and as a reflective practitioner has been advocated. As such, he/she is seen as an informed professional able to reconstruct his/her knowledge and action and to develop knowledge, competences, abilities, attitudes and values necessary for a deliberate and responsible professional practice

in the contexts in which he/she works (Vieira et al., 2020). As such, the teacher-to-be is seen as someone who makes informed decisions about his/her practice, who mobilises research findings and who uses pedagogical inquiry to improve his/her practice.

Knowledge and competences in initial teacher education: fragmentation or integration?

Whilst the core issues of the ITE curriculum are usually clearly identified, there is less agreement about how they are inter-related, their duration and location in ITE programmes. Focusing on the Finnish context, Kansanen (2014, p. 281) argues that, in general, studies in education, subject matter along with pedagogical content knowledge, and practice are included in teacher education programmes, but “how to build a dynamic and successful curriculum founded on these elements is the key to getting good teachers into the education system of the country”. Therefore, there is a need to take into account “the amount of emphasis placed upon different components of the curriculum such as subject matter preparation and preparation in pedagogical knowledge as well as the amount of time spent in supervised clinical experiences” (Zeichner & Conklin, 2008, p. 278).

A report on teacher education curricula in the European Union points to considerable variation in the skills and competences required for the teaching profession in the official documents in different countries (Piesanen & Valijarvi, 2010). This report states that subject competences, pedagogical competences, and the integration of theory and practice are mentioned in all the EU countries’ relevant documents, whereas quality assurance, mobility, leadership, and continuing and lifelong learning are often left out. The same report also indicates that whereas in most EU countries, national documents, laws and regulations stipulate general guidelines and frameworks for the organisation of teacher education, higher education institutions are granted a degree of autonomy to develop their own curricula.

In a similar vein, Darling-Hammond (2017), drawing on well-developed systems for teacher education around the world, identifies a set of leading practices that might be considered as ‘promising strategies’ for improving teaching and teacher learning, namely the need to connect theory and practice through the design of thoughtful coursework and the integration of high-quality clinical work in contexts in which good practice is nurtured.

In the process of restructuring of ITE programmes in Portugal, as a result of the implementation of the Bologna process, debates about its core features both in terms of structure and content were undertaken (Flores, 2011). The option for a consecutive model (a two-year programme after completion of a Bachelor’s degree in the subject matter) has dictated a clear separation between subject knowledge training and training in educational knowledge, pedagogy and professional practice. This new configuration of ITE was seen to represent a drawback in terms of what was called an Integrated Model of Teacher Education (Flores, 2011; Flores et al., 2014). The integrated model implied a 5-year undergraduate programme where subject knowledge training (e.g., English, Biology, etc.) and pedagogical training were offered simultaneously, followed by a one-year practicum in a school. The new model (a 2-year master degree programme) emphasises the subject knowledge, specific didactics, and professional practice. But, because teacher preparation only occurs at the second cycle level, it means that there is a clear separation between the content knowledge (developed in the first degree) and

knowledge about pedagogy, curriculum and specific didactics as well as professional practice (which only occurs at the Master's level). As such, a more condensed (and in most cases fragmented) curriculum has been put into place with implications for the construction of professional knowledge and the development of teacher professional identity. These are processes that require time, reflection and experience in real contexts of teaching. Transforming an integrated (5-year) model of teacher education into a consecutive model (2-year degree) entailed, therefore, challenges in terms of the articulation and consolidation of the different components of the ITE curriculum, including practicum. The practicum occurs in year two of the Master degree along with courses and modules at university, representing, thus, less time spent in school. Added to this is the prevalence of an academic logic in detriment to a professional one (Canário, 2001; Formosinho, 2009), and the nature of the academic culture, where research and theory are overvalued and professionalisation is undervalued as 'practical'. This scenario makes the curriculum articulation rather challenging, namely the articulation between theory and practice and between teaching and research, within and among courses. It is also important to note that fragmentation has been associated with the historical curricular separation between foundational and methods courses within ITE and in particular the disconnect between theoretical and practical knowledge (Grossman et al., 2009), as well as the tensions between the professional and academic logic of teacher education and the curricular organisation of time and space of each component in ITE curriculum (Formosinho, 2009).

Thus, the new scenario of ITE in the post-Bologna context included positive features such as a high qualification for all entrants into teaching (at master level), the valorisation of specific didactics and professional practice as key elements in the education of prospective teachers, and the recognition of the importance of a research stance along with the cultural, social and ethical dimensions of teaching. Nevertheless, the emphasis on these components and especially the articulation between them continue to represent a big challenge in ITE, in particular within the current sequential model, as it implied a different focus in different moments in the education of preservice teachers. The new configuration has contributed, in a way, to accentuate the separation of the key components of ITE, and the need to rethink the role of the practicum.

The practicum: A paradoxical element in ITE?

The valorisation of the professional practice was seen as a key element in the process of restructuring of ITE in the post-Bologna context. In the case of the University of Minho, practicum was given a great deal of attention within a rather paradoxical scenario. The paradox resides in the fact that the new legal framework issued in 2007 emphasised research training but there was a reduction of professionalisation time (now to be done in two years) and time spent in schools (Moreira & Vieira, 2012). In addition, the practicum can be seen as one of the most innovative but at the same time most controversial components of the new model of ITE (Vieira et al., 2019). As Vieira (2013) argues, in previous models the practicum tended to represent a 'non-place', i.e., an unclear curricular component with no consistent identity. As such, the process of restructuring it as a result of the implementation of the Bologna process represented a great opportunity not only to clarify its purpose and scope but also to develop a solid framework for its implementation.

The process of moving from (trans)national to local reforms (i.e. Bologna process and national legal framework for ITE to an institutional model) was not without controversy (Vieira et al., 2019). The coordination and research strategies implemented to support and investigate change were seen as part of a collective effort to develop a clear and robust framework for field experiences (Flores et al., 2016; Vieira et al., 2019).

Overall, the new practicum model at the University of Minho was designed to foster a critical and research-based pedagogical intervention in order i) to promote a critical understanding and intervention in pedagogical contexts (within a curriculum, didactic and psychological orientation); ii) to deepen the development of subject matter and pedagogical competences; iii) to develop a research culture and collaboration in professional training; and, iv) to develop the integration of cultural, social and ethical aspects in professional training. The model prioritises research at the service of pedagogy, namely action research, as a strategy to foster the development of reflective practitioners within a humanistic and democratic view of education. This is to be achieved through the development of small-scale pedagogical projects aimed at combining teaching and research under the supervision of university supervisors and the co-operating teachers at school. The themes vary according to context analysis and student teachers' interests and motivations. Student teachers attend seminars and modules at the university that are supposed to support the development of the pedagogical projects in light of their needs and interests (e.g. classroom management, inclusion and special needs, cognitive processes and learning, lesson observation and pedagogical inquiry). The design and development of the pedagogical project draw upon a set of principles that include a humanistic and democratic view of schooling, the adequacy of interventions to the contexts of practice and their educational value regarding teacher and learner experience, the use of data collection to support the understanding and renewal of pedagogy, and the enhancement of professional development based on reflectivity, self-direction, collaboration, creativity, and innovation. A detailed description of the guidelines for the practicum is provided below:

Adequacy to the contexts of practice – Knowledge and problematisation of teaching contexts in order to design and develop action plans that are relevant in the face of situational variables.

Orientation towards practice – Definition of topics, objectives and action strategies that result from the observation and analysis of teaching and learning practices within the teaching area, and contribute to understanding and improving those practices.

Ethical and conceptual grounding – Grounding in up-to-date and relevant ethical and conceptual assumptions oriented towards the development of inclusive practices that are centred on learning and support educational success.

Research at the service of pedagogy – Use of pedagogical research strategies that support the understanding and improvement of teaching and learning practices.

Formative potential – Articulation between the project's objectives and the student teacher's professional development goals, within a view of professional practice that favours the development of reflection, self-direction, collaboration and creativity/innovation skills.

(Regulation of the Masters in Teaching and Practicum Dossier, University of Minho)

In addition, student teachers have to do a reflective portfolio which documents their learning throughout their practicum experience.

Clearly, the new practicum model moved beyond previous dominant views of the practicum as a “place where teacher candidates are socialised into the cultural routines and patterns of the teaching profession while trying to demonstrate their competence at performing tasks associated with teaching such as: planning an enacting lessons and units of study, managing students’ behaviour, and assessing students’ progress toward particular outcomes” (Bullock, 2016, p. 379). A key element for change was the introduction of a notion of teaching as an inquiry-based activity, as student teachers develop, carry out, evaluate and narrate small-scale pedagogical projects aimed at understanding and transforming educational practices at school.

Whilst the practicum is viewed as a valuable component of the ITE curriculum, it is also scrutinised and contested (White & Forgasz, 2016). There is a lack of consensus about what it entails which is visible in its diversity of form, content, duration and focus internationally (Wilson et al., 2001; Flores, Vieira, & Ferreira, 2014). As Russell and Martin (2013) stress, if improvement in the quality of practicum learning is to occur, there is a need to challenge the implicit assumptions about the nature of school-university partnerships. It requires long term commitment and solutions, in particular strong collaboration between schools and universities as sites for professional learning through active and collaborative partnerships between teacher educators, cooperating teachers and student teachers (Flores, 2016).

A study carried out at the University of Minho (Flores, Santos, Fernandes, & Pereira, 2014) showed that student teachers stressed the relevance of the curriculum content, namely teaching practice and the role of teacher educators as positive aspects of their experience along with the guidance and support they received. However, they also identified tensions regarding the lack of connection between given subjects/modules, the gap between theory and practice, duplication of content, the length of the teaching practice, the lack of articulation between university and school, the lack of coordination amongst departments, supervisors and coordinators of the teaching practice, and the mismatch between given subjects/modules in Year 2 of the master degree and student teachers’ needs during their practicum. In a recent study of the 10 years of implementation of the new practicum model, Vieira, Flores and Almeida (2020) concluded that whilst there is a positive understanding between the desired quality and the perceived quality, which serves as a basis to sustain current practices, some pitfalls were also identified. These are related to the modules/seminars which are supposed to support practicum, time spent in schools and the development of reflective portfolios (Vieira et al., 2020).

In other words, although the new practicum model entails transformative elements, namely its conceptual framework and an inquiry approach to teaching and teacher development, there is room for improvement, particularly concerning ways of consolidating the mobilisation of knowledge and of supporting student teachers’ professional learning within a reflective and research-based perspective in so far as “practice alone does not make perfect or even good performance. Opportunities to connect practice to expert knowledge must be built into learning experiences for teachers” (Darling-Hammond & Bransford, 2005, p. 415). The new practicum model tried to overcome some tensions identified by Zeichner (1990), namely the general lack of an explicit curriculum for the practicum and the absence of explicit connections made between university-based coursework and school-based experience; the dominant view of

practicum as an unmediated and unstructured apprenticeship and the assumption that as long as preservice teachers are placed with “good” cooperating teachers, good things will happen.

Mobilising knowledge and competences

As mentioned above, the new model of ITE was designed based on the knowledge and competences required of a teacher who is seen as a professional who reflects and makes research-informed decisions about his/her professional practice. A combination of different kinds of knowledge (subject knowledge, general educational knowledge, specific didactics, professional practice and the cultural, social and ethical dimension) was enacted in a model of ITE which sees student teachers as key players in their own professional development and not mere doers or consumers of knowledge. In particular, the practicum is seen as a key component of ITE (White & Forgasz, 2016) and as a bridge between theory and practice in the learning of teaching and as a place where preservice teachers develop a personal teaching competence (Darling-Hammond, 2006a).

Vieira et al. (2019) looked at how new curricula deal with practice-related professional learning. They analysed 55 syllabi of all course units in six master programmes at the University of Minho: Biology-Geology, Mathematics, Philosophy, History-Geography, English-Spanish, and Portuguese-Spanish. The authors concluded that the relationship between professional learning and teaching practice in formal curricula does exist, yet it is not as evident as it might be, except for the practicum. Vieira et al. (2019) discuss the tendency to maintain a rather theory-driven approach to teacher education and the under-valorisation of theory-practice connections in syllabi descriptions. However, the same authors draw attention to the enhanced quality of professional learning in the practicum, which is based on an inquiry-based approach to teaching.

In another study, Flores, Vieira, Silva, and Almeida (2016) analysed 32 practicum reports completed between 2011 and 2013 within 7 ITE programmes at the same institution (Biology-Geology, Mathematics, Philosophy, Portuguese-Spanish, English-Spanish, Primary Education, Pre-school Education). The authors wanted to find out the kinds of practicum projects that have been implemented as well as the role of research in professional development and pedagogical renewal. Findings suggested that contextual and educational knowledge are more explicitly evident in the practicum reports followed by content-related knowledge. In other words, student teachers were able to mobilise various kinds of knowledge by expanding “the enactment of a praxeological epistemology” (Vieira et al., 2019). They were able to mobilise knowledge to characterise teaching contexts, to identify problems or concerns and to justify the focus of research. In addition, they were able to describe and justify pedagogical and research strategies and to examine their practice.

Developing a research stance

One goal of ITE should be to encourage teacher candidates to develop a research stance (Bullock, 2016). As Vieira (2016) asserts, it is both necessary and controversial in ITE contexts, in so far as it teaches something valuable about the possibility of building a more democratic education in schools, yet it counteracts dominant modes of teaching. The idea of

looking at student teachers not only as consumers or recipients of knowledge but also as producers of knowledge was one of the key principles underpinning the new practicum model in my institution. The need to better inform pedagogical practice and make it reflective was, therefore, at the forefront of the research component in the practicum. Integrating research into teaching was seen as a key strategy to educate reflective practitioners, and to enhance the transformative potential of the practicum experience (Vieira et al., 2019). In the official documents regulating practicum in my institution, the goals of practicum are defined in such a way that it aims to promote the critical analysis and understanding of pedagogical interventions as well as the critical intervention in such contexts; to deepen competences related to subject knowledge and pedagogy; to develop a research and collaborative culture; and to foster the integration of the cultural, social and ethical dimensions in the professional learning. Therefore, the new practicum model included three main dimensions associated with the professional profile of student teachers: i) the conceptual dimension (which relates to the theoretical framework of professional practice including subject knowledge, didactics, general educational knowledge, research and context); ii) the strategic dimension (associated with the methodological framework of professional practice including processes and techniques of analysis and development of subject knowledge and teaching and learning, regulation of and research into teaching, and understanding and transformation of intervention contexts); and, iii) the axiological dimension (which deals with the values of professional practice including the ethical and political values that underpin educational action with its ethical and political implications) (Flores, 2018; Vieira et al., 2019) (see Figure 1).

Figure 1. The three dimensions of professional practice



Source: Adapted from an internal document regulating the practicum at the University of Minho, Portugal

As Bullock (2016, p. 381) states, “one powerful way to encourage teacher candidates to develop authority over their own experiences (and hence a personal, practical, professional knowledge) is to engage them in one or more forms of teacher inquiry including but not limited

to action research and self-studies of their own experiences during practicum placements and during their teacher education programmes”. This assumption was prominent in the design of the new practicum model in the post-Bologna context.

Earlier studies on the new ITE model point to the relevance of research in developing pedagogical practice focused on the quality of teaching and learning (Flores et al., 2016; Vieira et al., 2013; Vieira et al., 2019). However, they also suggest the co-existence of different modes of articulating research and teaching which are associated with diverse views of teacher education and the role of research in practice and the (re)construction of professional competences. As the main positive issues, the studies identify the exploration of diverse approaches framed in current views of education within a democratic perspective, being change-oriented; the mobilisation of different kinds of knowledge; the articulation of pedagogical and research purposes in practicum; and the diversity of data collection methods and assessment modes designed to better understand student and teacher development.

A study carried out at the University of Minho (Vieira et al., 2013) showed the relevance of a research stance in developing pedagogical practice focused on the quality of teaching and learning. The authors highlighted the reflective practice that emerged from the practicum reports, which was seen as the central element in the (re)construction of the preservice teachers’ thinking and practice. Nevertheless, several constraints were also identified namely the need to make more explicit the ethical and conceptual framework underpinning the pedagogical projects, the mobilisation of knowledge about research in justifying the methodological options and data analysis, the integration of theory and practice and reflection about the limitations and recommendations for training, supervision and research on teaching.

In a recent study looking at 10 years of the implementation of the new practicum model with university supervisors, cooperating school teachers and former student teachers, Vieira, Silva, and Vilaça (2020) concluded that the perceptions of the different stakeholders (supervisors, cooperating teachers and student teachers) are globally aligned with the assumptions of the model. This view reinforces the importance of the research stance and its benefits for the development of a multifaceted professional teacher that is necessary to reflective practice and commitment to improving teaching and learning (Vieira et al., 2020). The same study also found that, although university supervisors and cooperating teachers have doubts about the development of research competences, almost all reports analysed reveal a research stance based on pedagogical conceptions oriented towards a humanistic and democratic perspective. The authors reinforce the importance of fostering an action-research approach which needs a more collective reflection among teacher educators and more explicit planning of the research cycles.

Vieira, Silva and Vilaça (2020) corroborate earlier studies and reflections which point to the lack of declarative research knowledge on preservice teachers’ reports. In other words, whilst student teachers can design, develop, describe and interpret pedagogical inquiry, they do not use theoretical research knowledge very often when they need to justify research options and analyse research processes (Flores et al., 2016). This means that they need more research training opportunities. To overcome this limitation, a new practicum seminar run by programme coordinators was created to support project design and provide more explicit training in pedagogical inquiry. Vieira, Silva and Vilaça (2020) added that there is a need for more focused supervision to make this kind of knowledge more explicit in the reports and to

increase the analysis of pupils' learning outcomes as a result of the student teachers' pedagogical intervention, as there is a tendency to focus on pupils' perceptions and opinions rather than on actual learning evidenced in class.

The integration of research studies, active learning experiences, and quality of supervisors have been identified as crucial elements in the positive evaluation of ITE in Finland (Niemi & Nevgi, 2014) and further reinforce notions of collaboration and development of professional knowledge. Whilst the research component in ITE curriculum is valued, its integration into the practicum varies within and across countries (Flores et al., 2014; Munthe & Rogne, 2015). For instance, Afdal and Spernes (2018) found that academic reading systematically enabled student teachers to integrate research-based knowledge with professional practice in various ways. In a similar vein, empirical work in Finland shows that student teachers value research experiences which promote the development of professional competences and support their growth toward evidence-based practice and 21st-century skills (Niemi & Nevgi, 2014).

Overall, despite the challenges and limitations, evidence has shown the potential of the practicum in developing a research stance and in promoting a critical and inquiry attitude from the part of the student teachers towards their professional practice (Vieira et al., 2013; Flores et al., 2016; Vieira et al., 2019; Vieira, Flores, & Almeida, 2020; Vieira, Silva, & Vilaça, 2020).

Final thoughts

The process of changing ITE programmes as a result of the Bologna process has entailed a new configuration both in its structure and in its content. The need to enhance the quality of ITE and to reinforce the link between theory and practice and between research and teaching were at the forefront of the restructuring process at the University of Minho. Along with this was the recognition of the importance of a solid knowledge base for teaching and the relevance of the practicum. The new configuration of ITE at Master level also implied a research component which was tacitly assumed by institutions and encouraged by external assessments (Vieira et al., 2019). Underpinning the process of changing ITE programmes, particularly at the University of Minho, was clearly the understanding of the “sophisticated nature of practice” (Loughran, 2015) as well as the idea that “the epistemology of learning from experience can be developed through framing teacher candidates as researchers” (Bullock, 2016, p. 396).

Darling-Hammond (2006b, p. 35) identifies three problems related to learning to teach: i) the problem of apprenticeship of observation (the need to understand teaching in different ways from their own experience as students); the problem of enactment (the need to think but also to act like teachers); and the problem of complexity (the need to understand and respond to the dense and multifaceted nature of the classroom). The adoption of a research stance and the design of a more structured and three-dimensional model for practicum (the conceptual, the strategic and the axiological) at the University of Minho was based on the idea of the teacher as a professional within a humanistic and democratic perspective and of teaching as “being carefully structured, thoughtfully created and deliberately informed” (Loughran, 2006, p. 15). As Bullock (2016, p. 396) argues, “The central challenge of learning to teach is learning how to learn from professional experiences and to develop warrants for making claims about one's developing knowledge of teaching”. The education of “transformative agentic teachers” (Orland-Barak, 2017) who can read, navigate and intervene in their professional context was

also a key aspect of the new ITE model, and particularly of the practicum model. As such, the mobilisation of different kinds of knowledge, the development of key competences, including research literacy, the valorisation of the professional practice, and the enactment of a comprehensive framework for the pedagogical intervention were seen as important features in the enactment of the ITE policies in the post-Bologna context.

Despite the positive, and in some ways, innovative elements of the new model, some issues deserve further consideration. First, there is a need to promote a better articulation between the different components of the ITE model, not only between course work and fieldwork but also between the foundational courses and the specific didactic courses throughout the programme. In this regard, as several studies conducted earlier have shown, it is also crucial to enhance the integration of the various modules supporting the practicum experience (Vieira, Flores, & Almeida, 2020; Flores, Santos, Fernandes, & Pereira, 2014) to foster its transformational and inquiry-based approach. Second, there is a need to enhance the collaborative dimension of the practicum experience both between university and schools and between preservice teachers and their peers as well as with cooperating teachers and university supervisors. The development of wider projects with a research dimension could foster the collaborative nature of the teaching enterprise and reinforce collective action and the co-construction of professional knowledge. This may facilitate the development of practicum learning communities between schools and universities (White & Forgasz, 2016). As Snoek et al., (2017) also concluded, based on empirical evidence, there is a need to develop research projects to go beyond the individual and personal level aiming at contributing to research-informed reflection of a team of teachers, creating input for the improvement of practice within the whole school. Thus, there is a need to foster the expansion and effects of the pedagogical projects not only on students' teachers' pedagogical practice and professional development but also on the schools in which they do their practicum.

Third, it is also important to develop more sophisticated understandings of the mentoring process. Within the new framework in which a research dimension is advocated, there is a need for both supervisors and cooperating teachers to “reshape their traditional roles and to expand professional competences to become partners of pedagogical inquiry and renewal” (Flores, Vieira, Silva, & Almeida, 2016, p.112). As Loughran et al., Keast, and Cooper (2016, p. 416) argue, teacher education is not “about training, it should be an educative process that develops thoughtful, informed and highly able professionals”. As such, the curriculum of ITE but also the opportunities provided to preservice teachers to learn how to teach should be aligned aiming to “extend understandings of teaching from being solely technical to offer insights and experiences of the dynamic, problematic, complex and sophisticated nature of practice” (Loughran & Menter, 2019, p. 222). Fourth, this multifaceted and complex view of teaching also requires more attention to its cultural, social and ethical dimensions. If preservice teachers are to be seen as agents of change, then teacher education programmes should provide them with opportunities to deepen their professional knowledge but also to consider more carefully its political and ethical dimensions. Finally, there is also a need to pay more attention to the professional learning and development of teacher educators (both university and school-based) which could be achieved by promoting a scholarship of teacher education, whereby teacher educators work in professional learning communities to study and improve their practices.

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