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## Research on pedagogical practice in initial teacher education for primary and pre-school teachers: a systematic literature review

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### Abstract

*The initial training of future teachers in pre-primary and primary education is of major importance for the quality of education of pre-school and early school-age children. It involves preparing students, for a teaching career and involves both theoretical training and practical introduction to teaching. The practical part of training is done usually in partnership of university institutions, with the schools of practice. Concerns about the different aspects of practice are visible in studies looking at how the practice programs are conceptualised, run, organised, and evaluated, from the perspectives of people involved: student, mentor, and university coordinator. Trying to understand how practicum is done within the frame of interinstitutional collaboration and shared responsibility, drawing on the theory of the third space, a systematic literature review was conducted to answer: How is the pedagogical practice of future primary and pre-school teachers researched from the perspective of the coordinator-student-mentor triad? 96 studies were selected, based on criteria related to issue researched, methodology used, categories of participants in the study, and results obtained. The analysis showed that most of the studies are qualitative, with relatively small numbers of subjects, most frequently students. The findings reflect the impact of the practice on each category of partners and the various facets of collaboration between those involved, as well as highlighting areas that the research did not fully address and require further investigation. The findings also highlight aspects to be considered for the further improvement of the teaching practice part of the initial teacher training programs.*

**Keywords:** initial teacher education, practicum, preschool and primary education, systematic literature review

### 1. Introduction

Initial teacher training is the key to teacher quality and performance (UNESCO, 2019). This first career stage is the beginning of the learning and training process for a teaching career, developing the skills to implement quality educational activities (Wiens et al., 2021). The European Commission recognises that when an education system appears to be failing to educate students, the cause is often seen as the quality of education that teachers provide (European Commission, 2019). Moreover, education policy efforts

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aimed at improving student outcomes should target initial teacher education (ITE) (Bunoiu & Ilie, 2017; van Katwijk et al., 2019).

ITE is a complex system of dynamic elements that influence each other. It encompasses both the theoretical and practical training of future professionals who will be responsible for teaching a class, group of school / pre-school children (Schwille & Dembélé, 2007). Initial training should be defined by knowledge, practice and professional involvement (Tondeur et al., 2020). While knowledge is acquired through theoretical courses and can be objectively assessed and supplemented later, practice and professional involvement are long-term processes involving the training and development of professional and transversal skills specific to the teaching profession.

Teaching practice is understood as a setting in which future education professionals are confronted with real situations (Hirmas, 2014), in a controlled and even simplified version (Guevara, 2017), in which students can observe, assist, teach, and conduct research in the field of education (Caprano et al., 2010). Exposure to real teaching experiences gives prospective teachers the opportunity to be relatively independent under the guidance of a tutor or mentor from the university or partner institution (Cohen et al., 2013; Graham & Thornley, 2000). Given the multiple valences of the teaching practicum for initial teacher training, we aimed in the present study to systematically identify the ways in which improving the teaching practice of future teachers has been researched and approached so far, answering the following research question: *How is the pedagogical practice of future primary and pre-school teachers studied from the perspective of the coordinator-student-mentor triad?*

## 1. Theoretical background

### *Pre-service teacher education*

In the context of ITE, theoretical training is complemented by practical training, to build the professional identity of future teachers. These foster reflective processes and mobilise professional skills, contributing to the quality of the training programme (Mendoza et al., 2020; Musset, 2010; Tondeur et al., 2020). The relationship between theory and practice should be seen as one of connection, in which the two components inform each other (La Velle, 2019).

Two models of teacher education are known: the concurrent model and the consecutive model. In the concurrent model, practical training takes place at the same time as theoretical training, while in the consecutive model, practical training takes place after completion of theoretical studies (European Commission, 2019). These models correspond to the two training routes: a traditional one, carried out in vocational schools and university centres, and a modern one that aims to train teachers in a short time at the place where these teachers will carry out their professional activity (Musset, 2010).

The (social) constructivist theory and the third space theory are used as grounding theories for the research approach in this study, as they explain the importance of interactions between the members of the triad: coordinator - student - mentor which act while undertaking the teaching practice preparation in ITE. Thus, we chose to take into account for the present study *the third space theory* because it values the partnership within the teaching practice triad (Beck, 2018). This theory is established between the personal and the social and involves the internal structures of the student, the way in which he understands and assumes his roles, but also external elements of the interactions he has that must be exploited through communication, reflection, and critical analysis. In the learning community, together with the coordinator, peers, and mentor, the student creates links that form the third space to make learning meaningful (Tatham-Fashanu, 2023; Beck, 2018). In the third space theory, the university and the practice partner need to collaborate, to be partners, not subordinates. This leads to a detachment from the simple theory-practice relationship that can exist between the two partners and to the transformation of roles and responsibilities so that learning opportunities are generated for future teachers (Green et al., 2019).

In essence, the 'third space' suggests stepping out of the normal work environment (school or university) and into a neutral space to design, develop and deliver education to future teachers based on a shared understanding and vision (Jackson & Burch, 2018).

#### *Partnership in pedagogical practice*

In some educational systems, including the Romanian one, university employees are responsible for coordinating pedagogical practice. The practice partner appoints mentors, who are teachers from the partner institutions, to work alongside the practice coordinator. The term 'mentor' encompasses the multiple roles this professional has in initial training: guide, advisor, supporter, and even friend (Koç, 2011; Murray et al., 2021; Rakes et al., 2023). Despite the recognised special role in student training, mentors are poorly prepared to carry out mentoring activities (Clarke & Mena, 2020). During pedagogical practice, university coordinators, together with students and mentors, have the opportunity to collaborate by bringing together knowledge from academia and practitioners from pre-university settings. The student learns between mentoring and supervision, between guidance and control (McDonough, 2014).

The partnership between universities and schools is not always comfortable because the specifics of pedagogical practice go beyond their traditional field of activity. Ideally, there should be a collaborative partnership, with a balance required between training in teaching and learning concepts and training in practical skills through teaching experiences that ensure knowledge transfer (Bourke, 2019).

#### *Researching pedagogical practice*

Over time, there has been a growing research interest in practice issues (Fuentes-Abeledo et al., 2020; Lawson et al., 2015), as there is a desire for teachers to excel in the activities they undertake, but we have not been able to identify systematic reviews of topicality. The studies highlighted that the value of pedagogical practice depends on the content, structure, mode of delivery, and level of preparation of students. Two myths of practice have also been identified: a *positive* one, which captures the role of practice on the formation of better teachers, and a *negative* one, which warns that practice might promote conservative patterns of behaviour in the teaching process (Fuentes-Abeledo et al., 2020).

In attempting to identify literature reviews that capture as many aspects as possible that shape the pedagogical practice of prospective primary and pre-school teachers, we identified few such studies. Studying the issues of pedagogical practice of future professionals in primary and pre-school education, we found a lack of literature reviews that bring together the aspects that relate to this educational segment.

The few studies identified captured pedagogical practice from the perspective of the three actors involved: the coordinator/supervisor in the university, the student and the mentor in the partner educational institution. Thus, Cohen et al. (2013) and Lawson et al. (2015) focused their literature reviews on capturing aspects of the practice programme during initial training from the perspective of the practice triad.

The study by Cohen et al. (2013) presents elements referring to the concept, conduct, and organisation of pedagogical practice analysed from the perspective of the benefits for the triad: students, mentors, and practice coordinators, the types of activities they carry out, and the learning outcomes. On the other hand, Lawson et al. (2015) and Matengu et al. (2021) capture both individual relationships within the triad and institutional relationships between the university and the institution of application. Analysis of the operational and pedagogical structure and collaborative-participatory aspects confirms that practice is demanding for those involved and highlights the importance of collaboration between university practice supervisors and school mentors for the practical training of students.

Recently, due to the pandemic period we have been going through, studies have been focused on analysing the effects of the way online work is organised on the practice and how it has adapted to the new conditions. Vancell (2020), Carrillo and Flores (2020) explored the ways in which training programs have adapted to the shift to online courses as alternatives to classroom practice, highlighting the need for a vision that goes beyond traditional educational practices so that training institutions and mentors can address limitations that may arise in the future.

However, the systematic reviews mentioned, even if they cover a multitude of aspects of pedagogical practice, are either outdated, covering periods up to 10-15 years ago, or have focused on niche periods, such as the pandemic, or the investigative focus has been limited. Therefore, in the present study, we would like to add to the research discussions

the latest trends and findings in researching the teaching-practice partnership between university coordinators, student teachers, and school-based teacher educators.

## 2. Research methodology

Aiming to identify *how the pedagogical practice of future primary and pre-school teachers is studied in the literature from the perspective of the coordinator - student - mentor triad*, we focused, more specifically, on:

- 1) What aspects of practice do the studies for each triad member cover?
- 2) How is the collaboration between coordinators, students, and mentors studied in the context of pedagogical practice?

### *Methodology*

Given the research focus, inclusion criteria were established:

*Firstly*, studies must be at the primary or pre-school level in compulsory mainstream education. Generally, ITE is mainly aimed at mainstream education, which covers the majority of the population in the 2/3 - 11 age group. The specifics of training for these segments of education to teach multiple subjects to the same group of school/pre-school children over 3 - 5 school years are different from those of teachers specialising in teaching a single subject.

*Secondly*, we looked for studies with an empirically investigative focus, be it a qualitative, quantitative, or mixed investigative design. The idea that educational research offers fresh perspectives and directions from institutional reality, which is all the more valuable because it is original, served as justification for such a choice.

*Thirdly*, the study had to address groups of subjects that could be identified in different contexts, such as university internship coordinators, the student as the beneficiary of the training, and the mentor/tutor/collaborating teacher in the school or pre-school institution where the internship takes place. University - student - school institution are practice partners who can influence each other positively or negatively, implicitly influencing the outcome of the practice training programme.

*A final criterion* was English as the language of publication, as for other languages, the accuracy of the translation could not be guaranteed, which could lead to misinterpretation.

To carry out the proposed study, a search algorithm was designed with three indicators in its structure: initial teacher training, pedagogical practice, and the level of schooling for which the training is carried out. For each of the three concepts, we identified synonyms frequently found in the articles studied in the pre-empirical stage of the systematic literature review.

Thus, we have identified four key terms and expressions for:

- *initial training*: 'initial teacher education', 'ITE', 'pre-service teacher education', 'initial teacher training', 'ITT', 'pre-service teacher training';
- *teaching practice*: "initial teaching practicum", "pre-service teaching practicum", "school-based practicum", "student-teacher practicum";
- *level of schooling*: early childhood education, preschool education, primary education, elementary education

The development of the algorithm was achieved by combining the key terms mentioned, using logical connectors "OR", "AND", and "AND NOT", which allowed the formulation of a research algorithm to identify relevant studies. The obtained algorithm was tested on different search databases so that it could be applied in the same way. After checking and adjusting the algorithm, in August 2021, we applied it to the databases of the National University of Singapore (NUS Library), Scopus, Web of Science, ERIC, ProQuest, and Google Scholar.

The choice of NUS Library was based on the fact that it allows the identification of studies by eliminating duplicates, applying filters for the targeted disciplines (education, psychology, and social sciences). As for Google Scholar, the large number of results was narrowed down by analysing them until three consecutive pages with irrelevant results were identified.

Based on the results obtained, the next step was the elimination of duplicates and the selection of articles that would form the basis of the systematic literature review. The elimination of duplicates was carried out manually, as not all databases allowed saving them in a format that could be checked with the help of a digital tool.

The selection of studies was done in two stages. The first stage, reading the titles and abstracts, aimed to identify articles according to the inclusion criteria. The result was a database of 364 studies, which was created in Excel spreadsheet software with information on key terms, type of publication, geographical region, publication period, type of design, instruments used, identification data of the sample under investigation, the problem studied, and the results obtained. At this stage, studies that did not provide sufficient information on the investigative approach or that could not be fully accessed were eliminated. This resulted in 79 articles addressing the practice issue with its various aspects. From the study of the bibliographic sources of the coded articles, following the "snowball" technique, we added a further 17 articles that met the inclusion criteria, thus obtaining a total of 96 articles. In the PRISMA diagram (Figure 1), it can be seen the searching process and the selection of articles to be reviewed.

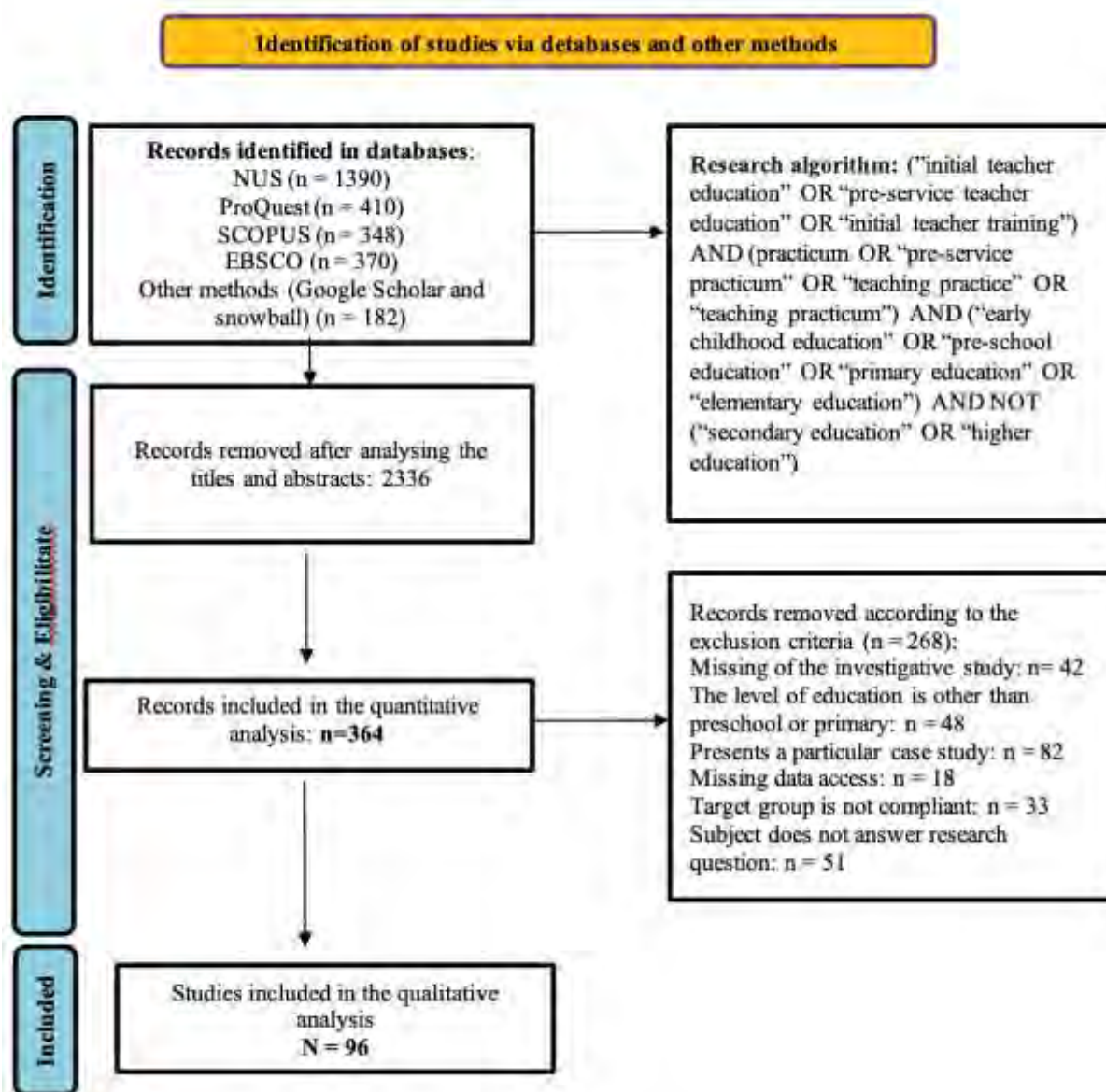


Figure 1. PRISMA diagram (adapted after Page et al., 2021).

### 3. Results

For the analysis of the selected studies, we took into account the targeted issues and aimed to identify those aspects that illustrate the roles of the triad of practice and the interactions between them in order to make the pedagogical practice programs of future primary and preschool teachers more effective.

Peer-reviewed articles made up more than 90% of the publications, which also included theses, dissertations, and papers presented at international conferences. The analysis of data related to publication period, type of research methodology, and geographical region is of interest as it demonstrates the focus of researchers on the issue of pedagogical practice. Thus, an increase in the number of studies published over time is observed from 1992 to the present, with the majority of studies published in the last 10

years. In terms of the geographical region in which the studies have been carried out, there is a greater concentration of studies in the European area, possibly due to changes in the last ten years due to the Bologna process and the European Commission's recommendations to improve the quality of teachers through educational policies aimed at initial training. The majority of the research methodologies used in the chosen studies were qualitative, with quantitative and mixed methods following.

The key terms identified have been coded and track issues that shape the relationships between members of the practice triad. Key terms referring to collaboration, communication, or partnership, in whatever form, from simple collaboration with the mentor, coordinator, or peers to carry out activities related to the internship programme, to collective reflection, peer review, and peer mentoring, were the most frequent. This confirms that there are necessary and useful links within the triad for the development of practice activities.

<i>Theme: Skills training</i>			
<i>Sub-theme</i>	<i>Author</i>	<i>Type of study</i>	<i>Subjects</i>
<i>Professional skills</i>	Fotopoulou, 2020; González et al., 2018; Agbenyega, 2012; Stenberg & Maaranen, 2020 a; Stenberg & Maaranen, 2020 b; Craveiro et. al., 2018	Quantitative Qualitative Mixed	Students
<i>Practical teaching skills</i>	Sirmaci, 2010; Toklu & Hursen, 2021	Qualitative Mixed	Students
<i>Communication skills</i>	Han et al, 2017; Hamaidi et al., 2014; Soini et al., 2015	Mixed Qualitative Quantitative	Students
<i>Digital skills</i>	Lemon & Garvis, 2016; Ballesteros Regaña et. al., 2019; Kim, 2020 Mohebi & Meda, 2021;	Quantitative Qualitative	Students Coordinators
<i>Theme: Structure of the internship programme</i>			
<i>Curriculum - contents</i>	Johansson & Sandberg, 2012; Rose & Rogers, 2012	Qualitative	Coordinators Students
<i>Organisation of activities</i>	Choy et al., 2014; Undiyaundeye & Inakwu, 2012; Harwell & Moore, 2010	Quantitative Mixed Qualitative	Students
<i>Feedback and reflection</i>	Bayat, 2011; Cenqiz, 2020; Chitpin & Simon, 2009; Foong et al., 2018 a; Foong et al., 2018 b; Galini & Kostas, 2014; Hojeij, 2021; Jain & Brown, 2020; Nolan, 2008; Nolan & Sim, 2011; Ntuli et al., 2009; Joseph & Brennan, 2013; de la Serna, 2011; Mena et al., 2016;	Qualitative	Students



	Khales, 2016; Loman et al., 2020; Martin & Clerc-Georgy, 2015; Davey, 2001		
<i>Program / student evaluation</i>	Aspden & McLachlan, 2017; Grudnoff et al., 2017; File & Gullo, 2002; Tasgin & Kucukoglu, 2016; Shahid & Hussain, 2011; Göçer, 2013; Al-Barakat & Al-Hassan, 2009; Koç, 2011; Laframboise & Shea, 2009; Sinclair, 2008; Ismail & Jarrah, 2019; Tok, 2011; Kaldi & Xafakos, 2017; Grudnoff, 2011; Johnson, 2013;	Qualitative Quantitative Qualitative Mixed	Triad Students Students Students
<i>Theme: Partnerships</i>			
<i>Partnership with colleagues, mentor, and coordinator</i>	Ammentorp & Madden, 2014; Walsh & Elmslie, 2005; Gardiner & Robinson, 2009; Parsons & Stephenson, 2005; Beck & Kosnik, 2002; Sağ, 2008; Ussher & Carss, 2014; Heung-Ling, 2003; Stavropoulos, 2016; Maynard, 2000; Bullough et al., 2002; La Paro et al., 2020; Ferrier-Kerr, 2009; Ronsyn, 2013; Graves, 2010; Mena et al, 2017; Ben-Harush & Orland-Barak, 2019; Edwards & Protheroe, 2004; Hagenauer et al., 2021; White, 2009; Kokkinos & Stavropoulos, 2014	Mixed Qualitative Quantitative Mixed Qualitative Quantitative	Students Mentors Triad Students
<i>Institutional partnership</i>	Kula & Güler, 2021; Martin et al., 2011; Mauri et al, 2019 Mason, 2013;	Qualitative Quantitative	Triad Mentors Students
<i>Ways of collaboration</i>	Schiff, 2015; Waber et al., 2020; Stanulis & Russell, 2000;	Qualitative	Students Mentors
<i>Theme: Mentors and mentoring</i>			
<i>The roles of mentors</i>	Ausiku et al., 2019; Cheng, 2005; Hobjila, 2012; Kupila et al., 2017; Jaspers et al., 2014; Jaspers et al., 2018; Hung et al., 2003; Puroila et al., 2021;	Qualitative Mixed	Mentors Students
<i>Types of mentoring</i>	Cavanagh & King, 2019; Kakana et al, 2017	Qualitative Mixed	Students Mentors
<i>Difficulties of students and mentors</i>	Craveiro, et al, 2018; Castañeda & Zuleta Garzón, 2005; Tok, 2010; Goodfellow, 1995; Koerner, 1992; Yoon & Larkin, 2018; Fuentes-Abeledo et al., 2020;	Mixed Qualitative Quantitative	Students

*Student teacher*

Of the three members of the practice triad, the most present in the identified studies are *students*. For them, initial training through pedagogical practice should ensure *the acquisition of competencies and skills* for the teaching profession (González et al., 2018). Through the teaching exercise, the theory learned is put into practice (Craveiro et al., 2018; Fotopoulou, 2020; Rose & Rogers, 2012), thus laying the foundations of *professional identity* (Craveiro et al., 2018; Fotopoulou, 2020; Soini et al., 2015; Stenberg & Maaranen, 2020 a, b). The student's progress from the beginning of the internship program to its end indicates the level of theoretical knowledge acquired, the effectiveness of the activities carried out to acquire practical skills, and the effectiveness in the teaching activity (File & Gullo, 2002; Göçer, 2013; Johnson, 2013; Laframboise & Shea, 2009; Shahid & Hussain, 2011; Tasgin & Kucukoglu, 2016; Tok, 2010).

Among the *professional competences* that students acquire during their practice are those related to classroom management, teaching and assessment design, and communication (Sirmaci, 2010; Toklu & Hursen, 2021). Communication, as a professional competency, is developed by encouraging the student to ask clarifying questions so that there are no unclear or misunderstood issues (Hamaidi et al., 2014; Han et al., 2017).

*The digital competences* necessary for the teaching profession are used with regard to students in the activities they carry out during their pedagogical practice, up to the use of digital resources and technologies in the classroom or the creation of digital content for the activities supported. Moreover, assessment of competences is carried out through digital portfolios (Lemon & Garvis, 2016). Studies have shown that although students appear to have sufficient theoretical knowledge, follow the routines of the institutions in which they carry out their practice, master the theory and methodology of instruction and the didactics of the subjects, and use technology in carrying out activities, at the beginning of their careers, the experience of practice does not seem to have sufficiently prepared them for the challenges they have to face (Göçer, 2013; Shahid & Hussain, 2011).

Reflection is the activity that future teachers carry out in order to analyse their own practical performance. The student critically analyses their own practice (Bayat, 2010; Cenqiz, 2020; Han et al., 2017; Hojeij, 2021; Martin & Clerc-Georgy, 2015), grounding their teaching in research (Laframboise & Shea, 2009). Reflection, as a practice in initial training, although more effective if carried out in a group through reflective dialogue than if carried out individually (Castañeda & Garzón, 2005; Fo et al., 2018; Nolan, 2008), plays a role in surfacing aspects of detail in the activities carried out. Conducted individually, reflection can be documented in the form of a structured question-based journal or an unstructured journal that gives students the opportunity to write about their own teaching experiences freely (Cenqiz, 2020). If at the beginning of the training period the capacity for reflection is limited, the student acquires autonomy by showing depth in

analysing classroom practices (Galini & Kostas, 2014). Reflection increases the student's self-confidence, improving communication skills, which leads to overcoming some of the difficulties that may arise in carrying out pedagogical practice (Khales, 2016).

In terms of assessment and self-assessment, this is done through the portfolio, e-portfolio prepared by the student during the period of practice, but also through demonstration lessons, research, problematization and case studies (Joseph & Brennan, 2013; Ntuli et al., 2009).

The difficulties that students face during the practical training period are not lost sight of either. Starting in the pedagogical practice program brings insecurity, anxiety, and stress due to a lack of experience in planning and facilitating learning in classroom management, but these can be overcome with familiarity with the requirements, with the mentor, and with how to seek and get answers to questions (Craveiro et al., 2018; Koç & Yildiz, 2012; Prada Castañeda & Garzón, 2005). During the course of the pedagogical practice, students reported difficulties in teaching different types of lessons and selecting the most appropriate teaching strategies, time and class/group management, insufficient diversity of teaching tasks, working with different categories of students, and even lack of guidance from the coordinator or mentor (Fuentes-Abeledo et al., 2020; Hamaidi et al., 2014; Ismail & Jarrah, 2019; Tok, 2010). These may be due to differences between theory and practice (Craveiro et al., 2018; Rose & Rogers, 2012).

### *Practice coordinator*

The university practice coordinator is rarely the focus of studies, with many unknowns remaining about their role or influence on student learning. Most often, coordinators focus their work on issues related to designing and organising the internship programme, ensuring the transfer of theoretical knowledge into actual practice, and supporting the student in lesson planning and reflection (Davey, 2001). They also identify institutions where the internship can take place and monitor students in terms of the level of practical knowledge they have acquired through (Johansson & Sandberg, 2011).

Coordinators in the university are responsible for creating a conducive learning environment by informing participants, placing students in practice in pairs or even groups, and assessing them accurately (Bullough et al., 2002; Gardiner & Robinson, 2009; Walsh & Elmslie, 2005).

Activities should be carried out in a step-by-step manner, encouraging student participation so that the student achieves the expected learning outcomes (Stenberg & Maaranen, 2020). The categories of tasks proposed include planning, assessment, and reflection (Johansson & Sandberg, 2012; Fuentes-Abeledo, 2020). The actual involvement in school activities is carried out gradually, from the teaching of lesson sequences prior to the actual practice (Choy et al., 2014; Kupila et al., 2017; Undiyaundeye & Inakwu, 2012), followed by observing activities carried out by mentors, and then teaching some lessons in their entirety (Choy et al., 2014; Harwell & Moore, 2010).

Coordinators use *digital means* for providing feedback to students for instructional design, for designing and organising pedagogical practice and communicating with institutional partners (Lemon & Garvis, 2016).

During initial training, practical training is carried out at the same time as theoretical training. Identified studies have shown that students have limited skills in applying theory to practice in lesson preparation and conscious reflection on practice (Agbenyega, 2012; Cavanagh & King, 2019; Craveiro et al., 2018), which calls for coordinators to increase the number of hours of pedagogical practice (Graves, 2010; Toklu & Hursen, 2021).

The competences are achieved by means of a curriculum designed to allow the student to apply the theories learned but also to practice skills and attitudes. This requires both the active involvement of the student and the positive example of the mentor (Rose & Rogers, 2012).

### *Mentors*

Mentors are seen as facilitators of learning (Cheng, 2005; Wilson & Huynh, 2020) and positive role models (Rose & Rogers, 2012) who create social and cognitive conditions for the development of future teachers' professional identities (Solé et al., 2018; Yoon & Larkin, 2018). They can influence, through their facilitation style, the depth of the student's thinking (Foong et al., 2018; Mena et al., 2016) by collaborating with the prospective teacher both in teaching activities and in the whole journey of planning, document analysis, and lesson plan making, assuming the role of teacher (Schiff, 2015; Jain & Brown, 2022; Nolan, 2008; Nolan & Sim, 2011; Stanulis & Russell, 2000; Waber et al., 2020).

The mentor's roles in mentoring students are diverse, ranging from providing the space for the practice to take place to observing the student's work to providing personal, professional, and educational guidance to the mentored students (Ausiku et al., 2019; Cheng, 2005; Hobjila, 2012). The mentor has a role in practice; the learning process of teaching is both personal and social (Cheng, 2005). It provides feedback on the development of activities (Foong et al., 2018; Galini & Kostas, 2014; Hojeij et al., 2021; Loman et al., 2020), but also on the classroom management of students, improving the quality of teaching (Hung et al., 2003). In order to understand and optimally perform their roles, mentors need motivation, specific supervisory and mentoring skills, specific training, and are undertrained (Ausiku et al., 2019; Kupila et al., 2017; Puroila et al., 2021).

The mentoring activity starts with observing the learning environment and the children, then familiarising the student with the pedagogical and methodical aspects, and culminates with the approach to teaching as a whole, including the relationship with the parents of the school/preschool children. These activities are carried out under the supervision of the university coordinator and mentor. While the student may be a

reflective observer or active participant, the mentor should be a supporter, role model, facilitator, collaborator, and evaluator. Roles are exercised both before mentoring and during and after mentoring (Kupila et al., 2017).

In the work of the mentor, there may be challenges due to the fact that the mentor has professional roles towards the students they educate (Koerner, 1992), but also roles given by the mentorship of future teachers (Yoon & Larkin, 2018). Primary are the duties towards the students, with mentoring and coaching perceived as additional tasks (Jaspers et al., 2014; Jaspers et al., 2018). Challenges also result from the fact that there are aspects of the running of the partnership with the university that need to be clarified: what documents need to be drawn up during the practice, what are the specific duties of mentoring students, or how student assessment is carried out (Aspden & McLachan, 2017; Goodfellow, 1995; Shahid & Hussain, 2011).

### *Partnership in the teaching practice programme*

The university-school/kindergarten partnership, after-school/before-school centres, etc. enable practical activities to take place, with pre-school educational institutions being the place where theoretical and practical knowledge are brought together (Ammentorp & Madden, 2014; Grudnoff et al., 2017; Mauri et al., 2019). To support students, universities can partner with teachers from educational institutions to act as mentors, which increases the involvement of experienced teachers in initial training (Mason, 2013).

Moreover, the partnership relationships are not only institutional, as the studies show, but mainly interpersonal, established between student and mentor, between student and group mates, and between student and university placement coordinator.

Student collaboration with group peers is a form of partnership that has the advantage of fewer mentors but also of peer learning and mutual feedback (Bullough et al., 2002; Chitpin & Simon, 2009; Loman et al., 2020; Joseph & Brennan, 2013). This type of collaboration also manifests itself in peer assessment, a way of evaluating students from the perspective of future education professionals (al Barakat & al Hassan, 2009; Koç, 2011). It is achieved by completing evaluation forms, which support the development of skills in using standards in assessment, lead to awareness of issues related to teaching activity, increase student responsibility, and diversify practice by providing opportunities to compare different activities (Koç, 2011). This placement model can also have disadvantages if students do not establish collaborative relationships with group colleagues (Parsons & Stephenson, 2005) and if there is no emotional and professional support from the mentor (Beck & Kosnik, 2002; Graves, 2010; Hagenauer et al., 2021; Sag, R., 2008; Ussher & Carss, 2014). Even if there are multiple students assigned to a mentor, it is necessary for the mentor to provide individualised support to each student in order to successfully complete the teaching and practice activities (Ronsyn-Misselbrook, 2013)

Building positive relationships between stakeholders in pedagogical practice must take into account issues related to communication, collaboration, and supporting the student in a professional manner by a mentor who is trained to perform the required roles (Edwards & Protheroe, 2004; Heung-Ling, 2003; Maynard, 2000; Mena et al., 2017; Stavropoulos, 2016). School institutions that practically prepare future teachers need to be supported, as they are spaces where students and mentors carry out various professional development activities (Edwards & Protheroe, 2004). If the relationship is not a constructive one, difficulties in carrying out pedagogical practice, stress or even lack of student effectiveness can occur (Ferrier-Kerr, 2009; Kokkinos & Stavropoulos, 2014; La Paro et al., 2020). These can be overcome if the practice triad of student, mentor and coordinator functions optimally (Ben-Harush & Orland-Barak, 2019), if there is a shared vision of practice (Sağ, 2008; White, 2009).

School-university collaboration is a complex one (Martin et al., 2011) that should be leveraged by increasing the number of practice hours (Kula & Güler, 2021) and involving mentors in joint partner institution-university activities (Mason, 2013). The mentor and the coordinating teacher should collaborate on an equal footing and with shared roles in the practical training of future teachers (Mauri et al., 2019). Students' expectations are directed towards both mentors and co-coordinators and the institution where they carry out their practice activities. From mentors, students want collaboration and guidance, while from coordinators, they want to maintain contact with them and the institution where they carry out their practicum, as well as rigorously supervise their teaching experiences. From the institution where the students carry out the practice, they want to create a desirable working environment and information on specific rules and routines (Sağ, 2008).

Mentor-coordinator collaboration is visible up to the student and even program evaluation stage to make the necessary adjustments so as to lead to improved student outcomes, and acquisitions that prepare the future teacher for the complexity of the demands of teaching (Grudnoff, 2011; Grudnoff et al., 2017; Kaldi & Xafakos, 2017).

#### **4. Discussions and conclusions**

The systematic literature review presented above has allowed us to identify some aspects studied over time concerning the pedagogical practice of future teachers in primary and pre-school education from the perspective of practicum triad: coordinator - student teacher - mentor triad.

Being informed by the third space theory in pedagogical practice we have tried to present the results from two perspectives: personal and social, structuring the data both to cover the three members of the triad, and to capture the interactions between them, in different learning environments.

*The student teacher* is seen in relation to the motivation for choosing the profession, the perception of the internship program, but also in terms of competences, self-efficacy, relationships with colleagues, or with an internship mentor. It has been found that future teachers in pre-school and primary education are more interested in teaching practice than those from other specialisations, and that they show a higher level of efficacy compared to those preparing to teach at the secondary level (Sirmaci, 2010).

*The mentor* is responsible for the student teacher's professional training, and it is necessary to clarify the specialisations and parameters of the relationship with the student. Less present in the studies is the university internship mentor, who is responsible for planning, organising, and evaluating the internship programme.

*The coordinator* at the university is the one who organises, plans, and coordinates the teaching practice programme. Less present in the studies identified, they are required to provide guidance to students, which is difficult to do given that future teachers feel the need for this support to underpin their learning.

The social perspective includes all the relations established within the teaching practice triad. From this point of view, we have underlined the idea that the institutional *partnership* must be supported by the interpersonal one. The three members work together at every stage of the placement to prevent and resolve problems that may arise due to the student's lack of experience. Communication, collaboration, involvement, responsibility, and facilitating learning are important in practical training activities. The common and specific roles of each partner should be known, assumed, and fulfilled professionally so that the student is well prepared professionally at the end of the training programme, but also to reduce tensions that may arise (Kupila et al., 2017; Tuyan, 2023).

Less studied were the roles and responsibilities of coordinators, student teachers and mentors, and how learning is achieved through pedagogical practice.

The results can also be seen from the perspective of how pedagogical practice is conceived, organised, carried out and assessed. In conceiving a *concept of practice*, competences related to classroom management, planning and designing of teaching, communication and digital activities should be carried out in relation to the theories learned and accompanied by a process of conscious reflection. An appropriate curriculum, gradually structured from activities of observation of the teaching approach carried out by the mentor to those of teaching sequences of lessons and then whole lessons contributes to the formation of the professional identity of the future graduate.

Compared to previous studies, our study contributes to broadening the scope of knowledge in the field of pedagogical practice on the one hand, by looking at practice from the perspective of the triad of practice, and on the other hand, by including pre- and post-pandemic studies focusing exclusively on the pre-school and primary education levels.

In addition to the positive aspects related to the diversity of the topics covered, we also identified the limitations of the studies reviewed. These include the fact that they are

mostly qualitative on small samples of subjects and that they do not address the perspectives of all those involved. The literature review showed the different themes that researchers have looked at when studying pedagogical practice in pre-school and primary education. It also showed that there is a need for studies that look at mentors of practice in pre-school education and practice coordinators in universities, two groups that were not well represented in the studies that were included in the literature review. Also, the review opens up themes to be further explored, as the topics underlined as being less addressed in the research undertaken so far are to be further considered, to come up with solutions for enhancing the quality of ITE practice training. A triad not functioning well hinders the desired quality of teacher preparation.

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