Revisiting reflection in pre-service teacher training: let´s think through a practicum in Spain

Ángela Saiz-Linares[a]* and Teresa Susinos-Rada[b]

aDepartment of Education, University of Cantabria, Santander, Spain; bDepartment of Education, University of Cantabria, Santander, Spain

Email: saizla@unican.es Adress: Avda. de los Castros s/n 39005. Santander, Spain. Phone number: (+34) 942201883 *corresponding author

Ángela Saiz-Linares is Ph.D in Education. She is currently working as a teacher in the Department of Education at the University of Cantabria. Her research interests include initial teacher training, practicum, socio-educational inclusion/exclusion, participatory research and Student Voice. https://orcid.org/0000-0001-9226-9346

Teresa Susinos-Rada is Ph.D in Education. Researcher at the Department of Education (University of Cantabria), she leads a research group that has carried out several research projects related to inclusive education, qualitative and ethnographical research. She currently heads a project on participatory research with socially vulnerable collectives. http://orcid.org/0000-0001-6385-2196

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This article presents the findings of research in which a practicum programme based on a reflective and research-based teacher training approach has been designed, implemented, and evaluated. The purpose is to analyse the educational design and its ability to facilitate teacher training based on active and reflective learning. Methodologically, the research has the format of an evaluative case study. The data come from interviews, observations, and document analysis. The analysis reveals some key aspects, which explain the effectiveness of the proposal: 'pedagogical concerns' as activators of reflection, the complementarity of various reflective strategies, dialogical relationships, and the balance between planning and flexibility. The relevance of our work relates to the need to review the practical training of pre-service teachers in Spain, updating the principles towards reflective professionals and also to facilitate professional practice informed by research.

Keywords: initial teacher training; practicum; reflective practice; research-based teaching models; collaborative learning.

Introduction

There is agreement in literature on initial teacher training (ITT) that highlights the need to formulate educational proposals, especially during the practicum,[1] within the framework of reflective (Brockbank & McGill, 2002; Bruno & Dell'Aversana, 2018; Sorensen, 2014) and research-based models (Darling-Hammond, 2017; Flores, 2018; La-Velle & Flores, 2018).

In Spain, these ideas have been the subject of debate, although they have had little impact on the actual ITT systems. Some relevant experiences can be found in the studies of Cubero et al. (2019) and Díez and Domínguez (2018)-. In this way, as part of the reform of the Spanish University System (the Bologna process), ITT underwent a major restructuring. The extension of the university Teaching Degree by one year and an increase in the time devoted to practicum placement are two of

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[1] We define the practicum as the stage within the ITT degree consisting of a period of school placement. The students remain in a particular school setting during this time in order to gain knowledge from the practice along with access to reflective knowledge about their real school experience (Susinos & Saiz, 2016).

the most significant changes. However, the reform has not been used to direct the debate towards core issues, such as the type of educational professional that we need to respond to the growing complexities of teaching in the twenty-first century, especially in contexts marked by increasing accountability and multiculturalism (Flores, 2018).

Nonetheless, these ITT reforms have enabled us to evaluate the achievements and limitations of this training plan. Based on this review, we have designed a practicum which is both sustainable and feasible within the regulations of ITT in our country and which constitutes a practical application of the principles of research-based and reflective training models. This article presents the main conclusions of this programme.

The traditional orientation of ITT based essentially on lecture-based teaching, following a technical rationality, has been shown to have serious limitations (Alvunger & Wahlström, 2018; Klette, 2002). For this reason, the need to formulate educational proposals for practicum consistent with reflective models has been repeatedly pointed out (Beavers et al., 2017; Bruno & Dell'Aversana, 2018; Korthagen, 2004; Wong, 2016). Similarly, in recent years pedagogical research has defended a research-based teacher training approach, driven by the urgency to promote a teaching professional identity that is informed and improved through systematic research (Darling-Hammond, 2017; Flores, 2018; La-Velle & Flores, 2018). These two paradigms reinforce each other and converge towards a common goal: to educate autonomous and reflective teachers capable of using research in their teaching and that can be defined as teachers with pedagogical thinking (Toom et al., 2010).

The reflective practice movement in education defines those teacher training

initiatives that recognise the richness of good teachers' practices and the ability of these to take substantive decisions on the means and purposes of their work (Schön, 1998). In this regard, reflection is a process of transforming the experience in learning (Bruno & Dell'Aversana, 2018) and practical knowledge becomes the main focus of reflection (Clandinin & Connelly, 2000).

Schön's (1998) work is still considered to be of major importance for understanding this theoretical concept. This author coined the term 'knowledge-inaction' to refer to those actions that we carry out spontaneously during professional practice, without having to think about them during their execution. We reveal this knowledge, which is initially implicit, through our spontaneous action. At the same time, Schön also defines a 'reflection-in-action', which occurs while action takes place. The conflict that certain actions entail, called 'undetermined zones of practice' (Schön, 1998), are identified as triggers of reflective processes (Loughran, 2002; Russell, 2017; Thompson & Pascal, 2012). The heart of reflective processes can be found in our efforts to understand this situation and, lastly, in the process of restructuring the problem (Perrenoud, 2007). Finally, Schön defines a type of reflection that occurs once the action has concluded, reflection-onaction, that allows us to review our pre-established scripts. It is in this reflective process where true learning happens: the type of learning that will allow the professional to learn throughout their life and become a more 'skilled' professional. In other words, teachers reflect on their action and decisions before, during, and after the teaching process.

These deliberations by Schön have contributed greatly to reassessing university education, clearly demonstrating the need to replace the traditional technical and decontextualised approaches with others based on real and complex professional

situations where reflection is a key element (Loughran et al., 2016; Wieser, 2018).

The reflective process as a rational processing of information must also consider the moral and political dimension (Hargreaves, 1995), as well as teachers' beliefs and perceptions about themselves and their teaching (Kelchtermans, 2009). As Zeichner and Liston (1993) point out, the content of the reflections matters and the reflection can never be treated as a simple procedural device because reflective practice is the result of a democratic and emancipatory impulse (Zeichner & Liston, 1993).

Similarly, we are in agreement with the position adopted by the authors who advocate the need to also understand reflection as a collaborative process (Brockbank & McGill, 2002; Gelfuso & Dennis, 2014; Patton & Parker, 2017), which allows us to move beyond mere introspection. Moreover, other authors defend the importance to promote training spaces that allow preservice teachers to reflect on their school biography, given that this generates very powerful implicit beliefs about teaching, learning, and the status of teachers and students that need to be made explicit (Clandinin & Connelly, 2000; Kelchtermans, 2009; Loughran et al., 2016; Sorensen, 2014).

What has been said so far does not imply embracing purely practical approaches or 'anti-intellectual' tendencies, but rather knowing how to make the practical and theoretical interact. Addressing this need, the current international trend in the education of teachers is that this training should be both research-based and profession-oriented. As the report on teacher training in the United Kingdom recognises (BERA-RSA, 2014), it is crucial that this training offers opportunities for future teachers to participate in research processes that encourage decision-making based on the analysis of the data collected (Buschor & Kamm, 2015; Flores, 2018; Lambe, 2011; Rees et al., 2012; Ulvik, 2014). Indeed, Schön's reflective model encourages future professionals to become researchers within the practical context.

Research thus provides a bridge that allows the linking of theory and practice in ITT (Cochran-Smith et al., 2016; Nelson & Campbell, 2017; Sachs, 2016; Toom et al., 2010). It is also the tool that allows teachers to transform propositional knowledge into practical knowledge (Cain, 2015; Flores, 2018) in Schön's (1998) terms, knowledge-on-action.

The proposal for reflective practicum

The practicum placements at the School of Education of the University of Cantabria are divided into three periods in the second, third, and fourth years (48 ECTS total). Practicum III (in the fourth year) follows an intensive model and lasts for sixteen weeks in the last semester of university education. It is within this period that our research has been carried out. In the three practicums, students combine their time in a school (they attend 5 days a week, full time) with the elaboration of an individual practicum portfolio, based on three areas of reflection: curricular processes, organisational aspects of the school and social context. The current regulations only stipulate two mandatory meetings as part of the support process for the completion of the portfolio tasks, which is the responsibility of the university supervisor. Consequently, from the point of view of the students, the role of the supervisor is often relegated to that of merely evaluating the work, with very little feedback or guidance provided during the process.

The design proposed here entails important innovations with respect to the traditional practicum programme, especially in relation to the role of the supervisor and the reflective training model put forward.

The training initiative starts by asking students to formulate a pedagogical concern arising from the practice in their school, using their own words in a brief text, understanding that the triggering of reflective processes is more feasible when we are faced with an 'indeterminate zone of practice' (Schön, 1987).

Following this, the training proposal is organised in two stages of reflective work:

(1) Individual reflection, which is facilitated in the meeting between the university supervisor and each participant, based on a semi-structured epistemic and biographical dialogue (Brinkmann, 2011).

Given the potential of writing as a means of researching into their own personal and professional concerns and also of linking theory to practice (Pasternak and Rigoni, 2015), this process of individual reflection continues in the elaboration of a reflective diary which is completed throughout the training programme.

(2) Collaborative reflection (between the supervisor and a group of students) that is structured around six seminars held at fortnightly intervals. In this space for reflection, each student discusses the enquiry on the pedagogical concern that he/she is investigating (using traditional research techniques: academic reading, observations, interviews with experts, etc.). Each concern research is discussed among the peers in the seminars and is also guided throughout its different phases by the university supervisor. In this stage, collaborative reflection enables progress to be made with regard to the definition of the problem and the search for complex solutions.

The following figure summarises the fundamental structure and chronology of the proposal:

Spaces for reflection	Objectives	Training tool	Participants	Purpose of each tool
Individual	Individually explore different aspects of the teaching practice linked to a dilemma selected by the student.	Selection of a pedagogical dilemma	Each student	Select a focus of interest or pedagogical dilemma on which to concentrate the reflection. Define the issue. Compare with the definition and final understanding of the problem.
		Epistemic-Biographical dialogue	Student and supervisor	Get involved in the pedagogical reflection through personal interests. Analyse critically the connections between the pedagogical concerns with the biography itself.
		Practice diary	Each student	Space for written analysis and personal interpretation of the reflective process.
Collaborative: seminars with the 'collaborative group of reflection'	Develop and practice the skills of 'Learning in relation'	Presentation seminar	All students and the supervisor	Participants approach to the different dilemmas selected: first shared reflections.
		Inquiry seminars		Guide the inquiry process and the reflections raised by this. Shared reflection on a possible intervention plan.
		Evaluation seminars 'Presentation to a guest'		Presentation of conclusions of their reflective process: reflection and final feedback. Contributions from a person outside the training process.

Figure1. Training proposal structure (Susinos & Saiz-Linares, 2016)

Method

The research corresponds to an evaluative case study of a qualitative nature (Denzin Lincoln, 2012; Simons, 2011). This perspective allows a closer look at the deeper meaning of the programme, giving priority to the participants' interpretations (Flick, 2018).

The study case is the practicum programme implemented at the University of Cantabria (Spain) involving a group of five students during their fourth year at university. They were doing their placement in schools under the guidance of a university supervisor. The selection of these students was made based on the following criteria (purposive sampling):

1) Representation of the different teaching degree majors: Kindergarten, Primary, English, Special Needs Education, Speech and Hearing Therapy.

2) They were all in the last year of the bachelor's degree (with the longest period of school placement).

3) The composition was that of a standard group with a similar number of students to those usually supervised by the practicum tutors from the University of Cantabria.

4) Accessibility and voluntary agreement.

All of these criteria aimed to ensure that the necessary conditions existed to allow collaborative reflection processes to take place.

We have used various tools for the production of data (Flick, 2018) that have allowed a qualitative processing of information. More specifically, we have analysed the information produced in:

1) Six training seminars (which were recorded and subsequently transcribed).

2) Five 'teachers diaries', one written by each student.

3) Five initial biographic-epistemic interviews (about an hour and a half long).

4) Five semi-structured interviews (an hour and a half long) carried out with each

5) participant at the end of the programme. These had the objective of evaluating the practicum proposal as a whole.

The research corresponds to an evaluative case study of a qualitative nature (Denzin & Lincoln, 2012; Simons, 2011). This perspective allows a closer look at the deeper meaning of the programme, giving priority to the participants' interpretations (Rapley, 2014).

Although the analysis we present here is inferred from all the information collected, due to extension limitations for this paper, the data vignettes that we provide refer mainly to interviews and to a lesser extent to teachers diaries. Double coding of

data collected was carried out (we used the MAXQDA computer program to systematise the information):

- Thematic coding: we organised the information thematically and developed theories using a deductive-inductive process (Gibbs, 2012) to the extent that, although we had begun with an initial list of categories to analyse, we refined and adjusted the work during the analysis process. This coding allows us to reach a general evaluation of the proposal based on the prefigured categories.

- Chronological coding: all the information from the seminars and the diaries was codified again according to when it was produced, with the aim of analysing the diachronic evolution of the reflections during the different stages of the programme (timeline of students' reflections).

In this paper, we synthesise the most relevant results of both analyses[2]

Results

The analysis of the informationreveals a number of key aspects that explain and justify the relevance of the programme.

Key 1: Pedagogical concerns as instruments for triggering reflective processes

Identifying a pedagogical concern in the context of their placements serves as a starting point to carry out a reflective process of research into this problem. In other words, it involves learning driven by concerns (with multiple and complex answers), in a research process that is governed by the participants themselves, according to the principles of Action-Research (Elliot, 2015; Flores, 2018).

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[2] A more in-depth and extensive analysis of each student's reflective processes (resulting from the chronological analysis) can be consulted in: Saiz and Susinos (2018).

This pedagogical concern may be related to the actual practice, observations and activities carried out by aspiring teachers in their placement at schools, or to other educational concerns that go beyond the walls of the school and are connected with relevant social and political issues. The only guiding principle in the selection is, therefore, that this concern is significant for the student, given that the triggering of reflective processes takes place when we face a disconcerting situation that obliges us to find an answer (Schön, 1998; Loughran, 2002).

We will show here that the concerns chosen vary according to the school contexts and the specific baggage[3] and motivations of the aspiring teachers. In our case, the dilemmatic aspects were:

Focus	Initial formulation developed by the student
Teacher Collaboration	'The key to the success of the school where I am doing my school placement is the close relationship and collaboration that exists between all teachers' (Patricia).
School ownership	'The difference between state and private schools' (Laura).
Theory versus practice	'If we can make practical use of everything we have studied during our degree when we are in the classroom' (María).
Improvement of written expression	'Improve both written and oral communication with the objective of providing students with a greater level of communication and security when expressing themselves and interacting with other people' (Cristina).
Conflict resolution	'One of the main problems that I have found is the number of conflicts that occur between students and I hope to find a solution' (Elena).

Figure 2. Initial formulation of pedagogical concerns.

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[3] We refer to the set of knowledge and experiences with which our participants start the programme.

As shown, we found very different focuses in these initial proposals. There are some technical and reductionist conceptions regarding education, and complex approaches linked to relevant social issues. For example, Maria's[4] initial approach place us directly at the heart of the technical rationality, by assuming as axiomatic that university training has to provide knowledge that is directly transferable to classroom practice. Certain aspects of a technical conception can also be identified in the first formulation made by Elena, who undertakes her reflective process with the intention of finding general solutions or 'recipes' that enable her to resolve this conflictive situation that concerns her. Despite her persistence, during the epistemic interview she realises that the characteristics of the contexts and situations that teachers face make the direct application of predetermined theoretical knowledge impossible: 'I would love the university to tell me: do this and it's solved. But I think that I need to search for techniques and then, seeing the context, modify them' (Elena _initial interview). Elena's teaching profile appears more reflective regarding its practice and committed to some functions that go beyond those associated with the idea of the teacher as an instructor of elementary skills. We can see how, in this case, the 'problem solving' approach described by Wallace and Louden (2000) appears to have been this student's main focus. Similarly, Cristina shows an interest in developing knowledge on her performance in the classroom which will allow her to intervene and improve her future educational practice with regard to work related to literacy skills. On the other hand, this student demonstrated a connection with the personal level of reflection when she justified the motivation behind her interest in enquiry, partly due to her biography as a university student of 'translation, which is closely linked to this branch' (Cristina_initial

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[4] All the names that appear in the paper are pseudonyms, respecting the principle of anonymity and confidentiality that we have guaranteed to the participants during the process.

interview). Finally, Patricia's and Laura's pedagogical concerns are linked to issues that refer to the context in which education takes place, combining characteristics that refer to an interest in problem-solving and to a critical one of reflection.

Not all the concerns share the same level of specification with respect to what to investigate. The seminars made it possible to guide these topics towards more practicable objectives of reflection and promote evolution with respect to their initial approaches.

In any event, we highlight the potential of pedagogical concerns to address the moral and political aspects of educational phenomena and to encourage students to begin to assess their own beliefs and perceptions about their teaching (Kelchtermans, 2009).

Key 2: Reflection is encouraged when there are several strategies that act in synergy

One of the main results of our research relates to the value of using a range of enquiry strategies, within a complex and dynamic relationship between individual and collaborative work, to promote significant reflective processes and enquirybased learning. Both the participants' perceptions and the analysis that we have carried out on their reflections show that it has been a confluence of different tools that has promoted transformative reflection (Mezirow, 2000), that is, the progressive enrichment of the framework within which the participants worked with respect to their topic of reflection.

Selecting a single pedagogical concern for reflection facilitated an in-depth understanding of a relevant teaching situation for the students and even the opportunity to specialise in a pedagogical situation of interest to them:

'It seemed right to choose only one topic of reflection. If we had tried to do this throughout the whole practice, we would have picked up many things from other subjects, but we would have missed a lot of others. It would have been too much work to choose more topics and we would have missed many things by wanting to cover a lot' (Cristina_final interview).

They understand that reflecting is not merely 'thinking about things' and that the systematicity that characterise a process of reflection entail the need to specify it based on a well-defined topic: there must be a focus to structure the reflective processes.

Furthermore, the collaboration strategies implemented facilitated a systematic analysis of five different educational topics: 'I liked their topics (those of other colleagues) a lot and I think they enriched me too' (Laura_final interview). Similarly, throughout the whole reflective process other contents emerged (intercultural and special needs education, school culture, social-political conditions of teaching, and so on) which have subsequently contributed to understanding the complex nature of education. This leads us to believe that, regardless of the central subject chosen by the students, there are certain educational issues which are transversal to almost any content and must be addressed in any reflective training proposal.

Finally, the freedom of each student to choose the pedagogical concern has connected the training proposal with their own interests, thus facilitating a learning experience that involves them in a meaningful project (Tang et al., 2012). This is one of the reasons for their high level of involvement in their learning process:

'It was much better that we could choose the topic because you work on something that you want, it's true that liked my topic from the beginning, so I could take advantage of it' (Patricia_final interview).

We also verified the value of the epistemic-biographical interview as an initial dialogue in order to understand that there are very close connections between our pedagogical actions and our biographies (Clandinin & Connelly, 2000; Kelchtermans, 2009) and to understand ourselves better as future teachers.

'I had never stopped to reflect on how my experiences influence what I think about education now. We saw that my topic was related to my family education […]' (Elena_final interview).

This biographical interview was transcribed and delivered to each student, and was established as a reference document that allowed them to reinterpret their initial thoughts, formulate new meanings and, in short, reposition themselves with regard to their initial narration, allowing what Schön (1998) calls a 'reflective dialogue' with the situation.

'I think it was valuable because later it served as a reference at several points during the entire development of the portfolio […] I mean that from the initial interview to what has led us to … after all the reflection, what has led us to see now is that many things have changed. ' (Laura final interview).

As we can see, revisiting this narrative allowed them to become aware of the progress that had been made in the reflection process at the end of the programme.

As said, the students also wrote a reflective teacher diary. This instrument has enabled the rethinking of pedagogical situations in a lasting format, what makes it possible to revisit initial reflections and think about new adjustments: 'with everything that we have been investigating and reflecting on, if you don't put it anywhere then you lose it later' (Cristina_final interview). It also constitutes a tool that documents the process of learning throughout the practice. Nevertheless, the demands of some of the participants lead us to believe that the opportunity of

also using other channels that are more in tune with students' typical interest in ICT options should be considered (Allaire, 2015).

Nonetheless, systematic enquiry has shown itself to be very appropriate for encouraging the questioning of the participants' frameworks of perception and the integration of new perspectives (Brockbank & McGill, 2002; Larrivee, 2008). In the following figure we show the enquiry strategies that have governed each participant's reflective project:

Focus	Enquiry strategies
Teacher collaboration (Patricia)	− Academic reading in relation to her topic of enquiry. − Observations in her school placement focused on relationships and collaboration between teachers. − Interview with a teacher.
School ownership (Laura)	− Academic reading: research on the state of the matter regarding public and private-state subsidised schooling in Spain. − Viewing a documentary on the subject. − Interview with a teacher in a public school.
Theory versus practice (María)	− Interview with an expert with a practical-theoretical profile: the expert was a school counsellor in a school and is currently a university teacher.
Improvement of written expression (Cristina)	− Study of the relevant literature: approaches to alternative ways of working on oral and written expression. − Observation of a classroom where language literacy was being worked on from a skills-based approach and with alternative methodologies. − Interview with the teacher of this subject.
Conflict resolution (Elena)	− Academic reading in relation to the subject. − Visit to a school with relevant experience in conflict prevention. − Interview with the school counsellor. − Action-research cycle: systematic observation of the situation in her classroom, reflection and establishment of resolution, implementation and assessment strategies to start a new cycle.

Figure 3. Main research strategies used by participants.

Regarding this research-based training phase, we have verified that, depending on the nature of the topics and the evolution of the reflective processes, some of the research strategies have shown themselves to be more valuable than others for the promotion of paradigmatic changes in the pedagogical thinking of participants. In the case of the concerns linked to classroom situations, observation of action, and analysis of the context has formed the basis for designing and handling different pedagogical situations. With regard to the concerns more removed from the immediacy of the

classroom, conversations or interviews with different education professionals (such as a senior practitioner or university professor) were decisive factors in refocusing their study phenomenon.

While all strategies are relevant, the Collaborative Seminars have been identified as the tool that has most clearly promoted the proposal of reflective training, confirming that reflective practice should be understood as a social and collaborative process. The seminars are primarily intended to support the enquiry processes of each student, according to their needs and interests. Some fundamental values of this collaborative format are:

- Discovering peers as a valuable source of learning and recognising the collaborative nature of the school practice: 'Learning from the person next to you, who is in a school, is really productive' (Laura_final interview).
- Reinterpreting pedagogical practice with new key aspects: 'What is indisputable is that four eyes see more than two, that various opinions bring different points of view' (Cristina's diary).
- Promoting a feeling of personal value by being able to guide the learning of others: 'Feeling valid in so far as we gave ourselves ideas that worked' (Patricia_final interview).

'Reflective dialogue' is proved to be a tool capable of breaking down some established paradigms (Brockbank & McGill, 2002). The reflection based on this type of strategy should be based, on the one hand, on participants' own experience, and on the other, on the findings that have been made during their research processes.

Key 3: The need for a more horizontal relationship[5] with the university supervisor

A reflective and collaborative practicum requires rethinking the role of the university supervisor, which in this new framework consists of offering guidance and constant support during the reflective processes (Korthagen 20104; Mena et al., 2015). It also requires providing students with meaningful learning opportunities, . This connects with the importance of redirecting relationships with the students towards more symmetrical models that allow genuine dialogue and collaboration. The implementation of the programme allows us to detail some of these new supervisor's.

We have confirmed an essential function of the supervisor as facilitator of the seminars, where the tasks involved include the control of time and turns to speak, the clarification of doubts, the explanation of the work scheme and reminding students about pending agreements. We have also observed that, as the seminars progressed, the participants developed a pattern of participation and thus the work of moderation was minimised as the students internalised the work structure.

However, his/her fundamental function relates to encouraging student reflection and accompanying them in their learning process, eluding attitudes of an expert nature:

'You have participated with us. When we were lost you have guided us, but you haven't imposed yourself either' (Laura_final interview).

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[5] This concept proposes a new model of relations between supervisors and students, what Fielding (2012) called 'radical collegiality'. This approach extents the shared and collaborative partnership between student and supervisor. The role of the university supervisor is transformed into a more symmetrical one that avoids attitudes associated with the idea of an expert. All this implies a mutual commitment of reciprocity between students and teachers that leads towards a way of understanding knowledge as something that is co-constructed and emerges intentionally.

Given this position, the supervisor can help students to critically analyse their practice and, finally, to integrate the theoretical and practical aspects of their training in the following ways: helping to make explicit the students' beliefs and formulating questions to help understand and look in-depth at particular content; guiding their research process (recommending academic reading, offering training on relevant research techniques, and facilitating access to people to interview or situations to observe, etc.); emphasising key aspects of their reflections; recapitulating and returning some ideas for rethinking ('mirrored function'); and proposing paths for reflection, etc.

Finally, it should be noted that the practicum may constitute a stressful training space where the student will need to recognise their strengths and weaknesses (Zabalza, 2011). The emotional support from the university supervisor therefore become fundamental. In our proposal, a friendly, comfortable and close environment that encourages participation without constraints has been indispensable for strengthening the sense of security for all students involved and also for making the most of the training potential of the proposal. The symmetrical relationship, monitoring and continuous support by the supervisor and the consideration of error as a motive for learning are among the factors that have contributed to the development of such a climate.

Key 4: A balance between planning and flexibility

Reflection consists of critical and methodological analysis that needs to be approached on the basis of planned proposals. In this context, students recognise the usefulness of articulating the training programme from different frameworks of reflection and structuring it in different moments of enquiry. This turns the process of reflection into something more functional and reduces the initial confusion in the face of a novel

programme. However, it does not imply renouncing a flexibility that allows us to adapt to the participants' training needs and to their ability to manage their own training process themselves. Offering an open schedule of reference, with times and tasks that are adaptable to the characteristics of their research projects and their own circumstances, has been fundamental for the successful development of the programme.

'It's better to have planning, because when you don't know how to approach the work very well it makes it much easier. Although this flexibility of being able to change according to how we are working also exists, I also like the fact that there is planning' (Cristina_final interview).

There has also been complete freedom to choose the pedagogical concerns and, later, a great deal of flexibility in choosing the research activities. Thus, the participants have decided, together with the university supervisor, the specific tasks of reflection to be carried out in the next phase, according to the direction each topic of reflection has taken.

Furthermore, most participants consider that it has been feasible in terms of its duration and intensity. It has not been an insignificant amount of work, but has been planned proportionally, taking into account the rest of the academic tasks that the students had to do during this period. However, some also express the difficulty of carrying out a proper practicum in parallel to completing the final degree project. The problem does not seem to reside so much in our specific proposal but rather in placing two academic projects of great magnitude in the same training period.

'This programme has been very interesting for me and I have put the final degree project aside. Doing both things at the same time is impossible' (Elena_final interview).

Rather than being a futile demand, these reflections question some cardinal components of the structure of the curriculum, or even the degree curriculum that require rethinking.

Conclusions

The aim of this proposal was to provide structured frameworks for deliberation and carrying out research. The analysis of the programme shows that, consistent with what some current researchers claim (Gelfuso & Dennis, 2014), transformative reflection is more likely when there is a definite plan rather than a more open format.

Our programme also demonstrated its value in breaking down a number of normative discourses on teaching and guiding aspiring teachers to reach deeper levels of reflection. This reflective process is encouraged when there are several strategies that act in synergy.

The seminars are at the heart of the programme and corroborate the usefulness of planning the training task based on collaborative frameworks of work, as suggested by research carried out in recent years (Harford & MacRuairc, 2008). The students have learnt to share their experiences, remaining open to other perspectives, and resolving a variety of educational situations together. Consequently, they have distanced themselves from the perspective of the isolated teacher in their classroom and assumed this collaboration as a strategic part of educational change (Brockbank & McGill, 2002) Moreover, enquiry confirms its efficiency in encouraging the development of future teachers through on-going study, reflection, and action (Ulvik, 2014). Research is established as a central element in the (re)construction of the thinking and practice of future teachers (Flores, 2018). Thus, as the programme progressed, we noted that most of the topics became more complex. The combination of collaborative seminars and the

research processes carried out by students has facilitated the integration of knowledge, narrowing the distance between theory and practice.

In short, this research proposes a reflective practicum model, which demonstrates its relevance in a process of allowing future teachers to develop a problematising view of pedagogical practice. Thus, the programme has presented students with a way of learning that connects theory to practice in a real way and has persistently called for a rethinking of the teacher's role.

Finally, the analysis of the proposal shows us some areas for improvement.

We regard the creation of collaborative links between the university and the schools where placements take place as essential, since both have a shared responsibility when it comes to training the future teacher and constitute research-rich environments (BERA-RSA, 2014; Korthagen, 2004). We believe that future research should consider how to involve school practitioners in a reflective practicum with the characteristics presented, with the questions on which to reflect including: How to collaborate on an equal basis? What will be their specific functions in the research process? We also need a more intense and coherent training framework in order to create an impact that is sustained over time (Zeichner & Liston, 1993). In the case under discussion, a good way to start might be to integrate the final degree project into the practicum proposal, instead of considering them as independent activities.

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