International Journal of Instruction *October 2023 ● Vol.16, No.4*
e-ISSN: 1308-1470 ● www.e-iji.net *p-ISSN: 1694-609X*
pp. 503-520

Article submission code: 20220926082850
Received: 26/09/2022 Revision: 12/04/2023
Accepted: 06/05/2023 OnlineFirst: 17/07/2023

Teachers, Education Administrators, Education Experts and Students' Opinions on Teacher Education Programs for Secondary School Teachers

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Secondary school teacher education in Spain has paid no attention to the fundamental principles of teacher education to educate all adolescents. The conditions under which this training has been implemented in the Spanish context have created a complex panorama of political and professional resistance, and a multitude of "gaps". The aim of this study was to define the conditions that this type of teacher education must fulfil to contribute towards developing the pedagogical elements that this training has been lacking and which are necessary to make it a quality education experience, accessing particular and shared meanings to master students, secondary education teachers, master principals and teacher education experts (researchers). For this research, both in-depth interviews and open-ended questionnaire questions were used. These were used to acquire the opinions and assessments of the participants. Afterwards, a content analysis was carried out in order to collect the evaluations provided for each single elements, extracting characteristics that define them as desirable. Findings advocate elements such as meaningful relationships between university institutions and secondary schools, and training agents who believe in training and who know how to transfer real practical knowledge to training. From these results, it is concluded that the implementation of the model to be introduced requires the creation of shared meanings and beliefs towards training. This requires effort and political will at all levels.

Keywords: secondary school teachers, teacher education, Spain, teacher education curriculum, program effectiveness

INTRODUCTION

Since teachers and their training matter for the quality of education of our young people, we need good teacher education policies to ensure that these professionals are both

Citation: Martín-Romera, A., Higueras-Rodríguez, l., & Martínez-Valdivia, E. (2023). Teachers, education administrators, education experts and students' opinions on teacher education programs for secondary school teachers. *International Journal of Instruction*, *16*(4), 503-520. https://doi.org/10.29333/iji.2023.16429a

emotionally and intellectually committed to their profession (Aarts et al., 2020; Cochran-Smith et al., 2018). Today, many groups question the capacity of the responsible institutions to respond to such training needs. Much criticism has focused on current dilemmas such as the influence of student ideas on teaching, the gap between theory and practice, the lack of coordination between key elements, training that is detached from professional reality, or the fragmentation of the curriculum (Flores, 2013).

The conditions under which secondary teacher training has been implemented in the Spanish context since its inception have created a complex panorama of political and professional resistance, and a multitude of "gaps". It should be noted that such professionalization of teaching staff has traditionally been characterized by their academic expertise. The expansion of education to the entire population in the 1990s entailed a shift in the identity of the teacher towards one who must educate everyone, as well as being able to teach their subject adequately (Esteve, 2009). This has created an extensive debate — which continues to this day — on how the disciplinary and pedagogical dimensions should be articulated to achieve a training that is appropriate to the demands of practice.

As previous studies have shown, the required improvements affect all the elements of teacher training plans. These include a lack of coordination in the curriculum and the absence of relevant content for practicing the profession (Flores et al., 2014), a model of competences not linked to the secondary school culture (Sarramona, 2012), traditional methodological processes that were removed long time ago from the learning experiences of beginner teachers, agents with no training or experience in the profession (Benarroch and APICE members, 2011), short (Flores et al., 2014) and poorly organised Practicum, or access processes lacking criteria for selecting the best candidates.

As reflected in the curricular structure, such training plans are more focused on the development of a teacher who knows how to teach the discipline than the more complex type of professional that is currently in demand (Flores, 2020), which further makes the interdisciplinary structures required for the training of competences that are more challenging and thus reducing them to the technical dimension of knowledge (Sarramona, 2012). This is one of the most resounding criticisms that have emerged, prompting the need to create training that aims for a different teaching profile.

There is a demand for teacher education plans to include processes and content that address the way teachers learn and what they need at this historical moment in the development of their profession (Karim et al., 2018; Montero and Gewerc, 2018). There has, however, been a lack of rigorous evaluation of what the professionalization of teachers implies today. The professionalization element appears to be absent, becoming in many cases a mere requirement to access the profession. In this sense, the evidence suggests that training should primarily target the pedagogical professionalization of future teachers (in the sense of recognizing the importance of processing quality) after which they begin to train as a teacher by acquiring a set of competencies that go beyond a disciplinary domain (Bolívar and Bolívar Ruano, 2012).

Against this background, several alternative models are being developed, with a seemingly current preference for clinical models. Whilst a new type of training is emerging, the current one continues to prevail, to prevail in what terms and in what form it should be established is something that remains to be discussed and researched. As indicated by Escudero et al. (2017), we must begin by analysing and understanding the meanings that underlie the culture of the formative context, and how these are shared by the various agents who act and participate in it, allowing their rethinking to serve as a first step towards improving teacher training.

Although there are works that present proposals for improvement (Escudero et al., 2019), we need evidence aimed at defining the characteristics that the set of elements of the teacher training plans should have to achieve pedagogical professionalization. Some studies that have attempted to analyse what makes teacher training plans effective (Darling-Hammond et al., 2017; Korthagen et al., 2006; Sahragard and Saberi, 2018), show that, in spite of the diverse ways of conceptualizing and developing such plans there are characteristics that help the creation of positive ideologies that contribute to pedagogical professionalization (e.g., they have been shown from the viewpoint of the teacher to be trained concerning the curriculum and the development of the training). However, its effectiveness depends on the demands of the specific context, policies, or professional needs, as well as the agents involved (Flores, 2019).

Training Models in The European Context

The Eurydice report (2003) sets out ways of organizing secondary teacher education:

- Simultaneous professional models, both, specific and pedagogical training have an important role to play. This model has been considered one of the most favorable for the development of professionalisation (Esteve, 2009).
- Consecutive model, represented by the French case in which scientific training predominates, with pedagogical training and practical training either suppressed or relegated to a secondary role. This also includes the English model given great importance to teaching practice, leaving pedagogical training open to the University or other types of centers.

In this respect, several studies (Bolívar and Bolívar Ruano, 2012; Sheridan, 2016) allude to the fact that these models encourage the construction of ideas and beliefs about teaching that consider the pedagogical dimension of teaching to be of little relevance, with special emphasis on knowing the subject in depth or knowing how to teach the matter.

According to this report, teacher education usually includes a general and a professional component. The general component is based on generic and subject-specific training courses in one or more subjects, while the professional component includes courses for the acquisition of skills, characteristics of the teaching profession, and practical training in schools. This professional, theoretical, and practical training (which could be called a blended model), according to Manso and Valle (2013) can be "offered in the same national territory" (173).

Another prominent model that has been gaining momentum is the clinical model (Santos and Lorenzo, 2015), and specifically the Teacher-in-Residence model (PrIR). In López Rupérez's research (2018), he lists the reasons why this model would encourage the improvement of effective preparation, including: this system is well-established in the health sector, successful and socially accepted. Moreover, it is perfectly applicable to the teaching field; or it provides an effective and efficient system of access to the teaching profession.

After several failed attempts, teacher education organized under consecutive models. In the first moment (1970), with the creation of two new educational structures (Unified Multipurpose Baccalaureate and University Orientation Course) the Pedagogical Aptitude Course (hereinafter PAC) was introduced. This entails a minimum level of pedagogical training that is undertaken once the degree studies have been completed. This course was delivered in the Institutes of Education Sciences and was developed across two cycles: On the one hand, a theoretical cycle that provided training on the foundations and and on the other hand (general didactics and specific didactics), with a minimum duration of 150 hours, and a second cycle, of a practical nature, carried out in the practice centers and under the supervision of the assigned tutors, with a duration of 150 hours. Despite widespread dissatisfaction, this course persisted - with a few exceptions - for almost four decades.

With the advent of educational policies in the European Higher Education Area, a new plan was implemented: Master's in Teaching Secondary Education, Vocational Training Education and Foreign Language Teaching (hereinafter, TSET Master's Degree). It was welcomed by various groups as a new opportunity for teacher education. This has a modular structure for postgraduate training, composed of 60 ECTS credits across three modules, delivered consecutively throughout an academic year.

Despite the expectations placed on this model, its potential to provide adequate preparation remains in question. The conditions under which it has been implemented do not appear to have been the most suitable for meeting the challenge. For instance, no attention has been paid to the fundamental principles required for teacher education to fulfil the need to "educate all adolescents", first to determine the goals or purposes (what for) of training; second what teachers need (what) in order to move effectively (...) and, thirdly, how to achieve this goal" (Valdés et al., 2015, p. 257).

At present, proposals have been made to improve this master's degree, focusing on the access to the degree and minimum requirements for each of the specializations offered (Ministry of Education and Vocational Training, 2022). The aim of this study is to investigate the curricular conditions that are proven to be appropriate for the design of initial secondary teacher education in Spain, and may be applicable to other contexts in which there is a consecutive model of training.

METHOD

Context of the research

This study was specifically framed around the Master's Degree in Teacher Education at the University of Granada (Spain), which starts in many universities in the academic

year 2009-2010, and is characterized by having 19 specializations that are offered to students, which are classified into five subject areas (e.g. in Science and Technology there are specializations such as Biology and Geology, Mathematics, and Computer Science).

The curricular structure established for this degree (Order ECI/3858/2007, text consolidated on 26 December 2011), and specifically for the specializations of this master's degree - except for educational guidance, which has its own program - is composed of three modules with their corresponding subjects.

Thus, a modular structure for postgraduate training is adopted, based of 60 ECTS credits across three modules, delivered consecutively throughout an academic year.

- "Generic" module of 12 ECTS, made up of three main subjects. The contents of these subjects refer to different areas of knowledge of Educational Sciences: psychology, pedagogy, sociology of education, theory and history of education.
- "Specific" is the one with the greatest number of credits (24 ECTS) and is made up of three subjects, the contents of which refer to the various areas of knowledge (specialties) of the degree that provides access and corresponds to the specialty of the master's degree.
- "Practicum" of 16 ECTS is established in two subjects: Teaching practice (10 ECTS) and the master's thesis (6 ECTS).
- For the remaining 8 ECTS, the Ministry of Education allows universities to choose their distribution, which has led to a wide variety of proposals (Benarroch and APICE members 2011), either in subjects of free configuration, or of the various modules according to the priority of each university.

The regulations set out the requirements for the verification of degrees, which deal with the name, requirements for access to the master's degree and certain curricular elements such as general competences and their curricular structure in accordance with the number of credits that each of the modules must contain, and the autonomy for their planning. The rest of the elements that fall within the framework of the design of the degrees (e.g., training principles, objectives, or methodological resources) are specified in the corresponding degree's verification reports in accordance with the regulations relating to this educational level at the university in question. Some works have highlighted the need to inquire the way in which the curricular design of this training has been established following as a framework the model verified for this purpose (Escudero et al., 2019). For this reason, we take these curricular elements as units of analysis, trying to find out what should characterize them.

Participants

We employed intentional sampling strategies to select information-rich cases.

The context is therefore Spanish at the national level regarding the theoretical framework (experts in initial training representative of the Spanish university) and

provincial at the practical level (Secondary Education Centers in the province of Granada) and teacher education (TSET Master's Degree of the University of Granada):

The research was conducted from the viewpoint of five scholars of teacher education in the national context with an established teaching and research career. They were selected according to expert sampling criteria (Signh, 2007), including demonstrable experience and recognition in the field of initial teacher education. We used the definition of expert as people "who are able to provide reliable assessments of a problem in question and, at the same time, make recommendations based on a maximum level of competence" (Mengual, 2011, p.158). To address our conception of expert, the analytically relevant variables were (Table 1): i) Demonstrated professional career as a teacher in the field of teacher education; ii) relevant contribution with their scientific production to the field of initial teacher education, and; iii) lectures, courses, seminars on their field of specialization in the area of teacher education.

Table 1
Professional characteristics of the experts interviewed

Criteria	1	2	3	4	5
Experience (years)	42	42	26	33	24
Experience (years)	Participant in the design of teacher training programs.	------	Coordination of CAP and current teaching in master's Teacher Education	Participation in the experimental design of Secondary School teacher training. Principal for more than twenty years of the master's degree in Teacher Education.	Teaching experience in the master's degree in Teacher Education.
Lectures, courses, seminars	Teacher training and professional development	University teaching, Internships.	Initial teacher training, teacher professional development and Practicum.	Adult Education, Training for Work and personal and social development, and Vocational Training.	University and secondary teacher training and pedagogical epistemology.
Others	Research Group Coordinator	Research Group Coordinator	Vice-rectorate for Quality Assurance of the University of Granada and Vice-Deanship of Practicum.	Research Group Coordinator	------

Professional practice was explored by interviewing secondary school teachers with long and medium-term professional experience. The teachers were considered by the members of the Education Inspectorate the best informants because they are active, accessible, and participative. Furthermore, we define a set of analytically relevant

variables that represent the heterogeneity of the group, and which have been highlighted in the literature as variables of interest for the subject matter addressed (Table 2).

Table 2
Teachers participating in the interviews

Initial Teacher Training	Education level	Speciality field	Teaching experience	Gender	Interview
GBE					Teach5
		Mathematics	37	Male	Teach6
		Geography and History	31	Male	Teach4
PAC	CSE	French	16	Female	Teach8
		Geography and History	15	Male	Teach3
	CSE & High School	Geography and History	22	Male	Teach1
		Mathematics	43	Male	Teach7
		Mathematics	17	Male	Teach12
		Philosophy	33	Male	Teach11
No previous training	VT	Personal image consulting and processes	15	Female	Teach2
	CSE & VT	Administration and Management	26	Male	Teach10
	CSE & High School	Mathematics	25	Male	Teach13

Note: GBE= General basic education; PAC=Pedagogical Aptitude Course; CSE=Compulsory Secondary Education; VT=Vocational Training.

Participant selection was based on two methods: purposive sampling of the highlighted case type and criterion-based sampling.

Initial training was examined following a purposeful sample (McMillan and Schumacher 2011), with potential informants being principals characterized by their teaching experience on the master's course, and their professional career in Secondary Education (Gest1) or Universality (Gest2).

Proposals submitted by master students were also taken into account (Stud001,...). We invited all the population to participate, taking the specialties as a means of access. 178 students participated. 48.4% women and 51.6% men, most of them graduated in the lastfive years in up to 41 different degrees, predominantly in Arts and Humanities (36.3%), and Social and Legal Sciences (35.3%). They were between 21 and 25 years of

age (70.5%) and had certain level of teaching experience (71.6%). The participants always expressed their agreement with the process and the way in which the results are visualized (credibility).

Data collection and analysis procedure

To gather student input, we used the following open-ended questionnaire (Martín-Romera et al., 2021): "Suggest measures to improve the master's degree". This was completed after the end of the practicum periods. This questionnaire tries to collect the evaluation of the pedagogical training in the master's degree, in three aspects: evaluation of the pedagogical knowledge to be a secondary school teacher, teaching competencies developed in the master's degree and proposals for improvement for the master's degree. A content analysis of this question showed us proposals referring to the elements of the master's degree programs, so we considered including their analysis in this work.

For the rest of the agents, the qualitative interview was conducted according to the degree of structuring and specific applications (McMillan and Schumacher, 2011). We selected the guided or semi-structured interview, where the questions were pre-determined without a rigid and closed structure. The interview guide tried to collect the opinions and assessments of the interviewees on elements that they consider desirable in a teacher training plan. The interview began with a general question: "In your opinion, what conditions do you think initial teacher education should fulfil to contribute to the pedagogical professionalisation of future teachers (in the sense that there are teaching competences to be acquired and therefore valued)?". During the interview, emerged questions were asked about the following curricular elements: principles, objectives, curriculum, planning, methodologies, training agents, and evaluation. The questions that probed desirable elements were the following:

- In your opinion, when and how should the training be developed? There are several formulas for developing training (*MENTION: Specific itinerary through subjects that can be taken in the university career/ A specific career as a secondary school teacher (similar to teacher training)/ Postgraduate master's degree of at least one year (currently 2 years)/ Training process after entering the profession (first years of teaching)*), what is your opinion on this matter? Can you evaluate them?
- - In order to develop an initial pedagogical training, what should characterize the planning (*what should the planning be based on? How should the master's degree be structured (subjects, professional areas, etc.)? Is the consistency between elements relevant? Taking into account later stages of the profession (initiation to teaching, professional development)?Would you highlight flexibility as an important aspect to meet the training needs? Interdisciplinarity/collaboration between different departments and areas*)?
- In terms of methodological processes, which ones do you think are the most appropriate?
- Regarding resources, in what spaces should the training take place? With what material resources? What type of trainers should be involved in the initial pedagogical training? What requirements should the trainers meet? What training

should they have? On what aspects? Would you require experience? In what? How should the trainers be selected (*pedagogical disciplinary training/teaching experience/knowledge in secondary education/educational research and innovation*)?

We used the Content Analysis procedure inspired by the work of Miles et al. (2014), addressed in four interrelated phases: 1. Data collection; 2. Reducing data by identifying and labelling units of meaning (in paragraphs, sentences or words) using a set of categories previously defined from the literature (e.g., Darling Hammond et al., 2017; Escudero et al., 2019) which was enriched by the contributions of the practice (Table 3); 3. Arrangement and transformation of data for interpretation, consisting of meaning using examples of recording units, and frequency of categories; 4. Obtaining results through comparison and contextualization of units of meaning, and drawing conclusions by integrating the results into broader theoretical and empirical frameworks.

Table 3
Category system

Principles	Pedagogical foundations or theoretical assumptions that should guide the training.
Planning	References (criteria, professional profile, etc.) and characteristics of the training design (coherence, flexibility, etc.), and/or academic and temporal structure to be given to the contents and subjects.
Objectives	Purposes to be addressed.
Curriculum	Theoretical and practical content that should be integrated, and the weighting of each of these.
Methodological processes	Appropriate teaching methods, strategies and techniques to develop the training.
Training agents	Professionals who should intervene, including types and requirements.

The stability in the categorization process was analyzed by means of a validation process consisting of comparing the coding of the material from two researchers, analyzing the stability of two categorizations of the material after a period of one month. The percentage of agreement obtained for the first categorization was 89%, and 91% for the second.

FINDINGS

The results, in terms of frequency data, are displayed in Table 4. We present the most significant results regarding the proposals offered by the interviewees indicated with their corresponding code in brackets. More in detail, compared results of provided frequencies run by each analysis category and subcategory agent are presented.

Table 4
Frequency of subcategories per element and agent

Categories (codes)	Students	Teachers	Principals	Experts
TRAINING PRINCIPLES	45 (42)*	42 (10)	21 (2)	33 (5)
Significant relations (Univ_cent)	20 (20)	13 (6)	4 (2)	5 (5)
Transfer of knowledge (Trans_know)	15 (15)	14 (7)	10 (2)	9 (4)
Leading by example (Predi_ej)	9 (9)	10 (6)	3 (1)	8 (3)
Pedagogical professionalization (Prof_pedag)	1 (1)	5 (3)	4 (2)	11 (5)
STRUCTURAL MODEL	3 (3)	28 (10)	6 (2)	17 (5)
"On the same plate"(Integ)	0	11 (6)	1 (1)	9 (5)
First disciplinary, then pedagogical, but more (Consec)	2 (2)	9 (6)	4 (2)	7 (5)
PrIR model (PrIR)	1 (1)	8 (5)	1 (1)	1 (1)
PLANNING	88 (80)	12 (6)	8 (2)	20 (5)
Selection of practical contents (Content_prac)	19 (19)	7 (5)	2 (1)	5 (3)
Integrated and interdisciplinary proposal (Prop_integ)	17 (17)	4 (4)	2 (2)	10 (3)
Practical component as axis (Comp_pract)	0	0	2 (2)	4 (2)
Coherence (Coh_curric)	52 (52)	1 (1)	2 (2)	1 (1)
OBJECTIVES	6 (6)	26 (10)	9 (2)	22 (5)
Creating mentality (Ment_inic)	3 (3)	12 (5)	2 (2)	7 (5)
Training to continue learning and improving (Cap)	1 (1)	7 (5)	2 (2)	5 (4)
Knowing how to teach (Sab_ens)	2 (2)	2 (2)	1 (1)	3 (3)
Attitudes and tools to reflect (Act_herr_reflex)	0	1 (1)	2 (2)	3 (2)
Ability to manage the knowledge skein (know_prof)	0	4 (4)	2 (2)	4 (3)
CURRICULUM	189 (170)	92 (12)	20 (2)	30 (5)
Increased psycho-pedagogical training (Form_psic)	18 (18)	25 (9)	6 (2)	9 (3)
Insistence on specific didactics (Did_eng)	68 (63)	10 (5)	3 (2)	4 (3)
Practical and useful (Form_pedag_pract)	90 (82)	26 (9)	2 (2)	3 (3)
Personal-emotional and ethics (Femoc)	3 (3)	9 (7)	3 (1)	4 (4)
Research and innovation (Inv_innov)	8 (8)	5 (2)	2 (1)	3 (3)
Guidance and Tutorial Action (Or_ac_tu)	0	7 (5)	2 (1)	2 (1)
Integrate optional content (Interg_content)	2 (2)	10 (4)	2(1)	5 (3)
METHODOLOGICAL PROCESSES	67 (66)	42 (9)	15 (2)	16 (5)
Active and participatory (Met_act)	42 (38)	12 (7)	4 (2)	5 (3)
Real-life professional practice situations (Sit_real)	3 (3)	16 (9)	3 (2)	4 (2)
TRAINING AGENTS	115 (109)	47 (13)	19 (2)	24 (5)
Academic and professional teachers (Prof_ac_prof)	22 (22)	1 (1)	2(2)	6 (5)
Other professionals (Other_prof)	5 (5)	3 (2)	4 (2)	2 (2)
Experience and knowledge about Secondary Education (Exper_know)	15 (15)	9 (13)	2 (1)	6 (4)
Specific and updated pedagogical knowledge (know_pedag)	14 (14)	7 (5)	2 (1)	7 (5)
Didactic transposition (Trasp_didac)	7 (7)	7 (5)	6 (2)	2 (2)
Interest in being a good teacher (Compro)	47 (47)	9 (2)	1 (1)	1 (1)
Recognition for good practices (Bpract)	0	3 (2)	2 (2)	0
Pedagogical Qualities (Quali)	5 (5)	8 (5)	0	0

Note: *= number of participants in parentheses.

Training principles

All agents alluded to this category (141 times). They understand the need for the different areas involved in training to "assume the pedagogical professionalization of this profession" (Prof_pedag), which involves recognizing that there are skills that must

be learned and that go beyond exclusively knowing how to teach the discipline. “A significant interaction between the fundamental contributions of Educational Sciences and the most relevant problems of teaching practice” (Univ_cent) is evident: "it is necessary to select the theoretical knowledge that influences, affects or forms part of the professional knowledge"(Princ1). In many cases, this training is conceived as being far removed from the professional reality and scientific culture from which the students come.

To this end, they believe it is necessary to "establish significant relationships between universities and secondary schools" (Univ_centr), stating that these should be assumed by the agents involved along with "greater and better links between professionals in both contexts."

They highlight the distance between the aspects in which future teachers are trained and those that are of most concern to beginners. They explain that most university teachers do not know the reality of the school and, therefore, do not sufficiently connect this with their teaching activity, all too often transmitting a distorted knowledge of the school: "I would have liked them to stick to the reality of the classrooms and not how we would have liked it to be" (Stud177). In relation to this, they highlight the "need to transfer the body of pedagogical knowledge that has been created around the didactics of updated disciplines” (Trans_know), through research to the secondary classrooms, the main transmission bridge being the trainers, since in many cases there is no consolidated didactic knowledge from specific departments.

Planning

This issue highlighted 131 times by the participants. They consider the "selection and programming of content that considers the knowledge of the profession" (Content_prac) to be important, opening up a greater space for the knowledge of professionals in the curriculum. They believe that this requires the involvement of teachers in coordination teams (Teach13), and curricular coordination structures that are coherent with the needs derived from practice "so that there was a line of work that meant reflecting on well, these kids, when they're going to be teachers they're going to be faced with a classroom, what is it that, we would say, they're going to need the most?" (Expert1), and their professional culture, and not the "division of powers between university departments" (Teach10).

In coherence with the above, they indicate that a "sequencing of the contents closer to the disciplinary culture from which the student comes", would favor the understanding and acquisition of pedagogical knowledge, and its assimilation and valuation. In this sense, teacher education must advance in the achievement of a curriculum that allows the combination of the disciplines towards" structures with a higher level of integration" (Prop_integ), with an attempt to faithfully represent how the integrated knowledge is presented in teaching practice.

They understand the need to "revalue practicum" (Expert3), "where the fundamental axis is the practical component" (Expert5), in a way that breaks with the current sequential structure.

They believe that it is necessary to have "coherence in the contents taught within the same subject and between different subjects and/or modules" (Coh_curric), and they point out that, at the academic level, there is a certain disorganization in the subjects of the master's degree "resulting in the fact that at the end of the master's the knowledge acquired varies significantly depending on who has taught the subject" (Est055).

Objectives

63 times were made to this component, alluding to objectives aimed at "developing skills and attitudes closely related to teaching identity". They consider that teacher education implies that the student "creates an initial mentality about the profession"(Ment_inic): "starting to decide what it means to be a teacher, why I'm there, what I want, what I imagine, what I think I'm going to do, what I'm going to do with the students, and so on" (Expert1), and "reflect, in practice, on your professional orientation and your qualities in order to carry out the profession", that "allows him/her to self-evaluate for the profession" (Princ1).

Another group of proposals (15) are focused on "providing training that allows you to continue learning and improving professionally" (Capac), demanding training that provides the necessary tools and the means to do so. It should "project on future teachers a more realistic vision of the teaching career" (Teach 4), so that they are aware that changes in education are slow and require time, which prevents possible difficult stages in the profession. Related to the above, teachers, managers, and experts indicate that one of the aspects that they will most need to face the demands of their profession — particularly in the beginning — "is the ability to manage this skein of knowledge that comes with being a teacher" (know_prof) (Expert1). Acquiring this capacity requires the development of a retrospective reflection that allows them to analyze teaching practice and to learn (Act_herr_reflex).

They must "learn that it is important to transform their content knowledge into something attractive and that, currently, they have within their reach a multitude of means and tools that allow it" (Sab_ens), and they must know how to "control the different factors that influence a teaching-learning process" (Teach6).

Curriculum

This was the most referenced category (331 times). They warn about the difficulty of deciding what a teacher needs to know. Although, undoubtedly, they will have to know about what they are going to work with, this is something that is not guaranteed, as it is a profession that works with "other objects of knowledge" (Did_esp) (Expert1) for which they do not have specific training.

They demand useful, innovative, updated, and interesting content for practicing the profession, and a greater depth and sequencing that responds, "to the process that students will have to put into practice during the practicum" (Stud213). It is worth noting the number of times (29) to: "Less theoretical content (general part) and more practicum" (Form_pedag_pract) (Est144).

They demand more psycho-pedagogical content linked to the reality of the profession (Form_psic): " It has to be deeply linked with the material you are dealing with, which you have in your hands [...]" (Teach8). They believe it is necessary to increase training on optional contents in the common curriculum as a school organization (Interg_content) and to include compulsory contents on guidance and tutorial action (Or_ac_tut) or professional deontology (Femoc), indicating that the teaching profession lacks the necessary regulation for the development of an ethically responsible teaching action: "[...] many people are taking advantage of everything that an institution means, such as educational institutions, which are not very regulated, with a lack of preparation of the materials, of the contents" (Expert2). On research and innovation (Inv_innov) in teaching, they propose to include it at the beginning of the training and as transversal content.

Methodological processes

The participants mentioned 140 times this issue. They emphasize that principles of any methodological approach should include: "the student as the centre of the action", "group work" and starting from the analysis of real problems "integrating experience, action and context"(Sit_real).

In the perceived success and acceptance of the methodological processes by the students, the potential of the method to convert the knowledge of the subject — in this case the pedagogical — into one that can be put into practice (Proc_met) seems to be evident: "If not, you will have their rejection of that theoretical knowledge, and until they realize that part of that pedagogical knowledge can be useful to them, you will have lost up to 50% of these students along the way, and they will continue seeing pedagogy and the pedagogues as an abstract and unnecessary part of the educational knowledge system" (Princ1).

In relation to this, they consider that "methodologies that foster changes in the conceptions that they have about teaching should be developed. It is the various methodologies, primarily active, which place the trust and responsibility in the students themselves" (Met_act) (Princ2): "I want teachers here, I have fifteen places in competitions that I'm going to award at the end of the term"(Prof4). Among the most outstanding modalities, we can find the external internships (Apr_prof), considered fundamental so that "the pedagogical knowledge is reflected in practice, the student can recognize it when doing the internship" (Princ1), particularly developed from the beginning of the training along with supervision seminars that favor such recognition.

Although they pay attention to the conditions in which practicum takes place, these lack systematic reflection, and "there are issues that can only be learned in practice or with someone who comes from practice and tells you about it" (Princ1), and they prefer "dynamics that involve bringing to the university context resources of practice, fostering knowledge of the profession" (Proc_met), providing a starting point for knowledge about the context in which they will develop it, and in which they will be explored in more depth, readapted, and reflected upon.

They highlight the strengths of "methods for personal development" (Met_des), to address certain characteristics of the students of the master's degree aimed at improving autonomy and self-confidence and understand that the development of these aspects offers better opportunities for learning: "the use of tools that promote the questioning of the way of seeing a phenomenon, specifically the teaching of Mathematics"(Teach7), applying the theme of humor "to situate a pedagogical problem".

Training agents

This issue was addressed 205 times by the participants. They consider the intervention of professionals from both the university and professional fields to be important (Prof_ac_prof). Students and teachers are more inclined towards the latter, questioning the knowledge that they have about the profession (Exper_conoc). They say that training posts are there to be occupied by teaching staff with certain requirements and "not to find positions for the members of the department".

They declare the need for trainers to "possess specific and up-to-date pedagogical knowledge" (Conoc_pedag), understanding that this goes beyond the mere transmission of information on the subject and is characterized by a broad list of teaching functions linked to a teaching model centered on learning: "Certain subjects centered only on pure, raw pedagogy and the presentation of educational laws are not very useful when they are not accompanied by the relaying of experiences" (Stud016).

They understand that what defines good trainers is their "ability to convert knowledge of the subject (in this case, pedagogical) into one that is understandable to students" (Trasp_didac). "[...] the teachers who believe in training should teach because they will be the ones who try to seek such integration"(Princ1). This didactic transposition involves having professional experience or knowledge about Secondary Education (Exper_know), allowing them to be aware of what they will face in their professional future, which are "those who are in contact with the reality of the schools" (Stud014). They consider the figures of associate professor or university teachers with Secondary teaching experience to be very useful in this regard (Other_prof).

According to the experts, there is a need for "more pedagogues who know mathematics or mathematicians who know about pedagogy, and who are able to integrate both" (Expert2) (know_pedag), and "technology" (Expert4). Furthermore, they should know "what is this process of appropriation, of dialogical construction of knowledge in the teaching profession", considering that "their methodologies would change strongly, but the essential step is this understanding" (Expert5).

Furthermore, they must be recognized for their good practice (Bpract), an aspect dealt with from two perspectives: "[...] professionals recognized for their good practice are brought to initial training to tell us about some experience that is really significant"(Princ1) and good secondary school teachers are selected to take on the task of trainers in the faculties, identified by certain pedagogical qualities (Cuali): "esteemed by their students, who taught well [...]" (Princ2) "seriousness" (Stud132), "with an acceptable ego" (Stud032), and coherent in their actions, thus serving as motivating examples to students.

"We cannot expect to develop good teachers without an interest in becoming a good teacher" (Compro) (Princ1), understanding that this attitude will influence the creation of positive teaching conceptions and identities in students: "if they're going to teach us to be teachers, let them start by being good teachers themselves" (Stud091).

DISCUSSION AND CONCLUSIONS

The aim of this study was to define the curricular conditions that secondary education teacher training in Spain must meet to contribute to the pedagogical professionalization of future teachers, accessing the meanings shared by the agents involved.

The actors show common preferences for most of the elements that are desirable for the purpose of developing realistic and adjusted ideologies about the profession and the recognition of the importance of possessing teaching competences that go beyond the mastery of the discipline. The most frequently mentioned include the need to achieve a transfer of knowledge from teaching practice to training. As Darling-Hammond et al., (2017) point out, it is essential to acquire theoretical knowledge that is connected to the reality of schools. This leads to the so-called isomorphism principle, where previously acquired learning is transmitted in the classroom (Colognesi et al., 2020; Darling-Hammond et al., 2017; Güçlü Yılmaz, 2021; Vikan et al., 2019). This implies the development of a set of curriculum design and development conditions such as the establishment of meaningful relationships between responsible institutions (Nóvoa, 2019). As Tardif (2016) points out, there is a considerable distance between the two institutions when the university provides training that is not relevant for students because they consider that it does not respond to the realities of education. Equally relevant is the selection of teaching practice content, particularly psycho-pedagogical and professional content with the necessary requirements to make the didactic transposition and thus foster recognition of the usefulness of having pedagogical training. In this way, an initial teaching mentality can be developed.

As we can see, the participants advocate for elements such as meaningful relationships between university institutions, secondary schools and trainers who know how to transfer real practical knowledge to training, showing the reality of the classroom and fostering the necessary teaching mentality in students, as Day (2020) points out in his research. We understand that implementing these approaches will allow us to overcome the dichotomy between disciplinary and pedagogical knowledge from the current model (Novóa, 2019).

The methodological processes to be implemented, the curriculum to be developed, the assessment and even the selection of students are also inconsistent elements, with all types of profiles entering the profession without meeting the minimum requirements (Escudero et al., 2019), leading to overcrowded classrooms.

The results show a lack of proposals regarding the basis for the curricular design of the training. The principles and objectives to be addressed, have no clear and common criteria in this respect. From the perceptions analyzed, it can be deduced that the implementation of programs with this professionalization purpose requires the creation of shared meanings and beliefs in the agents involved regarding the teaching profile to be developed. For this reason, universities must connect with the educational reality,

creating new spaces that promote a culture of collaboration toward a common goal by creating shared dynamics that allow the necessary culture to be constructed, which can be established in the curriculum to answer the question: what do future teachers need? Once the necessary commitment has been achieved, let us begin rethinking curriculum design and development in favor of true pedagogical professionalization. This requires effort and political will at all levels (Day, 2020).

This study is based on the perceptions of the actors involved and therefore does not provide empirical conclusions regarding the impact of the suggested conditions on the culture of master's programs. Despite this fact, the study constitutes evidence about the way teaching training is perceived in a context dominated by a consecutive model, that can be extrapolated to other national and European contexts, where this type of training is developed. Future studies should aim to apply and/or analyze the conditions indicated in the form of more specific proposals.

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