



Defining content for field-based coursework: Contrasting the perspectives of secondary preservice teachers and their teacher preparation curricula

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ABSTRACT

The current study examined changes and continuities in how 11 secondary teacher preparation programs and 743 preservice teachers conceptualized the content and sequence of field-based teacher preparation. Although curricula and candidates differed regarding the knowledge each deemed as most relevant for field-based preparation, they largely agreed on the types of learning activities considered as most meaningful for the acquisition of that knowledge base. Possible explanations for these discrepancies and continuities are discussed.

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1. Introduction

Situating preservice teachers' learning in K-12 schools is widely considered the most potent curricular activity within teacher preparation, particularly if it is well structured and aligned with other program components (Clift & Brady, 2005; Darling-Hammond, Chung, & Frelow, 2002; Guyton & McIntyre, 1990; McIntyre, Byrd, & Foxx, 1996; Wilson, Floden, & Ferrini-Mundy, 2002). Strengthening the connections between initial teacher preparation and the work of teachers has been a common response to criticisms regarding the quality of teacher education graduates. In some parts of the world, like in Great Britain, this has entailed developing a school-based teacher preparation model (Stephens, Tønnessen, & Kyriacou, 2004). In other countries, like in the United States, innovative university-school partnerships have been developed seeking to simultaneously improve the quality of schools and preservice preparation (Holmes Group, 1986; Zeichner, 2010). Yet in other countries, such as Argentina, Turkey and Singapore, this response has entailed increasing the number of courses requiring experiences in K-12

schools (Bullough et al., 2002; Kavak & Baskan, 2009; Korthagen & Kessels, 1999; Mau, 1997; Pogr , Allevato, & Gawiansky, 2004).

In Chile, an increase in field-based preparation was the major feature of new curricula implemented by 17 universities in the context of the Ministry of Education's Program for Strengthening Initial Teacher Preparation (1997–2002). Across these 17 institutions, courses requiring candidates to work in schools began earlier and their proportion increased from about 8% to an average of 20% of the curriculum; ranging between 8% and 36% (Avalos, 2003). This variability in the number of field-based courses reflects the fact that in Chile teacher education is unregulated by the state. In addition, it may also reflect the diversity of perspectives described in the international literature with respect to how this curricular component should be best organized in terms of content, sequence, and structure (Clift & Brady, 2005; Cochran-Smith, 1991). Although the educational value of field-based preparation is unquestioned, the quality of the learning opportunities offered through this component of the preservice curriculum has been a concern in Chile and elsewhere (Beca, Montt, Sotomayor, Garc a-Huidobro, & Walker, 2006; Bullough et al., 2002; Jim nez et al., 2005; Organization For Economic Cooperation and Development (OCDE) 2004; Zeichner, 2010).

In the current study we analyzed the field-based component designed by 11 secondary teacher preparation programs to determine the types of content knowledge candidates were expected to learn, the sequence in which content was organized and the learning

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activities. Additionally, we surveyed prospective teachers from those programs to ascertain the types of knowledge they were interested in developing from their participation in school-based coursework and the learning activities they deemed as most meaningful in those courses. To what extent do programs and candidates agree on what is the most relevant content to be learned through participation in K-12 schools? To what extent do programs and candidates agree on what types of learning activities will help them develop that knowledge base?

2. Related literature

2.1. Field-based coursework

From our analysis of the literature we identified three key interrelated aspects which are often considered when defining and sequencing the content for field-based courses: (a) assumptions about the theory–practice relationship, (b) relative emphasis on procedural, propositional, and dispositional knowledge for teaching, and (c) conceptions about learning to teach in school settings. In what follows, each one of these will be briefly described.

2.1.1. Theory–practice relationship

Korthagen and Kessels (1999) have persuasively argued that the prevailing assumption structuring teacher preparation has been that the theoretical domain precedes the practical domain. Consistent with this assumption, preservice teachers are first required to complete campus-based coursework that provides the theoretical foundations for practice. In other words, learning to teach involves learning how to transfer knowledge developed at the university to the K-12 schools and classrooms (Korthagen, Loughran, & Russell, 2006). This perspective was evidenced in the fact that, prior to the 1997–2002 curricular reform, Chilean preservice teachers were placed in schools only during the final semester of their four or five-year preparation program.

The curricular changes that led to the inclusion of field experiences prior to student teaching, however, do not appear to reflect a change in perspective (Pogré et al., 2004). Our analysis of the field-based curriculum of the eleven preparation programs participating in the current study showed a common pattern in the sequence of content and tasks addressed at different phases (Contreras, *in press*). Briefly, the main task requested in the initial field experiences (typically linked to concurrent foundation courses offered within the first four semesters) involved observing students, teachers, and their interactions. In this phase, therefore, we posit that schools are represented as *texts* to be read through the conceptual frameworks discussed on campus-based courses. The high school classroom is a text that makes possible understanding theoretical texts used in the university classrooms. In the subsequent set of field-based courses (typically linked to concurrent method, school counseling, school administration or special education courses offered within the 5th and 9th semesters) schools are represented as a *context* that provides specific information needed for university-based course assignments involving a specific, procedural instructional task (e.g., planning an assessment or a class session). In Student Teaching (last semester) schools are represented as a *stage* where the skills and knowledge developed in the previous courses are to be performed in the processes of taking on the responsibility for pupils' learning. This sequence of metaphors for schools as sites for learning to teach, in our view, reflects the traditional “theory precedes practice” perspective.

Contreras, Rittershausen, Montecinos, Suzuki, and Solís (2008) showed that when the field-based curriculum for their one-year post-baccalaureate secondary program was structured around propositional knowledge (i.e., theories) teacher candidates came to

understand the theory–practice dialogue as an end in itself. As a consequence, often preservice teachers were using theory to judge how well school professionals and school life matched the prescriptions they derived from theory. On the other hand, when field-based courses were restructured in alignment with a new performance-based assessment, the focus of analysis shifted to the impact teachers and prospective teachers had on pupils' learning. Through this alternative approach, the theory–practice dialogue ceased to be an end. Instead, candidates came to understand that this dialogue was a possibility for understanding how to contextualize, implement, monitor, and interpret pupils' responses to teaching.

An alternative conceptualization of the theory–practice relationship seeks to connect campus and field-based work in ways that make possible the integration of theory and practice. This relationship assumes that learning to teach entails engaging in the tasks of teaching, allowing preservice teachers to reflect on their actions through theoretical frameworks that can be interrogated and refined. When the curriculum allows preservice teachers to go from practice to theory, conceptual frameworks are used to orient the analysis of the context for practice and of alternative ways to operate in that context (Edwards & Protheroe, 2003; Korthagen & Kessels, 1999). From this perspective, one would expect that throughout the sequence of courses schools would be represented as *stages* for preservice teachers' engagement with pupils and teachers; moving from a supporting to a leading teaching role with increased preparation.

2.1.2. Types of knowledge

A second factor considered when sequencing field experiences is the program's conceptual orientation and the types of dispositional, procedural, and propositional knowledge for teaching that are derived from a given orientation. For example, Feiman-Nemser (1990) distinguished between an academic orientation and a practical orientation, exemplifying how each proposes contrasting ways of defining the central goal of teacher preparation, the main types of knowledge to be developed, and the curricular experiences that foster teachers' learning. She noted that within an academic orientation the emphasis is on mastery of the subject matter to be taught and of subject matter pedagogy; knowledge that can be learned primarily through on-campus courses. Within the practical orientation, on the other hand, the knowledge base for teaching is understood as a mix between craft and technique, which is primarily developed through an experienced-based apprenticeship model.

Joram (2007) showed that preservice teachers and teacher educators largely disagreed on what was the most important knowledge candidates should be learning in their program. Whereas the majority of the candidates mentioned teaching skills, only a third of the professors and practicing teachers concurred that this was the main content to be learned. This focus on the “how to” of teaching, according to Joram, may explain why university-based instruction is less valued than field experiences. Her contention suggests that the main focus of fieldwork is the development of procedural knowledge. Fives and Buehl (2008) surveyed preservice teachers and practicing teachers to ascertain their beliefs about the knowledge necessary for, and unique to, teaching. These participants proposed that the knowledge base for teaching include: pedagogical knowledge, knowledge of children, content knowledge, management and organizational knowledge, and knowledge of self and other.

2.1.3. Approaches to learning to teach in schools

How programs organize field-based preparation is also a function of their perspectives on how learning to teach takes place in schools and the role of the cooperating teachers and peers in this process. Cochran-Smith (1991) described three approaches to fieldwork that illustrate this point. The Consonance Approach seeks

to place preservice teachers with cooperating teachers who can model what the program proposes as best practices. The second approach, Critical Dissonance, stresses the importance of creating opportunities for preservice teachers' uncovering of prevalent school practices that maintain structural inequities and developing the skills to build alternative practices. The third approach, Collaborative Resonance, seeks to prepare preservice teachers for critique by inquiring into practice in collaboration with classroom teachers engaged in reform oriented teaching and learning. It is likely that prospective teachers will mobilize contrasting beliefs about what ought to be learned, and how, when programs ask them to observe a model as opposed to when they are asked to engage in inquiry.

2.2. Prospective teachers' knowledge interests for fieldwork

The beliefs preservice teachers hold about knowledge and knowing influence their learning with respect to what and how they interpret the information encountered, how they judge the credibility of competing knowledge claims, and how they decide what knowledge is worth knowing (Joram, 2007; Joram & Gabriele, 1998; Wideen, Mayer-Smith, & Moon, 1998). Nespor (1987) noted that beliefs are particularly instrumental for making sense of ill-structured, complex environments, such as the classroom contexts in which preservice teachers work and learn. Addressing prospective teachers' beliefs, therefore, has increasingly become an important element of teacher education curricula. In the current paper we explore a rather scantily researched topic on preservice teacher's beliefs: the knowledge that they consider is worth developing as a result of their participation in a field-based course (i.e., what they are interested in learning from this curricular component). It has been suggested the knowledge interests defined by teacher candidates may have a significant impact on the conceptual changes that result from learning to teach in a school setting (Buitink, 2009; Joram, 2007).

Prior studies have shown that the learning goals candidates and student teachers define for their experiences in K-12 classrooms shift over time (Hollingsworth, 1989; Kowalchuk, 1999). Often, teacher candidates have first expressed an interest in developing classroom managerial routines, as they believe that these are a precondition to being able to focus on pupils' learning (Clift & Brady, 2005; Wilson et al., 2002). Kowalchuk (1999) reported changes in the knowledge interests defined by 37 art student teachers who began the semester wanting to learn about content and pupils but, as the semester progressed, their interest in learning about pupils declined while their interest in assessment increased. Prospective teachers, of course, are not monolithic in their beliefs about learning to teach in schools (Leavy, McSorley, & Boté, 2007; Stuart & Thurlow, 2000). From a two-year longitudinal study with five preservice teachers in the United States, Mueller and Skamp (2003) concluded that teacher candidates have diverse expectations about how they will learn to teach and that these expectations need to be discussed so concerns are addressed as early as possible. Additionally, they recommended that teacher educators find multiple ways of helping candidates become aware of, and experience, the theory–practice connection to disabuse their idea that they will learn to teach only in schools. Tang (2004), based on her qualitative case study with seven student teachers in Hong-Kong, argued that productive learning experiences result when student teachers have a strong teacher identity and a rich teaching repertoire that can be deployed in a context that appropriately mixes support with challenge. These characteristics interact in idiosyncratic ways requiring that teacher educators respond in a similarly variegated fashion to support professional development in all candidates. Based on data collected over

a ninth-month period from 14 preservice teachers, Hollingsworth (1989) has also suggested the need for flexibility in teacher education to account for differences in the entering beliefs of teacher candidates as well as in the school contexts in which they conduct their fieldwork.

Buitink (2009) examined the learning goals and evolving practical theories defined by eight student teachers of mathematics in a one year post-graduate teacher education program in the Netherlands which included a year in which they were employed as a teacher. The results highlight three distinct perceived learning goals: an emphasis on teaching efficiency, an emphasis on teaching effectiveness alongside efficiency, and an emphasis on learning to teach and the development of a practical theory of teaching. Some of these student teachers only exhibited an interest in getting through the day-to-day lessons, seeking direct feedback on how well they had performed. The majority, however, adopted an active approach as they sought feedback to enhance their learning process. By the end of the course, participants had developed a practical theory which integrated instructional, interactional, and contextual factors in teaching. In the practical theories developed, pupils' learning process was a key feature.

2.3. Summary and research questions

In summary, a review of the literature shows the complexities of reaching consensus on the most important knowledge preservice teachers should be learning from the field-based component of the preparation program. This complexity stems from differences on how teacher educators conceptualize learning to teach, a curriculum that supports that conceptualization, as well as from differences on how candidates understand this process. Moreover, what teacher educators may come to agree upon may be less relevant than what preservice teachers' believe regarding the knowledge they ought to be learning, as these beliefs orient them to consider or disregard information presented throughout their curricular experiences (Fives & Buehl, 2008). Notwithstanding these difficulties, examining alternative ways for structuring and sequencing this curricular component can help us understand why only in some cases changes in practices and beliefs are fostered by field-based coursework (Borko, 2004; Clift & Brady, 2005). Additionally, knowing the content and processes prospective teachers expect to learn through their work in schools can guide the planning of a field-based curriculum that is teacher-learner centered (Korthagen et al., 2006).

2.3.1. Research questions

1. What knowledge are preservice teachers interested in developing from field-based coursework and what activities are perceived as most significant for learning to teach? Do these knowledge interests and activities differ among participants completing the different phases of this teacher preparation component?
2. What is the content knowledge addressed by the general objectives defined for the field-based component of the curricula and what, according to teacher candidates, are the main activities they will perform to achieve these objectives? Are there differences among field-based preparation phases with respect to the types of content knowledge and activities addressed?
3. To what extent do the knowledge interests of preservice teachers and the knowledge addressed by curricula coincide? To what extent do the activities preservice teachers perceive as most significant represent the activities curricula expects them to perform in the schools?

3. Method

3.1. Initial teacher education in Chile

In Chile the preparation of teachers is the responsibility of institutions of higher education. Even though the teacher education curriculum is unregulated by the state, there is a law requiring programs to be accredited by private agencies. The accreditation criteria define a structure for organizing the content of the curriculum in four areas (*Comisión Nacional de Acreditación de Pregrado* (CNAP), 2007). The Specialty Area represents courses associated with content addressed by the national PK-12 curricular framework and pedagogical content knowledge. The Professional Preparation Area includes courses about pupil learning and development, assessment, curriculum, and related pedagogical issues. The General Preparation Area refers to courses related to the social foundations of education and courses specific to an institution's mission. The last area is Field-based Preparation, which includes a sequence of curricular activities that culminate with the student teaching phase.

Programs have autonomy to decide the weight of each of these preparation areas. The norm is to structure secondary teacher preparation as a five-year program in which pedagogical and disciplinary preparation are concurrent. This is reflected in this study as six of the participating universities structured their programs into ten semesters of coursework and only one as a one year post-baccalaureate program.

3.2. The structure of the field-based preparation area

The secondary programs participating in this study were quite diverse in the number of courses required as part of the field-based component; ranging from 4% (or 2 courses) to 18% (or eight courses) of the curriculum. At two universities, school-based coursework was required every semester, beginning the fourth semester (eight courses). Another three required one field-based course per year, beginning the fourth or fifth semester (three courses). One university required a field-based course in each of the last two semesters. The university with the one year post-baccalaureate program required one field-based course each semester. Collectively, participating programs offered 44 field-based courses.

3.2.1. Phases in field-based preparation

For analysis purposes, the course sequence offered by each program was divided into three phases. Criteria used to create these phases included the semester in which a course was placed and whether it was associated with a concurrent method course. The Initial phase involved courses required in the first four semesters that were not linked to a method course. If they were linked or they were located in the 5th through 9th semester, these were coded as Intermediate phase. Courses placed in the last semester, in all cases, involved the Student Teaching phase.

3.2.2. Preservice teachers

Using a cross sectional survey design, data were obtained from 743 secondary preservice teachers enrolled in one of 42 field-based courses surveyed at the beginning of each semester of the 2008 academic year.² The median number of participants per course was 18, ranging from 3 (Student Teaching phase in a Mathematics Education program) to 33 (Initial phase in

a Mathematics Education program). Women represented 67% of the participants, with Language Arts majors representing 35%, Science majors 33%, and Mathematics majors 32%. According to the course in which they were surveyed, the distribution of these preservice teachers by phase was: 43% Initial, 40% Intermediate, and 17% Student Teaching.

3.3. Data sources

3.3.1. Beginning of the semester field experience questionnaire

A self-report questionnaire was used to gather data on prospective teachers' beliefs about learning to teach in field-based courses and their understandings of the curricular expectations and structures for these courses. Items were written after consulting relevant literature and reviewing program documentation (i.e., Guyton & Byrd, 2000; McIntyre et al., 1996; Wilson et al., 2002). A first draft was shared with faculty from each program, and adjustments were made based on their suggestions. The second draft was piloted with three samples of teacher candidates from the researchers' institutions. The results of the pilot were used to write the final version of the questionnaire which contained one open-ended and 24 closed-ended items.³ For the current study we analyzed responses to the following items:

1. Open-ended item: "Please write down the three things you are most interested in learning in this course".
2. Closed-ended item: "From the following list, select the sources of knowledge and activities you consider as the most meaningful for your preparation to become a teacher".
3. Closed-ended item: "From the following list, select the main task you are expected to perform during the time you spend in the schools".
4. Demographic information.

3.3.1.1. Coding scheme and procedures

3.3.1.1.1. Knowledge interests. Codes were developed to identify major knowledge categories, and when needed, subcategories of responses to the open-ended item requesting that candidates identified what they were interested in learning from this field-based course. Codes were generated inductively by two teams of two researchers who first read all responses. Next, the codes generated by each team were compared and refined, and grouped into six categories, with three of them encompassing subcategories. These new codes were used by the two teams to independently recode all responses. The two main topics identified by each candidate were coded, for a total of 1382 units of analysis. Later, code assignment was compared across teams, resolving disagreements found on 70 responses. Through this process, each response was coded a minimum of three times. Table 1 provides a description of each category and subcategory, with examples drawn from the objectives stated in the syllabi reviewed and candidates' responses.

3.3.1.1.2. Most meaningful activities for learning to teach. From the close-ended item that provided a list of 11 types of activities, responses were grouped into five categories.

² At one university we were unable to collect, in the time frame required, data from student teachers. At another university, we were unable to collect data from candidates taking a course in the Intermediate phase.

³ A copy of the questionnaire, in Spanish, is available from the first author. Given space limitations, here we only mention the topics surveyed: (a) vocational characteristics; (b) expectations for the field-based course in terms of learning goals, types of tasks required, and interactions with school professionals and university professors; (c) characteristics of the school and classroom placement; (d) appraisal of the sources of knowledge that would be most helpful in performing the required tasks; (e) perceptions regarding their level of preparation to perform tasks codified in Chile's Standards for Initial Teacher Preparation; and (f) demographic information.

Table 1

Coding scheme with examples of objectives stated in the syllabus and candidates' responses.

Knowledge categories and subcategories	Examples of course objectives	Examples of candidates' learning Goals
I. Classrooms Processes and Interactions	Description: Knowledge of instructional processes and social–pedagogical relations that occur in the classroom.	
a. Instructional procedures	Develop competencies for planning, implementing, and evaluating a learning unit in the discipline and in orientation.	Acquire knowledge related to my sector, mathematic. Elaborate didactic materials according to the needs and context of the group of students. Manage groups that present behavioral problems.
b. Classroom management		How to establish relationships with students so they feel good about my presence in the classroom.
c. Pupils' motivation and learning	Adopt the role of an educator as a mediator of students' meaningful learning.	Teach physics so all students can learn, using didactic examples that will let them see natural phenomena. How to motivate students to develop a taste for reading and literature.
II. Actors	Description: Knowledge of pupils' characteristics and behaviors, the teaching profession, and themselves as developing professional.	
a. Pupils		Involve myself with youth, who are very young, knowing their concerns, strengths, and weaknesses.
b. Teachers' roles	Recognize the diversity of roles and functions of the teaching profession.	The real meaning of what it means to be a teacher, as a professional who has a social formative role.
c. Candidates' personal and professional development	Reflect before and after teaching as a strategy for continuous feedback of their pedagogical practices.	Have a better understanding of my strengths and weaknesses as a teacher.
	Understand the elements that constitute their personal identity, recognizing facilitative personal factors.	Try to reaffirm my vocation for teaching. Acquire personality to speak in public.
III. School Context and Educational System	Description: Knowledge about schools and its administration, getting to know educational contexts different from their own 9–12 experiences, educational policies, working with others outside the classroom, and school-wide topics related to the improvement of educational quality.	
a. School functioning and improvement	Develop educational improvement projects that are coherent with the needs that emerged from the analysis.	How schools function at the institutional level.
b. Educational system and policies	Develop critical-reflective competencies related to the educational system and Special Educational Needs in schools.	Aspects of current educational policies.
c. Professional relations with teachers and parents	Value the personal and professional interactions that are produced in diverse contexts as a continuous source for learning about teachers' roles.	How to work together with parents and guardians.
d. School administration	Value educational administration as an efficient instrument to modify and resolve management problems.	Aspects related to the administration of schools.
IV. Research	Description: Development of research skills or implementing a research study.	
	Research one's own and other's pedagogical practices to establish relationships and interpretations from the social context and the search for theoretical perspectives that support them.	Learn how to do classroom research to improve my practice.
V. Theory–practice	Description: The integration or application in schools of propositional knowledge developed in campus-based coursework	
	Relate the theoretical knowledge provided by the pedagogical and disciplinary areas with what is observed in the classrooms.	Know how to apply my theoretical knowledge to practice.
	Assume, integrally, the teacher role putting in practice the skills and competencies acquired during initial preparation.	Enrich with regards to theory and content, complementing the content with the how to teach, that is, comparing theory to practice
VI. Unspecified	Description: References to participating in the school without specifying what will be done or a specific propositional content	
	Actively, with responsibility, and commitment join the activities of a school.	Learn from the lived experiences.

- a. *Field-based courses*: involving the implementation of instructional procedures (two items, for example, “Having many opportunities to plan and implement lessons with a group of students, reflecting on the process and its outcomes”).
- b. *Campus-based courses*: involved four response alternatives related curricular activities addressing pedagogical knowledge, foundation courses, subject matter (for example, “Taking courses that address the content area that I will be responsible for teaching”).
- c. *Conduct research and observations in schools*: involved three response alternatives (for example, “Observing exemplary teachers and analyzing with them what was observed”).
- d. *Pre-teacher preparation experiences*: involved the response alternative: “Resorting to my own experiences as a PK-12 student”.
- e. *Dispositional characteristics*: involved the response alternative: “Having the vocational and personality characteristics required for this profession”.

3.3.1.1.3. *Tasks asked to be performed in schools*. From the closed-ended item that provided a list of seven types of tasks that programs typically required for their field-based courses, responses were grouped into three categories.

- a. *Observing, gathering, and analyzing information*: involved three response alternatives related to informal observations as well as systematic inquiry of the school context and its actors (for example, “Observe and collect contextual information, mainly outside of the classroom”).
- b. *Assisting*: involved three alternatives related to helping teachers and other school actors as they performed their daily responsibilities (for example, “Informal interactions with students as they engage in learning within or outside the classroom”).
- c. *Teaching*: involved the alternative “Teach classes to a group of students”.

3.3.1.2. *Procedures for the administration of the questionnaire*. The field experience coordinator for each program contacted the course instructor⁴ to explain the purpose and procedures of the study. After obtaining permission to administer the questionnaire during a class period, a researcher attended a class session to explain the study and ask for volunteers. A date to administer the questionnaire was set during the first week of school placements. After reading and signing an Informed Consent, participants completed the questionnaire. Each volunteer was paid a small stipend for participating in the study.

3.3.2. Content analysis of course syllabi

Program documentation was requested after each program administrator signed an Informed Consent. For the current study, a content analysis was performed on 29⁵ syllabi obtained for the courses defined as part of the field-based curriculum. The general objectives⁶ defined for each course constituted the unit of analysis. Given that our interest was to contrast the knowledge interests defined by preservice teachers with the knowledge represented in

these courses' general objectives, the same coding scheme previously described for analyzing candidates' knowledge interests was used.

3.3.2.1. *Coding procedures*. A subset of course objectives were first read and coded by four researchers, discussing those cases in which there was disagreement and generating new codes when necessary. Later, two teams of two researchers independently coded a second subset of objectives, followed by a meeting where coding was compared across teams to further calibrate our understandings of how to apply the codes to these objectives. Next, the remaining objectives were coded by each team, followed by a discussion and resolution in the few cases where there were disagreements. No statistical analysis was performed to examine inter-rater agreement in the last round of coding.

We coded 120 general objectives– 35 associated with 11 courses in the Initial phase, 66 associated with 13 courses in the Intermediate phase, and 19 associated with five courses in the Student Teaching phase. On average, each course listed six objectives, with courses in the Initial and Student Teaching phases listing four, and those in the Intermediate phase listing eight.

3.4. Quantitative data analysis

Considering the nominal nature of the variables measured, data analysis required the use of a Chi-square Test of Independence to determine if the types of knowledge addressed by course objectives, candidates' knowledge interests, types of tasks, and sources of knowledge were independent of the phase in which courses and candidates were located. SPSS 17.0 was used to conduct these statistical analyses.

4. Results

The results will be presented in three sections. First, we describe the knowledge candidates expected to learn in the schools as well as their understandings of the most meaningful activities for acquiring this knowledge. Next, we describe the content knowledge codified in the general objectives curricula defined for the field-based courses as well as the main activities candidates reported these courses required them to perform at their school placements. Third, the candidates' and the programs' knowledge interests and learning activities are contrasted to address the third research question. In reporting results we have not disaggregated as a function of program structure given that in all but one university a concurrent model was being used.

4.1. Teacher candidates' perspectives

4.1.1. Knowledge interests

As can be observed in Table 2, the topics candidates were interested in learning were similar across phases (χ^2 (10, $N = 1382$) = 11.24, $p > .05$). Irrespective of the phase, candidates were mostly interested in learning about various *Classroom Processes and Interactions* (66%). Within this category three foci emerged; *Instructional Procedures* (representing about half of the responses coded in this category), *Classroom Management* (a third of the responses coded in this category), and *Pupils' Learning and Motivation*.

The next most frequent category was *Actors* (19%), with most of these responses relating to the subcategory *Candidates' Personal and Professional Development* (67% of those coded in this category). Another fifth of the responses in this category involved an interest in learning about *Pupils' lives and characteristics*, with the remaining related to learning about *Teachers' roles*.

Learning about topics related to *School Context and Educational System* was mentioned in 9% of the topics identified by preservice

⁴ Some of these instructors had been involved in the validation work described earlier and had received a modest honorarium.

⁵ In three universities the syllabus was the same for the two majors offered by that institution, so they were coded once. In two universities a syllabus for Student Teaching had not been developed.

⁶ For the current study we have opted to use the terms “course objectives” and “learning goals” as synonyms, notwithstanding our understanding that theoretically they are not the same.

Table 2

Knowledge interests expressed by preservice teachers by category, subcategories, and phase ($N = 1382$).

Knowledge categories and subcategories	Phase		Student teaching %	Total %
	Initial %	Intermediate %		
<i>I. Classroom processes and interactions</i>	65	66	67	66
a. Instructional procedures	32	28	35	31
b. Classroom management	21	24	22	22
c. Pupils' motivation and learning	12	14	10	13
<i>II. Actors</i>	17	20	21	19
a. Pupils	4	4	5	4
b. Teachers' roles	2	3	2	2
c. Candidates' personal and professional development	11	13	14	13
<i>III. School context and educational system^a</i>	10	10	7	9
a. School functioning and improvement	6	5	2	5
b. Educational system and policies	1	2	1	1
c. Professional relations with teachers and parents	2	2	3	2
d. School administration	1	1	1	1
<i>IV. Research</i>	1	0.2		0.4
<i>V. Theory–practice</i>	4	2	3	3
<i>VI. Unspecified</i>	3	3	2	3

^a The total percentage for the category has been distributed among the subcategories it entails.

teachers. Of the responses coded in this category, the majority (55%) involved issues pertaining to *Schools Functioning and Improvement*. Other aspects of the school context and system addressed were knowing about: *Educational System and Policies*, *Professional Relationships with Teachers and Parents*, and *School Administration*. Explicit references to *Theory–Practice* were made in 3% of the responses, most often alluding to testing whether what they had learned at the university was applicable in schools or valuing the opportunity to apply what they were learning. A few candidates wrote about their interest in gaining experience, without specifying the content of that experience, thus those types of responses were assigned to the category *Unspecified* (3%).

4.1.2. Activities considered as the most meaningful for learning to teach

Responses were first grouped into two categories: those pertaining to teacher preparation and those unrelated to formal training. When comparing the percentage of candidates identifying activities related to teacher preparation curricula with the percentage identifying unrelated sources, results showed no differences as a function of phase ($\chi^2 (2, N = 596) = 5.62, p = .06$). At the Initial phase, 22% indicated that sources unrelated to the teacher preparation curricula were the main sources informing their development as teachers, a percentage that dropped to 14% and 15% for the candidates in the Intermediate and Students Teaching phases, respectively. Within these groups, most often developing into a teacher was attributed to having the appropriate vocational and personality characteristics. Across all phases, 83% of the candidates identified sources related to teacher preparation. Among the candidates identifying sources related to their teacher preparation curriculum, at the Initial and Intermediate phases the percentage identifying field-based courses (36%) and university-based courses (38%) was quite similar. However, at the Student Teaching phase school-based experiences were identified as the most meaningful source of knowledge (44%) more often than university-based courses (33%).

During their time at the schools, 62% of those who were in the Initial phase, 38% of those in the Intermediate phase, and 10% of the student teachers reported that the most meaningful activity performed at schools to support their learning to teach process involved *Observing, Gathering, and Analyzing Information* both inside and outside of the classroom. *Assisting teachers, pupils, and other school staff* was reported as the most significant activity by 32% of the participants in the Initial phase, 41% in the Intermediate phase, and 10% in Student Teaching. *Teaching* was identified as the most significant activity by 6%, 21% and 79%, respectively, for the Initial, Intermediate, and Student Teaching phases.

4.2. General objectives defined by the curricula

Across phases, close to a third of the objectives related to the category *Actors* (37%). The second most frequent category, *Classroom Processes and Interactions*, entailed 29% of the objectives, followed by *School Contexts and Educational System* which involved 17%. Objectives related to the *Theory–practice* relationship (8%) and to the development of knowledge about *Research* (5%) were less frequent. Results showed differences in the frequency with which these different types of contents were addressed in the various phases of the course sequence ($\chi^2 (10, N = 120 = 30.30, p < .001)$) (Table 3).

As shown in Table 3, at the Initial phase, *Actors* represented 54% of the objectives, followed by *Classroom Processes and Interactions* (17%). The third most frequent categories with 12% each referred to the relationship between *Theory and Practice* and *School Contexts and Educational System*. At the Intermediate phase, *Actors* (30%) continued to be the most frequent content, followed by *Classroom Processes and Interaction* (28%), and *School Contexts and Educational System* (24%). At the Student Teaching phase, *Classroom Processes and Interactions* concentrated slightly more than half of the objectives (53%), with about a third addressing topics coded as *Actors* (32%). At this phase it was also observed that 16% of objectives failed to specify the content knowledge to be developed. These objectives stated that student teachers were expected to take on professional responsibilities and apply what was learned in previous coursework.

Table 3

Knowledge addressed by the curricula by category and phase ($N = 120$).

Knowledge categories and subcategories	Phase			
	Initial %	Intermediate %	Student teaching %	Total %
<i>I. Classroom processes and interactions^a</i>	17	29	53	29
a. Instructional procedures	11	21	47	22
b. Classroom management				
c. Pupils' motivation and learning	6	8	5	7
<i>II. Actors^a</i>	54	30	32	37
a. Pupils				
b. Teachers' roles	11	11		9
c. Candidates' personal and professional development	43	20	32	27
<i>III. School Context and Educational System^a</i>	11	24		17
a. School functioning and improvement	9	6		6
b. Educational system and policies	3	6		4
c. Professional relations with teachers and parents		6		3
d. School administration		6		3
<i>IV. Research</i>	3	8		5
<i>V. Theory–practice</i>	12	9		8
<i>VI. Unspecified</i>	3		16	3

^a The total percentage for the category has been distributed among the subcategories it entails.

When the category *Classroom Processes and Interactions* was broken-down into subcategories, results showed that the vast majority of the objectives referred to *Instructional Procedures* (77% of those coded in this category). Learning how to engage *Pupils' Motivation and Learning* was addressed in only 6% of the 120 objectives coded. On the other hand, none of the objectives addressed the subcategory *Classroom Management*. When the category *Actors* was broken-down into subcategories, results showed that the vast majority of the objectives addressed topics related to the subcategory *Candidates' Personal and Professional Development* (73% of those coded in this category). None of the objectives focused attention on learning about characteristics of the pupils.

When the category *School Contexts and Educational System* was broken down into the types of content addressed, objectives related to the *Educational System and Policies* framing teachers' work was addressed infrequently (4%) and only at the Initial and Intermediate phases. Additionally, topics related to developing *Professional Relations with Teachers and Parents* (6%) were infrequent and restricted to the Intermediate phase, as was also the case for topics related to *School Administration*.

4.2.1. Candidates' expectations regarding the main tasks to be performed in school

Understanding what programs expected candidates to learn entails knowing how they were expected to learn that content. What they may learn about instruction by observing teaching is not the same as what they may learn about instruction by actually doing the teaching. To address this issue, participants were asked to identify the tasks to which they would be dedicating most of the time they spent at the schools. These tasks, in turn, reflect how the course envisioned learning to teach in schools.

During their time at the schools, 82% of those who were in the Initial phase, 52% of those in the Intermediate phase, and 9% of the student teachers reported that their main task would be related to *Observing, Gathering, and Analyzing Information* both inside and outside of the classroom. *Assisting teachers, pupils, and other school staff* was reported as the task to which they would be dedicating most of their time by 16% of the participants in the Initial phase, 39% in the Intermediate phase, and 38% in Student Teaching. As candidates advanced to the Student Teaching phase, there was an increase in the percent indicating that most of their time would involve *Teaching*: 2%, 9% and 52%, respectively, for the Initial, Intermediate, and Student Teaching phases. As the second task to which they would devote time while in schools, at all phases, *Assisting various school actors* was most frequently mentioned. On the other hand, *Teaching* was mentioned as a second task by 19% and 23% of candidates in the Intermediate and Student Teaching phases, respectively (see Table 4).

4.3. Contrasting the general objectives defined by the curricula and knowledge interests of preservice teachers

Results showed three areas of contrast in what preservice teachers and their preparation programs envisioned the knowledge to be developed from field-based coursework: (a) what and how learning to teach in schools was represented, (b) attention to social versus instructional aspects of teaching and the representation of pupils in those processes, and (c) the relationship between theory and practice.

4.3.1. Knowledge to be developed through field-based preparation

Irrespective of their level of curricular advancement, preservice teachers were predominantly interested in learning about classroom interactions and instructional processes. In contrast with the

Table 4

Percentage of candidates indicating each task as the one to which they expected to dedicate time while working in schools (N = 710).

Tasks	Phase			
	Initial	Intermediate	Student Teaching	Total
<i>Expected to dedicate most of the time</i>				
Observing, gathering, and analyzing information	82	52	9	55
Collaborating	16	39	38	30
Teaching	2	9	52	14
Total	100	100	100	100
<i>Secondary tasks based on the expected amount of time dedicated</i>				
Observing, gathering, and analyzing information	39	21	16	27
Assisting Various School Actors	59	58	61	59
Teaching	2	19	23	14
Total	100	100	100	100

content sequence reflected in their curriculum, participants' knowledge interests did not differ as a function of phase. Curricula designed for field-based learning by the participating universities addressed the various types of knowledge that have been repeatedly codified for teacher preparation (National Council for Accreditation of Teacher Education (NCATE), 2008; Shulman, 1987). These include learning about procedural aspects of classroom instruction, the broader school context and educational system, as well as the candidates' dispositions as developing professionals. The type of knowledge addressed changed as a function of a course's location in the field-based sequence. At the Initial and Intermediate phases the focus was placed on the development of the candidates' dispositions and understandings of the profession. Developing procedural skills associated with teaching a group of students was emphasized in the last phase.

4.3.2. Instructional and social processes in the classrooms

Candidates were mostly interested in learning about instructional procedures as well as how to develop social relations with pupils. Although a majority shared their program's focus on instruction, they were more likely than their programs to express an interest in ensuring pupils' learning and motivation. Social life in the classroom, that is classroom management, was explicitly stated by about a third of the candidates, but it was not addressed in the learning objectives intended by the curricula. When interpersonal relations were addressed by the objectives, this was expressed as a disposition rather than a skill. The curricula showed a clear emphasis on teaching and when pupils were referenced in the objectives, they were most often represented as a source of information to contextualize instruction. On the other hand, candidates expressed an interest in learning about their lives and characteristics.

4.3.3. Theory–practice relationship

Both programs and candidates made explicit references to the relationship between theory and practice; however, this was more frequently mentioned by curricula, particularly in courses offered at the Initial phase. Programs typically represented fieldwork as an opportunity to integrate theory and practice or apply theory in practice. In fact, we found that a number of objectives in the Student Teaching phase failed to make explicit the content addressed rather they used language such as "Demonstrate professional competency providing evidence of the knowledge and skills acquired". Some candidates saw fieldwork as an opportunity for testing theory in practice or, as they put it, "seeing" if what they

have learned in their campus-based courses actually worked in high schools. Other candidates understood, like the curricula, that in schools they would have an opportunity to apply all the knowledge they had developed through campus-based coursework.

4.3.4. Meaningful tasks and activities for learning to teach

Programs and candidates were closer in their perceptions of how the knowledge base for teaching was developed in the field-based courses. From the Initial to the Student Teaching phase, both programs and candidates showed a steady decrease in the importance afforded to learning tasks associated with *Observing, Gathering, and Analyzing Information* concomitantly with a steady increase in the importance given to *Teaching*. At the Initial phase, 82% of candidates indicated that curricula prescribed activities mostly related to *Observing, Gathering, and Analyzing Information*; 62% reported these types of activities as most meaningful. At the Student Teaching phase, whereas 79% identified teaching as the most meaningful activity, only 52% reported that teaching was prescribed as the main activity by the curricula.

5. Discussion and conclusions

Based on their reviews of research on field experiences, Wilson et al. (2002) and Clift and Brady (2005) highlighted the need for large scale studies on the content and impact of field-based coursework. Both reports noted that studies have typically included a small sample size and too often have involved professors examining the impact of a course they have designed and implemented. Additionally, our review of the literature shows that even though field-based learning is sequenced throughout the length of concurrent preparation programs, the majority of the studies have focused on the Student Teaching phase, fewer on method-related field experiences, and still fewer on initial field experiences. The current study addressed these limitations by including a large sample of preservice teachers across several programs and universities. By examining field-based preparation at different phases of the curriculum (Initial and Intermediate field experiences, and Student Teaching) and including cohorts of preservice teachers taking courses in each phase, we collected evidence of changes and continuities in how programs and candidates conceptualize the sequence of content and learning activities to be addressed through field-based coursework.

Notwithstanding differences in the amount of field-based preparation, findings showed participating universities shared a pattern in the sequence of the content to be addressed through this curricular component as well as in the types of activities candidates were asked to perform in schools. In addition, irrespective of their institutional affiliation and phase in the preparation program, teacher candidates largely agreed on what, and how, they expected to learn through this curricular component. However, when contrasting curricula and candidates we found significant disagreements regarding the knowledge each deemed as most relevant and agreements on the types of learning activities deemed as most meaningful for the acquisition of that knowledge base.

With regard to the first research question, concerning candidates' knowledge interests, results showed that preservice teachers were mostly interested in learning about what teachers and students do in the classroom, ascribing importance to learning how to develop positive interpersonal relationships with students and school personnel. This coincides with other studies that have shown that the interpersonal domain is important in developing teachers' professional lives (Ben-Peretz & Kupferberg, 2007; Chiang, 2008; Fang & Ashley, 2004; Volante & Earl, 2002;

Weinstein, 1989). It also coincide with results reported by Joram (2007) related to the importance prospective teachers assign to learning the "how to" of teaching. The similarities observed among candidates at different phases in their preparation program enrich previous research which has argued for a stage model in the process of learning to teach (Buitink, 2009; Hollingsworth, 1989).

The knowledge interests expressed by teacher candidates support Evelein, Korthagen, and Brekelmans' (2008) contention that there are three basic psychological needs to be fulfilled when working in the schools: competence, relatedness, and autonomy. The need for relatedness refers to experiencing positive relations in their engagement with others. This can be seen in that for almost a third of the participants, their main interest was in learning how to build positive relationships with students, colleagues, and parents. When this dimension was addressed by the curricula, it was framed as developing dispositions rather than skills.

The need for competence relates to preservice teachers' interest in developing the technical and procedural skills and knowledge that would allow them to feel effective in managing their classrooms and promoting pupils' learning. This was expressed in several goals, such as when stating that through the course they wanted to improve and become good teachers, as well as in their focus on procedural teaching skills. The need for autonomy refers to self-determination, an interest in finding opportunities for expressing and acting upon their ideas and choices as developing professionals. This need was expressed in participants' interest in developing a professional identity. In the current study, curricular advancement was not associated with saliency of any of these psychological needs. Further research is needed to examine factors that may make certain needs more salient than others as well as ways to help preservice teachers achieve a balance among them.

With regard to the second research question concerning learning goals defined by curricula, findings showed a fairly distinct pattern in how content was sequenced from the Initial, to the Intermediate, and Student Teaching phases. In the Initial phase, in particular, we saw a focus on what Feiman-Nemser (1990) defined as the personal orientation to teacher preparation- the vocational, personal, and dispositional development of the preservice teacher. Attention was placed on the construction of their self images as teachers vis-a-vis developing an understanding of what teachers do through classroom observation at first, followed by pedagogical interactions with children next (Kagan, 1992; Sweitzer & King, 2004; Tang, 2004). As teacher candidates engaged in fieldwork during their fifth year of preparation, we observed the curricula increased the presence of what Feiman-Nemser (1990) defined as a technological orientation- attention to the instructional knowledge and skills for teaching. The programs also reflected that in school-based coursework, learning to teach involved more often developing conceptual and dispositional knowledge, as procedural knowledge was less frequently stated in the general objectives. Additionally, procedural skills were mostly concerned with teaching, with very few course objectives attending to pupils' learning, and none to classroom management. Further research needs to explore the impact of this cognitive approach to teacher preparation in field-based coursework in terms of whether approach is well suited for developing effective novice teachers who feel well prepared and committed to remaining in the classroom (Darling-Hammond et al., 2002).

With respect to the third research question, the findings support previous work that has shown discrepancies in the knowledge prioritized by teacher educators and preservice teachers (Joram, 2007). Teacher education curricula prioritize knowledge as it selects content and activities aligned with its underpinning conceptual model. Knowledge prioritized by student teachers, on the other hand, is influenced by socialization prior to and during an

initial teacher education courses (Hayes, Capel, Katene, & Cook, 2008). Programs defined that the most significant learning activities, particularly at the Initial phase, were observation and analysis of what was going on in the schools and classrooms. Whereas this cognitive approach may be pertinent to the goals defined by curricula (i.e., learning about the candidate vocational dispositions) we question its relevance for developing the types of knowledge teacher candidates found useful (i.e., learning how to teach and interact with students). We can hypothesize that during their own school experiences preservice teachers developed an understanding of what teachers must know and be able to do. However, it is less evident whether they also developed a perspective on how that knowledge base was acquired by the teachers they had observed or the extent to which they even question how one learns how to teach. This could explain why they largely disagreed with the curricula on the content to be learned but not on the processes through which that content would be learned. In the absence of a personal perspective, we hypothesize that a large number embraced uncritically the vision of learning to teach embedded in the tasks required by the field-based curricula.

These findings add another layer of complexity to findings from previous studies which show disagreements between the knowledge prioritized by curricula and that identified as most meaningful by preservice teachers (Joram, 2007). Chilean preservice teachers were quite similar to those surveyed in the United States by Joram as in both contexts candidates more often than professors (in our case the curricula) expressed an interest in acquiring teaching skills. Curricula represented learning to teach as incremental and sequential in complexity, but preservice teachers for whom courses were designed did not reflect this same understanding as we found no association between phase and types of knowledge interest. However, the epistemological clash aptly described by Joram (2007) was only evident in response to the question “what” ought to be learned but not in response to the question of “how” that knowledge is to be learned. Additional studies need to examine if what prospective teachers report learning from these courses resembles more the curriculum objectives or their own knowledge interests.

The understandings teacher candidates expressed regarding what teachers must know and be able to do align more closely with a participatory version of learning to teach. Given that they had adopted their programs’ cognitive version they expressed a preference for learning how to interpret classroom events rather than learning how to engage as participants in these events. Edwards and Protheroe (2003) proposed that learning to teach is learning to be, see, and respond in increasingly informed ways *while working* in the classroom. Through repeated interactions with pupils and the classroom teacher, candidates learn to interpret classroom events and select responses that best promote pupil learning, widening their repertoire. The curricula we analyzed, however, seemed to restrict these interactions as even in the Student Teaching phase a significant number of candidates indicated that most of their time in the schools would not entail assuming the responsibility for pupil learning.

Should these inconsistencies be addressed mostly by reframing candidates’ knowledge interest or by re-examining curricula? To partially answer this question we draw from Korthagen et al. (2006) who have suggested seven principles for maximizing theory–practice dialogue while situating teacher learning in schools: (a) learning how to learn from experience, (b) learning how to negotiate conflicting demands, (c) learning to focus on the learner not on the curriculum, (d) learning to engage in inquiry, (e) peer-supported learning, (f) collaboration among the institutions involved, and (g) teacher educators’ modeling the previous principles. The discontinuity we observed between the curricula these programs had developed for field-based learning and what teacher-

learners wanted to learn might reflect that programs tend to be more curriculum-centered than learner-centered, as this distinction has been made by Korthagen et al. Following these authors, we suggest that if programs are more teacher-learner centered, then curricula may be better positioned to enrich candidates’ understandings of the complexity of the knowledge base for teaching and it may enrich its own design to provide more powerful opportunities for learning to teach in school settings.

Teacher education reform is more complex than mandating or providing external incentives to increase field-based preparation or move the program entirely to the K-12 schools. Pogr   et al. (2004) noted to their analysis of teacher education curricula in Chile and Argentina that the notion that practice entails applying theory oriented the ways in which programs had increased the number of field-based courses. Our analysis of these 11 secondary teacher preparation programs leads us to hypothesize that if the fundamental beliefs underpinning a program’s conceptual orientation regarding the theory–practice relationship are not altered, increasing field-based coursework and implementing it earlier in the curriculum might not necessarily fulfill the promise of providing candidates with more authentic learning experiences.

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