



# Exploring the pedagogical field: A comparative study of the teacher education curriculum in Latin America

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Accepted: 17 July 2025

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**Abstract** The texts that future teachers read in their pre-service training offer a way to understand the teacher education pedagogical field. In this research, we studied 12,193 texts read by prospective teachers in 25 primary teacher education institutions in Argentina, Chile, and Uruguay. This approach is a new methodology for the empirical study of the teacher education curriculum. Significant differences emerged across the four fields of knowledge examined: pedagogical knowledge, foundations of educational sciences, content knowledge, and learning sciences. The study shows that authors from the intellectual field of education, theories, and disciplines are totally different in each country. Chilean future teachers read more recent, international, and pedagogical content knowledge oriented texts. Argentine future teachers read mostly Argentine authors, and Uruguay future teachers read older texts, with a mix of authors and a more psychology-based orientation. The article shows that comparative study of the pedagogical field in different countries is a fundamental step to unravelling the importance of context in teacher initial education.

**Keywords** Teacher education · Comparative education · Latin America · Pedagogical field · Pedagogical content knowledge

In this research, we set out to study the teacher education curricula of three countries that share many geographical, cultural, and socio-economic similarities in the Southern Cone of Latin America: Argentina, Chile, and Uruguay. We focus our empirical approach on the texts listed as required reading in the syllabi of primary teacher education programmes.

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Using this methodological ‘window’, we seek to understand and map the structure of the teacher education pedagogical field (TEPF) in these countries. Our main empirical research question is: What are future teachers in Latin America expected to read in their initial training? This question connects to the more general research questions that guide our study: How is the field of education and its knowledge categories structured in the teacher education curriculum? What specific pedagogical fields are more relevant, and which authors predominate? Our research maps the fields of knowledge that shape teacher education and aims to understand to what extent they are specific to each country.

These questions are rooted in the context of ongoing research on teacher education in Latin America from a comparative perspective (UNESCO, 2021; Voisin & Avalos-Bevan, 2022). In recent decades, both the number of studies and the evidence pointing to the importance of teacher education in the region have grown significantly (Marcelo & Vaillant, 2018). Latin American countries present diverse and heterogeneous situations in terms of teacher education models. In recent years, most countries in the region have promoted curriculum reforms, with mixed results given the poor governance of training systems (Vaillant & Manso, 2022).

Conducting an empirical study of these reforms is challenging. There is a limited body of comparative studies of teacher education curricula that explore the actual content of curricula (Flores, 2016). The work of Rasmussen and Bayer (2014) is one of the few exceptions, examining the content of teacher education programmes (including lists of recommended literature) in Canada, Denmark, Finland, and Singapore. The study of Tatto and Bankov (2018) compares the teacher education curriculum in mathematics using data from the Teacher Education and Development Study in Mathematics (TEDS-M) in the United States of America (US). Tatto and Hordern (2017) analyse the secondary teacher education curriculum in Germany, Poland, Singapore, and the US, with an analysis of syllabi from cross-national representative samples of pre-service programmes; the same authors (Hordern & Tatto, 2018) compare the different conceptions of educational knowledge in teacher education in Germany, England, and Finland.

Other studies have compared teacher education curricula in different countries with a focus on specific subjects (Gonca, 2016; Jensen, 2020; Salajan et al., 2017). The study by Pomerance et al. (2016) is perhaps one of the best-known studies in the systematic analysis of teacher education textbooks in the US. This study spawned a campaign to promote curriculum revision to advance the ‘science of learning’.

Our study sets out to extend the empirical knowledge of the teacher education curriculum, understood in its most basic sense as the set of contents and practices considered valid to educate student teachers, organized into courses according to categories of knowledge (Bernstein, 1990; Shulman, 1987). In this domain, we specifically examine and compare, by country, the texts assigned for study in each course, as a detailed and comparable representation of the curriculum’s contents. This documental evidence provides a powerful means of characterizing a major source of dominant pedagogical discourses in Latin America countries.

## Theoretical background

The study aimed to analyse the pedagogical field of teacher education in the countries of the Southern Cone of Latin America. The comparative analysis of pedagogy involves not only the acts of teaching, but also the ideas that circulate in teachers’ practices. As Robin

Alexander points out, ‘comparative pedagogy identifies, explores and explains similarities and differences in pedagogy as a concept, discourse and practice across designated units of comparison such as nation states’ (Alexander, 2009, p. 927).

For the analysis of the teacher education curriculum, we applied the theoretical framework of the pedagogical device, originally formulated by Basil Bernstein (1990) in *The Structuring of Pedagogic Discourse: Volume IV*. The pedagogical device is formulated to explain ‘the ways in which social discourses are appropriated, regulated, contested and controlled in order to become “pedagogised” or part of legitimate pedagogical knowledge’ (Loughland & Sriprakash, 2016, p. 233).

The process of pedagogizing knowledge for teacher education differs from Bernstein’s classical analysis, which is situated in the compulsory education curriculum. In teacher education, the analysis starts with the intellectual field of education (IFE) as the main basis of the knowledge (the ‘distributive rules’ in Bernstein’s theory) that is recontextualized to be taught.

The IFE is the complex web of educational theory, research, and practice that establishes which educational discourses are legitimate in a historical and situated context (Díaz, 1994). The teacher education curriculum is shaped by a process of recontextualization of the IFE. This is what we call, using Bernstein’s terminology, the teacher education pedagogical field (TEPF).

The pedagogical device of teacher education is the process by which a set of texts, theories, and their authors and disciplinary currents, are part of a relational process of selecting and moving knowledge from one context to another. IFE is based on distributive rules that define specialized fields of educational knowledge. These are rules for ‘delocating a discourse, for relocating it, for refocusing it’ (Bernstein, 1996, p. 47).

The study of the teacher education curriculum is therefore an empirical approach that makes the pedagogical device visible. This is a way of understanding the disciplinary, theoretical, and epistemological influences of the IFE on teacher education in the countries studied.

The second line of theoretical analysis follows the route of the perspective developed by Lee Shulman on the sources of the knowledge base for teaching. In his 1987 classification, categories of the knowledge base for teaching include (p. 8):

- content knowledge;
- general pedagogical knowledge, with special reference to those broad principles and strategies of classroom management and organization that appear to transcend subject matter;
- curriculum knowledge, with particular grasp of the materials and programmes that serve as ‘tools of the trade’ for teachers;
- pedagogical content knowledge, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding;
- knowledge of learners and their characteristics;
- knowledge of educational contexts, ranging from the workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures; and
- knowledge of educational ends, purposes, and values, and their philosophical and historical grounds.

Shulman's category 'knowledge of educational ends' was reformulated in this study and renamed 'foundations of educational sciences'. This allows us to analyse in greater depth the specific disciplines that support the educational sciences and that seem to be very relevant in teacher training in the countries studied.

In this classification, Shulman placed special emphasis on the importance of pedagogical content knowledge, which:

identifies the distinctive bodies of knowledge for teaching. It represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction. Pedagogical content knowledge is the category most likely to distinguish the understanding of the content specialist from that of the pedagogue. (Shulman, 1987, p. 8)

Since its introduction in the 1980s, pedagogical content knowledge (PCK) has become both a contested as well as an accepted academic construct. The foundation of PCK is thought to be the amalgam of teachers' pedagogy and understanding of content such that it influences their teaching in ways that will best generate students' learning for understanding (Van Driel & Berry, 2010). Some studies found that making PCK more explicit in the teacher education process could help novices adjust to teaching, as well as aiding experienced teachers in developing more reflective practices (Kind, 2009).

However, our hypothesis is that its reception in Latin America has been uneven and its translation into teacher education curricular policies depends on each specific context.

## **Context: Teacher education in Argentina, Chile, and Uruguay**

A brief overview of recent reforms provides context for understanding teacher education governance and curricular regulation in the three countries.

In Argentina, teacher education is provided by tertiary education institutions. As a federal country, education is managed by the 23 provinces and the Autonomous City of Buenos Aires. This is a highly fragmented system with 1416 teacher training institutions (66 per cent are public and the remaining 34 per cent are private). The teacher training system for primary education is made up of 648 institutions, of which 435 are public (state-run institutions) (National Ministry of Education-INFD, 2025).

At the national level, the National Teacher Training Institute was created in 2006. This institution is responsible for promoting national policies and basic curricular guidelines for initial and continuous teacher training. At the provincial level, each province defines the curricular frameworks for teacher education, taking into consideration the national guidelines. At the local level, each teacher training institute has the autonomy to adapt curricular regulations to its context. The increasing democratization of the governance of teacher education institutions has led to greater levels of autonomy and local authority control in recent years (Sánchez & Rivas, 2021).

In Chile, the teacher education system comprises faculties or departments of education across 47 universities: 16 state universities, 11 private universities with public funding, and 20 private universities without public funding. Enrolment expanded significantly during the 2010 decade, but then began to gradually but consistently decline, reaching 58,000 students by 2022 (Cox et al., 2025).

During the last 15 years, the institutional profile has experienced regulatory pressure from public policies. A law entitled *Sistema de Desarrollo Profesional Docente* ('Teacher Professional Development System') (Law 20903, 2016), defines three instruments of curricular regulation: training standards, accreditation of institutions, and learning standardized assessment. These instruments are articulated and are pervasive in the curricular and pedagogical work of institutions. The process of public accreditation of universities depends on the application and achievement of standards, both in curricular definitions and in teacher education student learning achievements, which are implemented in the penultimate year of training (Law 20903, 2016).

Both the original standards, introduced in 2011, and their revised version a decade later, draw decisively on Lee Shulman's (1987) conceptualization of the foundations of teaching knowledge and his central concept of pedagogical content knowledge. They are also influenced by the vision and developments of practice-based teacher education, particularly the essential or core practices identified and developed by Deborah Ball and Francesca Forzani (2011) and the Framework for Teaching developed by Charlotte Danielson (1996, 2014). In fact, the official definition of a Framework for Good Teaching in 2004 makes explicit use of these sources.

Teacher education in Uruguay is tertiary and predominantly public. The National Administration of Public Education (ANEP), which is an autonomous body, is responsible for curricular regulation, issuing of teaching qualifications, and certification.

As we were conducting the research for this study, ANEP (2022) initiated the implementation of a comprehensive curriculum change for all compulsory education in the country based on competences. By 2023 (the year in which we conducted the field work of this study), two teacher training plans coexisted: the 2008–2010 plan in force for students enrolled until 2022 and the 2023 plan in force for those enrolled in 2023 and subsequent years. Curricular regulations are more detailed than in Argentina and use different policy instruments than Chile. In Uruguay, there is a mandatory curricular framework with rationales, contents, and recommended referents for each subject of the syllabus.

## Methodology

The study was carried out through the coordinated work of a team of researchers from Argentina, Chile, and Uruguay. The first step was to systematize the institutional context of teacher education curriculum governance in each of the countries studied. The purpose here was to identify which aspects of teacher education were regulated and influenced by the state, and which were directed by teacher education institutions. This initial mapping was complemented by a brief review of the state of teacher education research and the historical roots of pedagogical traditions in the three countries.

The second phase of the research involved designing the sample frame of teacher education institutions to be selected.

In the case of Argentina, three provinces were selected to reflect regional diversity. Within each of the selected provinces, a random sample (Martino et al., 2018) of primary teacher training institutions was made, stratifying by management sector based on information provided by the national authorities. Two public and two private institutions were randomly selected for each of the provinces (in the case of Entre Ríos, it was not possible to obtain all the information from one of the public institutions and it was decided to exclude it from the sample).

In Uruguay, teacher education institutions were also selected from different regions of the country: one in the north, one in the east, two in the centre, and one in the south. The aim was to obtain a heterogeneous sample that would allow data to be collected from teachers of different subjects and therefore from different areas of knowledge.

In the case of Chile, nine universities were selected based on a structural sample, representative of initial teacher education universities. The selection criteria were: (1) years of institutional accreditation; (2) geographical location (north, centre, and south); (3) size of enrolment; and (4) administrative dependence (public and private). In the sample, four institutions are public universities, and five private universities.

Table 1 shows the final sample size for each country. A total of 11 institutions were analysed in Argentina, 9 in Chile, and 5 in Uruguay.

In the case of Argentina, the selected sample of 11 institutions represents 1.6 per cent of the country's institutions. However, within each province, the sample represents 7 per cent of the institutions in Entre Ríos, 18 per cent of the institutions in Misiones and 16 per cent of the institutions in Mendoza. In Chile, the sample selected for this study represents 25.7 per cent of the country's institutions. The institutions in the Uruguayan sample represent a little over 20 per cent of the country's total teacher training institutions.

The third methodological phase of the study was carried out in these 25 institutions: the collection of the syllabi for all the subjects of the primary teacher education programme. The aim of this phase was to collect all the texts presented as compulsory or optional in the complete teacher education programme in each institution.

The methodology for collecting this information was different in each country, given the characteristics of the teacher education systems. In Argentina, the leaders of the teacher education institutions were contacted, and they, in turn, contacted the corresponding teacher educator of each subject to ask them for the updated syllabus of their subject. This process involved several iterations with the team until full coverage of all subject curricula for each institution in the sample was included.

In Chile, the directors of the general undergraduate programmes at the sampled universities were contacted and asked to participate in the study and then asked for the curricula and syllabi of their institutions.

In Uruguay, the teacher education institutions were contacted through their respective leaders, who facilitated the researchers' presentation of the study to the teacher educators. During the presentation, they were invited to complete a survey, in which they could enter data on both compulsory and optional recommended readings in their subjects. The

**Table 1** Sample of teacher training institutions

Country/region	Public/state	Private	Total
Argentina	5	6	11
Entre Ríos	1	2	3
Misiones	2	2	4
Mendoza	2	2	4
Chile	4	5	9
Uruguay	5	0	5
Total	14	11	25

*Note:* This table shows the final sample of teacher training institutions for each country. In the case of Argentina, a breakdown by province is also included.

decision to use a survey and send it to all the teachers in the selected schools was made because, in Uruguay, it is not compulsory for teachers to formally submit their teaching syllabus. This meant that the only way to know what readings they suggested for their students was to consult with the teachers directly, in contrast to the process followed in Argentina and Chile.

Since the data collection in Uruguay was different from the other two countries, this explains why we collected fewer texts in total for that country.

The fourth methodological phase was to process and categorize the collected texts. This involved an analysis of the courses' contents in the three countries, and their categorization, adapting Shulman's categories. Table 2 shows the results of this stage. The accumulated database consisted of a total of 985 courses for the three countries (an average of 39 courses per teacher training plan or programme) and 12,193 texts with 15,950 authors (there are many texts with more than one author).

In this phase, the 12,193 texts were classified according to the country of origin of their authors, the year of publication of the text, and a classification of fields of knowledge and themes of the teacher education curriculum (Table 3). As mentioned, we use Shulman's categories, with some adaptations according to the context. The four fields of knowledge and the thematic categories of the texts classified in our empirical analysis are defined below:

1. **Pedagogical knowledge:** refers to texts with a focus on teaching. These are texts with a greater normative load, with recommendations, suggestions, and theoretical frameworks. These texts were classified into the following nine categories: (1.1) official curriculum; (1.2) curriculum theory; (1.3) learning assessment; (1.4) educational technologies; (1.5) pedagogical content knowledge (which, in turn, is divided internally into each teaching discipline); (1.6) pedagogy and general didactics; (1.7) school leadership and educational management; (1.8) teaching for inclusion and special education; and (1.9) behaviour and conflict resolution.
2. **Foundations of educational sciences:** these texts are more theoretical, conceptual, and/or essayistic texts on different disciplines of education that are not directly linked to teaching practices. The categories included in this field are: (2.1) educational research; (2.2) sociology of education; (2.3) history of education; (2.4) philosophy of education; (2.5) general psychology; (2.6) essays and discussions on education; (2.7) teacher training and teacher identity; (2.8) general educational norms and policies; and (2.9) educational policy and justice.
3. **Content knowledge:** these are the original texts of each discipline that do not refer to teaching. They were divided into categories by discipline.
4. **Learning sciences:** these texts refer more directly to learning and are divided into three categories: (4.1) learning theories more focused on their empirical application; (4.2) educational psychology texts; and (4.3) theoretical texts on inclusion, disability, and learning.

The classification of the 12,193 texts from the three countries involved several processes of interaction to create these categories and make them internally consistent. First, the map of knowledge fields and basic categories was drawn up. Then, the research team in each country catalogued all the texts into these categories. Next, the project coordination team reviewed this classification and made modifications to make the database compatible across the three countries. Finally, a further review by the three teams (of each country)

**Table 2** Number of courses, texts, and authors by country (total amount, average by institution, and average by subject)

Country	Courses (total)	Courses (average by institution)	Texts (total)	Texts (average by institution)	Texts (average by course)	Authors (total)	Authors (average by institution)	Authors (average by course)
Argentina	411	37	6496	591	16	8330	757	20
Chile	492	55	4654	517	9	6331	703	13
Uruguay	82	16	1043	209	13	1289	258	16
Total	985	39	12,193	488	12	15,950	638	16

*Note:* This table shows the final number of courses, texts, and authors for each country. Averages of courses by institution, texts by institution and course, and authors by institution and course are also provided.

**Table 3** Classification of teacher education texts by knowledge fields, categories, and subcategories

Field	Description	Categories	Subcategories
Pedagogical knowledge	<p>Texts focused on teaching practices, with normative aspects and theoretical frameworks</p> <p>(1) Official curriculum                      (2) Curriculum theory                      (3) Learning assessment                      (4) Educational technologies                      (5) Pedagogical content knowledge</p>		<p>(5.1) Language and literature                      (5.2) Mathematics                      (5.3) Social sciences                          o History                          o Geography                      (5.4) Natural sciences                          o Biology                          o Physics                          o Chemistry                          o Environmental studies                      (5.5) Music                      (5.6) Arts                      (5.7) Religion                      (5.8) Physical education                      (5.9) Integral sex education                      (5.10) Emotional education                      (5.11) Technology, information, and communication                      (5.12) Play and early childhood                      (5.13) Human rights and citizenship                      (5.14) Second language didactics</p>
		<p>(6) Pedagogy and general didactics                      (7) School leadership and educational management                      (8) Teaching for inclusion and special education                      (9) Behaviour and conflict resolution</p>	

Table 3 (continued)

Field	Description	Categories	Subcategories
Foundations of educational sciences	More theoretical and conceptual texts on education disciplines that do not directly address teaching practices	<ol style="list-style-type: none"> <li>(1) Educational research</li> <li>(2) Sociology of education</li> <li>(3) History of education</li> <li>(4) Philosophy of education</li> <li>(5) General psychology</li> <li>(6) Essays and discussions on education</li> <li>(7) Teacher training and teacher identity</li> <li>(8) General educational norms and policies</li> <li>(9) Educational policy and justice</li> <li>(1) Language and literature</li> </ol>	
Content knowledge	Texts from various disciplines, unrelated to teaching but establishing content knowledge	<ol style="list-style-type: none"> <li>(2) Mathematics</li> <li>(3) Social sciences</li> <li>(4) Natural sciences</li> <li>(5) Music</li> <li>(6) Arts</li> <li>(7) Religion</li> <li>(8) Physical education</li> <li>(9) Technology and society</li> <li>(10) Philosophy</li> <li>(11) Societies, culture, politics and general knowledge</li> </ol>	History Geography Biology Physics Chemistry Environmental studies

**Table 3** (continued)

Field	Description	Categories	Subcategories
Learning sciences	Texts directly related to learning processes and theories	(12) Second language (1) Learning theories (2) Educational psychology (3) Inclusion, disability, and learning	

*Note:* This table shows the classification of teacher education texts by knowledge fields, categories, and subcategories. This final categorization was produced following numerous revisions and interactions between the three research teams, to ensure compatibility of the databases.

resulted in the final basis for classifying the texts, the results of which are presented in the findings.

The limitations of the study should be noted. The specific curriculum focus was limited to the texts listed in the bibliography. We did not analyse whether these texts were actually read or how they translated into teacher training practice. Nor did we analyse other key dimensions of teacher education such as professional teaching practices, which occupy much space in the curriculum.

## Findings

### Age and country of origin of texts

The first finding from the data collected relates to the average date of publication of the texts read in teacher education. In Argentina, the average year of publication of the texts is 2003, in Chile 2007, and in Uruguay 1999. This suggests that the pedagogical field of teacher education in Chile contains, on average, more recent texts and that, in Uruguay, it contains much older texts.

Second, we found a significant difference in the country of origin of the authors of the teacher education texts. To make this comparison, we analysed the 50 most read authors in each country (see Table 4). In Argentina, the vast majority, 84 per cent, are Argentine. This indicates a very local and endogamous profile of the pedagogical field of teacher education in Argentina.

On the other hand, Chile and Uruguay distribute their leading authors among different countries of origin. In Uruguay, almost 20 per cent of the authors are Argentine, which indicates a greater exchange in the pedagogical field due to the geographical and cultural proximity of these two countries. There is also an important influence of Spanish authors and a slight predominance of Uruguayan authors.

In Chile, the picture is different: there are no Argentine or Uruguayan authors at the top of the reading list for teacher training. On the other hand, 82 per cent of the authors read in Chile come from Chile, Spain, and the US. This shows a more global profile of readings in Chile, with less influence from the local context and a greater variety of authors' countries of origin.

### Fields of knowledge in teacher education

This section presents the differences in the proportion of texts corresponding to each of the four fields of knowledge in teacher education described in the methodological section (Table 3). Comparing the three countries, we find that, in Chile, there is a higher proportion of texts focused on pedagogical knowledge (58.8%) (Figure 1).

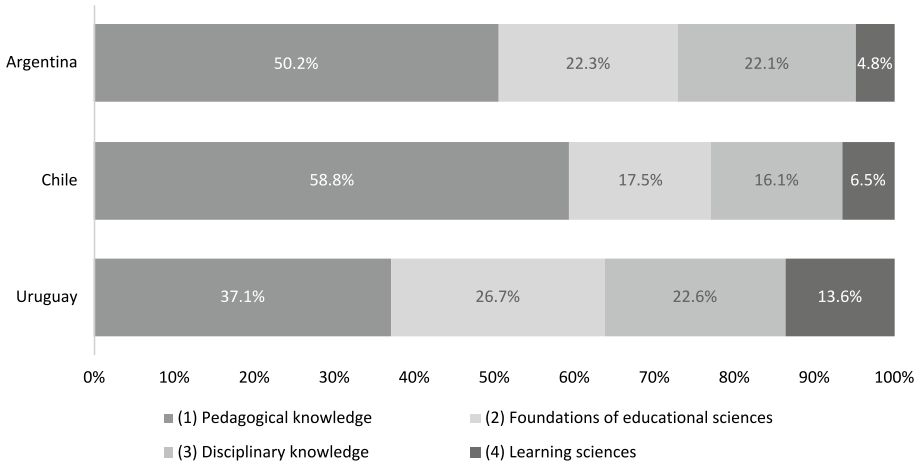
In Uruguay, there is more balance between the four fields of teacher education knowledge, with a greater emphasis on texts related to learning theories (13.6%), than in the other two countries. This is linked to other indications that seem to point to the primacy of psychology as the central discipline in teacher education in Uruguay, well above the other two countries.

In Argentina, learning theories play a lesser role and there is a proportionately greater stress on the foundations of educational sciences (22.3%).

**Table 4** Distribution of main authors' nationalities, by country (top 50 authors in each country, values in percentages)

Country	Argentina	Brazil	Chile	Cuba	Spain	France	Mexico	Russia	Switzerland	UK	Uruguay	US
Argentina	84	2			10			2	2			
Chile			28.9	2.2	28.9	2.2	6.7		2.2	4.4		24.4
Uruguay	19.5	2.4			17.1	9.8		2.4	2.4	2.4	29.27	14.6
Total	36.8	1.5	9.6	0.74	18.4	3.7	2.2	1.5	2.2	2.2	8.82	12.5

*Note:* This table shows the distribution of the most read (top 50) authors in each country, by their country of origin. The values are in percentages.



**Figure 1** Distribution of texts in each knowledge field of teacher education by country.

Note: This figure shows the percentage of texts for each of the four fields of teacher education knowledge within each country.

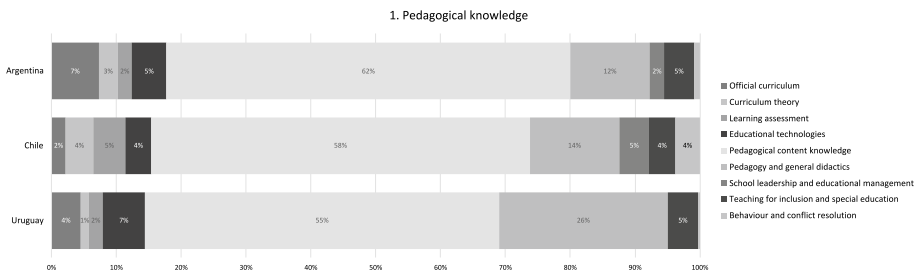
In the following, we will analyse each of the fields of knowledge. In our comparative analysis, we will summarize the findings.

### Pedagogical knowledge

We first analyse the field of *pedagogical knowledge* (Figure 2), with texts that are specifically aimed at building teaching skills. In all three countries, texts referring to pedagogical content knowledge (‘specific didactics’ in Spanish) predominate.

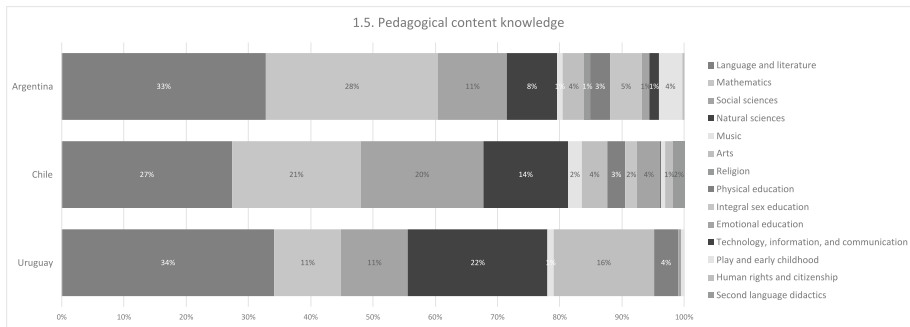
The comparison shows that, in Uruguay, there is a high proportion of pedagogy and general didactic texts (26%), much higher than in Argentina (12.3%) and Chile (13.8%). In Chile, there is a greater presence of curriculum (4%) and learning assessment (5%) texts than in the other countries, while, in Argentina, there are more texts referring to the official curriculum (7%).

Within the *pedagogical content knowledge* category (Figure 3), all three countries allocate around 80 per cent of their texts to the four core areas of language, mathematics, and



**Figure 2** Distribution of texts in each category of the *pedagogical knowledge* field, by country.

Note: This figure shows the percentage of texts for each of the categories of the pedagogical knowledge field, within each country.



**Figure 3** Distribution of texts for each of the subcategories within the *pedagogical content knowledge* category, by country.

*Note:* This figure shows the percentage of texts for each of the subcategories within the pedagogical content knowledge category, within each country.

social and natural sciences. However, Argentina places relatively greater emphasis on language and mathematics (61%) compared to Chile (48%) and Uruguay (45%).

Beyond the core subjects, we observe that Uruguay has a higher proportion of texts related to arts (16%), Chile to emotional education (4%), and Argentina to integral sex education (5%).

### Pedagogical content knowledge

In terms of the predominant authors and theoretical currents in the field of *pedagogical content knowledge*, we found large differences between the countries. There is a ‘pedagogical mountain range’ in the circulation of readings, with clear comparability between Argentina and Uruguay, and wide difference between the authors read in these countries and those read in Chile. Of the 20 most read authors in the field of pedagogical knowledge in the three countries, Argentina and Uruguay share two authors (Rebeca Anijovich and Melina Furman), while none of the most read authors in Chile are present.

In each area of the PCK we find similar differences, with some exceptions. In language, we find a common presence of a Spanish author (Daniel Cassany) who has a great influence as an international reference. However, in each country, national authors are widely read in this field, with local referents who have their own tradition of dominance in the teaching of language.

In the PCK of mathematics, Argentina and Uruguay share some key authors, while Chile does not share any of the 20 most read authors with the other countries. It is interesting to note that, in Argentina, mathematics is taught almost exclusively through national authors, while, in Uruguay, both Argentine and Uruguayan authors feature. Chile, on the other hand, has two major international references with a high weight in the proportion of mathematics teaching texts: a Spanish author (María del Carmen Chamorro) and a Japanese author (Masami Isoda). In the PCK of social sciences, there is also no author among the top 20 most read authors shared by the three countries. This is another field of divergent influences isolated by national borders. In Argentina, two national authors predominate (Beatriz Aisenberg and Silvia Alderoqui), in Uruguay there is also a national author (Elina Rostan), while in Chile, on the other hand, two Spanish authors (Antoni Santiesteban and Joan Pages) are more prominent.

In the PCK of natural sciences, some names appear that cross borders and become references for the Southern Cone in Latin America. In particular, an Argentine author (Melina Furman) is widely read in Argentina and Uruguay, and also in Chile, although here the central figure of the discipline is an English author (Wynne Harlen).

The comparison of the specific disciplinary fields of PCK shows different traces of the transfer of authors and theoretical currents between countries and global regions. A few authors seem to have managed to cross the geographic-pedagogical boundaries of very closed, endogamous fields of knowledge with their own traditions and referents. These ‘transnational’ authors are an indication of a slightly more structured or vertical field, in a general scenario where a great fragmentation of authors within and between countries prevails.

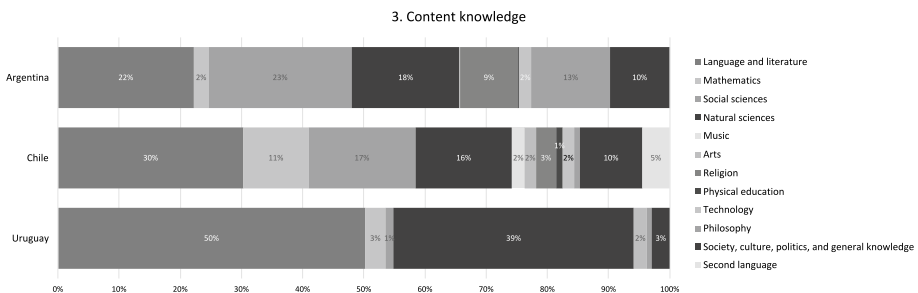
### Content knowledge

We now turn to the third field of knowledge, which refers to texts related to individual disciplines, which are referred as *content knowledge* (Figure 4). The data collected show that, in this specific field, student teachers in Uruguay are required to read a large proportion of language (50.2%) and science (39.3%) texts, but very few mathematics (3.3%) and social science (2.9%) texts. The situation is different in Argentina, where the proportion of history (16.7%) and philosophy (12.8%) texts is higher than in Chile and Uruguay. Within content knowledge, Argentina also has a significant proportion of religious texts (9.4%), especially in private teacher education institutions (which are mainly Catholic tertiary institutions).

Although mathematics texts are proportionally less common, only Chile seems to have a relevant presence (10.6%), while the proportion is much lower in Argentina (2.4%) and Uruguay (3.3%). Chile also stands out for having a small proportion of texts for learning English as a second language (4.5%), which is not present in the other two countries.

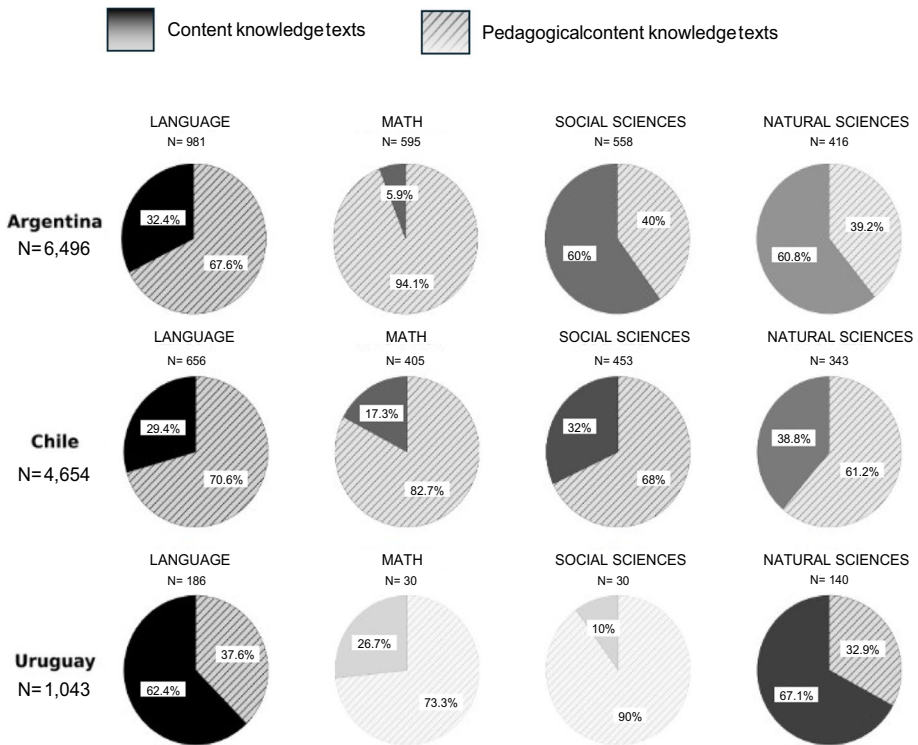
It is interesting to analyse the field of content knowledge in relation to the pedagogical content knowledge associated with each discipline. Figure 5 shows the proportions of original content knowledge (CK) (in shaded area) and pedagogical content knowledge (PCK) (in striped area).

Again, the differences between countries are striking. First, the different approaches to teacher education in each discipline can be observed. In language, Argentina and Chile prioritize the teaching of PCK (68% and 71%, respectively), while Uruguay focuses on CK



**Figure 4** Distribution of texts in each category of the *content knowledge* field, by country.

*Note:* This figure shows the percentage of texts for each of the categories of the content knowledge field, within each country.



**Figure 5** Distribution of *content knowledge* texts and *pedagogical content knowledge* texts for language, mathematics, social sciences and natural sciences, by country.

*Note:* This figure shows the percentage of texts for content knowledge and pedagogical content knowledge, for the main four areas of knowledge within each country. The colour gradient in the graphs shows, in proportion, the percentage of texts from each discipline relative to the total number of texts for that country.

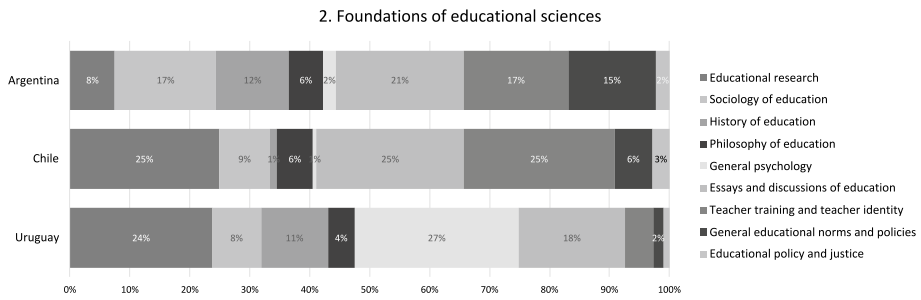
(62%). There are more similarities in mathematics, where PCK texts predominate in all three countries.

In social and natural sciences, the contrast between Argentina and Chile is very stark: in Argentina, future teachers are trained by being asked to read many original texts in the discipline (for example, many history texts for social sciences). In Chile, on the other hand, teachers are trained by reading science PCK rather than the original texts of each social or natural science. This is in line with the existence of national curricular standards for teacher training that Chile introduced in recent years, with a focus on PCK.

In Uruguay, we see very different approaches for the sciences: in the natural sciences, CK predominates (67%), while in the social sciences, training focuses on PCK (90%).

## Foundations of educational sciences

In the *foundations of educational sciences* (FES) (Figure 6), we find further significant differences between countries. On the one hand, Chile and Uruguay are more similar in the weight given to research and epistemology (around 24% of the readings in the field of FES in both countries). On the other hand, the presence of texts on the sociology of education is more pronounced in Argentina (17% compared to 8% in Chile and Uruguay).



**Figure 6** Distribution of texts in each category of the *foundations of educational sciences* field, by country. *Note:* This figure shows the percentage of texts for each of the categories of the foundations of educational sciences field, within each country.

Argentina and Chile share a certain weight of more general readings of educational discussions (this category includes general essays on education; Argentina: 21%, Chile: 25%) and texts on teacher education and their identity (Argentina: 17%, Chile: 25%). In Uruguay, FES seems to have a different orientation, with a very high proportion of texts on general psychology (27.5%) as a central source of educational sciences, which is almost absent in Argentina (2.2%) and Chile (0.6%).

The most widely read references in the field of FES are varied, as this is a very broad field of knowledge. However, it is notable that there are no central authors who are almost ‘obligatory’ references. The only exception is Paulo Freire, the well-known Latin American educator who is still relevant in teacher education. In Argentina, Freire is clearly the most read author in the field of FES (3.3%), while in Uruguay and Chile, he is also among the 20 most read authors in teacher training.

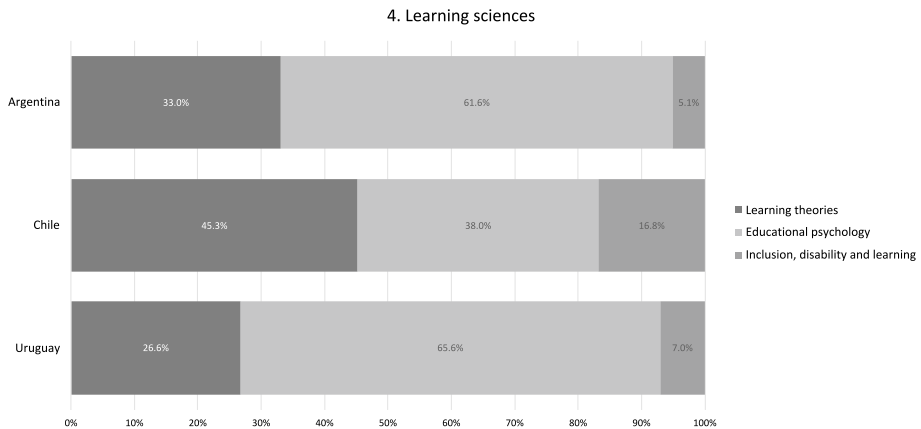
The dispersion of authors shows that the field of FES is what Bernstein conceptualized as a ‘region’ of knowledge linked to professional practice and composed of many ‘singulars’ (or disciplines of specialized knowledge) (Bernstein, 1990; Hordern, 2016). It is a dispersed, fragmented field, without predominant authors: Argentina and Uruguay read largely local authors, while in Chile international authors from the US and Spain have a prominent presence.

## Learning sciences

The field of the *learning sciences* (LS) (Figure 7) is narrower in the spectrum of categories that allow a classification of the texts. A comparison of the three countries shows the primacy of educational psychology readings in Argentina (61.6%) and, above all, in Uruguay (65.6%), with classic reference authors such as Piaget and Vygotsky.

Chile, on the other hand, shows a totally different scenario, with a predominance of texts on more recent learning theories, from the field of cognitive psychology and neurosciences, with presence of Anglo-Saxon authors such as Diane Papalia and Robert Marzano. These same authors do not appear among the most widely read in Argentina and Uruguay.

It should be noted that in the field of LS, we find in all three countries a primacy of international authors with classic figures such as Piaget, Vygotsky, or Bruner, and, in some cases, more recent authors (especially from Spain). This indicates that the fields of knowledge of teacher education have different marks of local appropriation of national and



**Figure 7** Distribution of texts in each category of the *learning sciences* field, by country.

*Note:* This figure shows the percentage of texts for each of the categories of the learning sciences field, within each country.

international authors: FES and PCK are more locally based (especially in Argentina) while LS have more global roots.

### Synthesis of findings from a comparative perspective

The comparison of the three countries shows pronounced differences in the TEPF. Here, we will focus our analysis on Shulman's original classification of teacher knowledge domains, with our adaptation for empirical systematization.

In a general overview, we find that Chile has a more recent profile of teacher education texts, more international in the origin of its authors and more focused on PCK. This may be partly explained by the national standards policy, which points in this direction. But it certainly has deeper roots in an intellectual field of education that is more internationalized and more up to date in educational debates (Cox, 2025). The field of educational research in Chilean universities is more productive in publishing articles in international journals, and there is a strong policy of doctoral scholarships for international studies, from which many teacher educators have benefited over the last two decades (Castillo-Canales, 2024).

In contrast, Argentina has a strong national base of teacher education texts, with more emphasis on the foundations of educational sciences. This profile of texts shows the tradition of some national intellectuals that is a crucial component of the process of curricular recontextualization of teacher education. Argentina's future teachers read education through national specialists who dominate the intellectual field of education.

Argentina's TEPF is more dominated by critical perspectives in subjects such as sociology of education. Authors in this country (also in Uruguay, although less markedly so) tend to be more active in the critical ideological field and engaged with theories of resistance. This seems to give room for a more political and ideological formation, especially in comparison with Chile. With more readings from the field of foundations of education, Argentina seems to have a more generalist model of teacher education, with a tradition closer to teachers as critical intellectuals (Giroux, 2024).

Finally, Uruguay reads much older texts than the other two countries and has a stronger background in psychology as a key discipline. Uruguay also shares many authors with

Argentina, which is typical of its geographical and cultural proximity. The Rio de la Plata which divides the two countries seems to be a more porous border (in one direction only: from Argentina to Uruguay) for the pedagogical transfer than the Andes Mountains that divide Chile from the other two studied countries.

The pedagogical field in Chile is more structured than in the other two countries. A clear sign of this is that in the four core teaching areas (language, mathematics, social sciences, and natural sciences), Chile has a predominance of PCK texts over CK texts. In Argentina, on the other hand, there seems to be two major differentiated approaches. In language and mathematics, PCK texts predominate, while social and natural sciences are read from CK. Uruguay is a bit more chaotic, with a mixture in science and in language and mathematics.

This shows that there are processes of ‘colonization’ of the disciplinary pedagogical fields in each country. In some cases, the matrix of pedagogical translation is produced by PCK triumphs. In others, teachers are trained with original readings of the discipline, with few bridging pedagogical texts. This may not be a problem, given that previous studies indicate that PCK-specific knowledge in mathematics is a better predictor of teaching performance than courses in CK in the discipline (Monk, 1994). However, the baseline level of teachers in this area is generally very low in Latin America, which prompts the question of what the appropriate combination of PCK and CK is in each specific context.

## Discussion

This article presents an innovative methodology for analysing key dimensions of teacher education curricula from an international comparative perspective. The systematic analysis of the texts included in the syllabi of all teacher education courses in three countries is a visible, measurable, and comparable expression of the teacher education pedagogical field (TEPF). The research allowed us to develop four hypotheses for the discussion of future studies in this field.

The first hypothesis indicates that the TEPF expresses a strong local component in the reference authors read in Argentina, Chile, and Uruguay. The TEPF of each country is markedly different, indicating the importance of a comparative analysis of pedagogical fields for understanding the local and international influences on the identity and traditions of future teachers.

Other studies in Latin America also show the profound differences in the traditions of shaping pedagogical disciplines in universities in Argentina, Brazil, Colombia, and Mexico (Rolim & Pimenta, 2022). As a review of contemporary comparative research on pedagogy published since 2000 suggests, there has been a tendency to over-generalize comparisons and to ignore greater recognition of the richness of context and the challenges of situating pedagogy within it (Schweisfurth et al., 2020).

The pedagogical field is a local assemblage of theoretical currents, disciplines, and authors. The differences between the three countries are more marked than within them, suggesting that there are certain common traditions in each context. National authors are particularly prominent in one of the countries: Argentina. This shows that education can be a very local or inward-looking field. Argentina seems to have its own pedagogical field with national authors circulating in almost all areas of teacher education (except for the learning sciences, where authors are more international).

A second hypothesis is that the difference in the composition of the TEPF is not based only on the different intellectual fields of education. The different institutional models of teacher education may also be a key factor in the comparative analysis of the three

countries, since, in the case of Chile, it is university-based and in Argentina and Uruguay it is provided by tertiary institutions. Previous research suggests that university education tends to provide a broader range of theoretical and analytical knowledge than the more practice-based education provided by tertiary institutions (Ball & Forzani, 2009; Moon, 2016).

However, this distinction is not without its paradoxes. In Chile, university teacher education has a more PCK-centred approach, through standards that the state has defined with this orientation since 2011 and with mandatory meaning for the institutions since 2021. In the other two countries, there is a greater proportion of texts from the more theoretical disciplines of educational foundations (Argentina) and psychology (Uruguay). PCK is not exactly a practical approach, but it does provide a theoretical framework that is more focused on teaching. The predominance of PCK in Chile's university model of teacher education shows that state regulation seems to have been particularly effective there.

The third hypothesis suggests that the TEPF in the three countries is fragmented and dispersed. Few authors predominate in each area of knowledge and the variation between texts is very large between institutions and between countries. This suggests that the teacher education curriculum has the characteristics of a region of knowledge with a predominant horizontal discourse (Hordern, 2015, 2016). In Bernstein's terms, horizontal discourses are more local and contextual. In contrast, vertical discourses have a 'coherent, explicit and systematically principled structure' that is 'hierarchically organised, as in the sciences' or 'a set of specialised languages with specialised modes of questioning and specialised criteria for the production and circulation of texts, as in the social sciences and humanities' (Bernstein, 1999, p. 159).

In the analysed countries, the process of recontextualizing the intellectual field of education is very local at the national level. The three countries analysed form the Southern Cone of Latin America, a region with strong similarities in social and cultural terms. Argentina shares borders with both countries, as well as the same language and many aspects of common culture and history. However, the TEPF is extremely different between these countries.

The specific analysis of recontextualization opens new questions for future studies of the 'pedagogical transfer processes' (Kusanagi, 2022). The idea of transfer in education can occur at different levels: 'The concept of "educational transfer" can be defined as the movement of educational ideas, institutions or practices across international borders' (Beech, 2006, p. 2). Central to our analysis is the comparison of the results of country-specific processes of recontextualization that constitute the curriculum of teacher education. This is an area that has been scarcely explored in previous empirical studies.

The fourth hypothesis focuses on the future possibilities of the methodological framework. Our findings show that the chosen methodology has been consistent in providing empirical evidence of the TEPF. The analysis of the texts that prospective teachers read during their pre-service training is productive because it shows the close relationship between teacher education and the intellectual field of education in each specific context.

The limitations of this methodology point to the fact that we analysed the curriculum only from the specific point of view of the texts available in the bibliography of teacher education courses, without examining what was actually done with them. Thus, curriculum as a text in each educational system, and the application in teaching and the ambit of practices of the analysed bibliography, which are evidently very relevant in teacher education, are left out of this record.

The methodology used can be extended in at least three directions. First, it can be systematically applied in other countries to broaden the basis for comparing the TEPF.

Second, it can be used before and after a curriculum reform in teacher education in a country to capture the impact of the prescribed curriculum on the actual curriculum. Third, the methodology can be further developed to analyse a specific area of teacher education. A deeper analysis can include the discussions, traditions, and influences that inhabit the field of teacher education in a specific discipline.

Our study mapped authors and texts per categories of knowledge in teacher education in Argentina, Chile, and Uruguay, empirically identifying patterns of continuity as well as differences in key dimensions of their teacher education curricula. Future in-depth studies may provide important insights into the generation and reach of the fragmentation we have made visible, and its implications for the identities and capacities of prospective primary teachers in the Southern Cone of Latin America.

**Funding** In the case of Chile, this work was supported by the Agencia Nacional de Investigación y Desarrollo de Chile [FONDECYT 1221560].

**Data Availability** All data included in this article can be found in this link: <https://data.mendeley.com/datasets/bbzg683gwj/1>

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