Competency-Based Training Versus Teacher Training in Professional Performance: A Debate in Educational Sciences Programs

Lázaro L. Blanco-Figueredo¹ Universidad Católica de Temuco, Chile

Katerin E. Arias-Ortega² Universidad Católica de Temuco, Chile

Abstract: The purpose of this article is to conduct a descriptiveinterpretative analysis of the systematized and emerging theoretical assumptions in academic literature in initial teacher training, which show hints of a model based on professional performance as an alternative in contexts of social and cultural diversity. The article is based on an intercultural educational approach which has an indigenous perspective. This raises the urgency of rethinking teacher training processes in relation to indigenous and intercultural contexts based on appraisal and respect for indigenous children and young people's episteme, who hold cultural, ethnic, and linguistic differences. This article discusses the main limitations of the competency-based training model in educating teachers who take on inclusion and diversity of indigenous individuals as part of their professional performance. This research is qualitative and is grounded on content analysis of literature selected from internationally renowned databases. The literature review was organized around three areas of professional education: teaching, research, and practice. Results taken from this search were interpreted from the perspective of the educational model of the universities of the Araucanía region, Chile. An intercultural context that is characterized by a high enrollment of students from indigenous and rural communities. Results show associations among conceptual, attitudinal, procedural, and relational contents in professional training areas that might be subject of reconceptualization, this is, to enlarge the scope in the initial teacher training model by including intercultural professional performance in the context of social and cultural diversity. These areas fall into three categories: (a) development of intercultural critical thinking, (b) autonomous search of intercultural knowledge, and (c) intercultural communication, which are interpreted as useful for professional performance and are highly recommended in literature for their inclusion in educational sciences curricula.

Keywords: competency-based model, intercultural competencies, intercultural education, interculturality, teacher education.

¹ Corresponding Author: Ph.D. in Educational Sciences. Department of Educational Sciences, Universidad Católica de Temuco (UCT), Chile. E-Mail: lblancof78@gmail.com

² Ph.D. in Educational Sciences. Associate Professor of the Department of Psychology, Faculty of Health Sciences, Universidad Católica de Temuco (UCT). E-Mail: karias@uct.cl.

Literature Review

Over a decade ago, the Regional Strategy on Teachers in Latin America and the Caribbean, organized by the *United Nations Educational, Scientific and Cultural Organization* (UNESCO) emphasized the need for a profound renovation of the pedagogical and academic traditions of initial teacher training in the region (UNESCO, 2016). This is key to ensure inclusive, equitable and quality education and to promote lifelong learning opportunities for all by 2030 (United Nations, 2018). At international level, especially in Latin America, teacher training has focused on a competency-based model (Ferrada & Del Pino, 2019). This professional training model arose in Europe in 1999 (Dobbins & Knill, 2009), and its extrapolation to other socially and culturally diverse contexts represents a new neocolonial strategy that redresses the epistemic convergence of peripheral societies with the European cultural center (Bellagoun, 2022; Powell et al., 2012).

In 2004, the competency-based training educational model became institutionalized in higher education in Latin America through Alfa Tuning Latin America, an international cooperation project, with the aim of standardizing teacher training plans in the region with the European teacher education model in a context of globalization (Ferrada & Del Pino, 2019). However, the competency-based training model does not necessarily adapt to the major social and cultural diversity present in Latin American territories since most pedagogy programs do not consider the contexts of social inequality and poverty in which indigenous people live and are brought up, consequently, the Westernized curricular design reveals its decontextualization of educational needs and purposes of indigenous territory (Meunier, 2022; Quilaqueo et al., 2017).

Interculturality is excluded from teaching competencies since it is not an indicator evaluated by the national commissions for the accreditation of higher education in most Latin American countries (Arias-Ortega et al., 2022). Generally, initial teacher training in intercultural perspective is relegated to the goodwill and intentions declared in the mission of universities, despite the centrality of interethnic relations in the social and academic debate in the region (Dietz & Mateos, 2019). Consequently, intercultural teacher training is not mandatory for most universities in the region. Therefore, it is an invisible aspect in the content of pedagogy programs (Quintriqueo et al., 2014). This has resulted in the lack of preparation of teachers to meet the educational development needs of minority groups, such as indigenous peoples (Fickel et al., 2018). However, a more updated perspective on teacher training reveals that this should be configured based on the reality in which organizations and individuals engage (Jiménez & Montecinos, 2018). This comes into tension with the paradigm of a globalized world under the Western cultural hegemony, systematized under the competency-based training model (Kristoff, 2022). Likewise, this decontextualized training increases structural racism towards historical minorities, continuing with the coloniality of knowing and doing in the formation of trainee teachers. This increases the gaps between indigenous and non-indigenous, since for the latter, higher education becomes a negative space that does not fit their family and community environment (Maheux, 2020; Sosa & Quintana, 2020).

The article has been written in the Chilean region of Araucanía, the ancestral territory of the Mapuche culture, the larger indigenous ethnic group in the country. As teacher trainers and researchers of the pre-service teacher education (PTE henceforth) in a context of social and cultural diversity, the authors seek pedagogical alternatives that allow the incorporation of an intercultural educational approach in pedagogy programs to advance in an epistemological pluralism that progressively favors decolonization of higher education and thus fosters the formation of new citizens from an intercultural perspective.

It is assumed that in contexts of social and cultural diversity, competency-based training in educational science programs is based on a monocultural teaching method of a Western Eurocentric fashion (Dietz & Mateos, 2019) which results in the denial and lack of validity given to indigenous people's knowledge and ways of learning in higher education training programs (Harvey & Russell, 2018). This assumption is taken into consideration for the analysis of the data extracted from the selected literature. The purpose is to comprise new knowledge that claims for an urgent rethinking of initial teacher training based on the development of intercultural competencies to offer teaching and learning alternatives to account for local diversity, with a strong, rooted sense of social, cultural, and territorial relevance (Corbin & Strauss, 2014).

Consequently, through PTE, Western education systematizes a set of knowledge, procedures, attitudes, and values that attempt to homogenize an increasingly more diverse society (Chilisa, 2017; Ferrada & Del Pino, 2019).

From this analysis, in terms of the development of educational sciences programs in a context of social and cultural diversity, we pose our research questions: Is an educational sciences curriculum based on a competency-based training model compatible with an intercultural education approach? What is a relevant PTE alternative to implement in contexts of highly populated indigenous communities? What competencies can be incorporated into initial teacher training as a transition to an intercultural educational model?

Although several studies have highlighted the limitations of the competency-based training model in relation to an intercultural perspective of educational sciences programs (DesRoches, 2016; Fougere, 2021), there are few alternative proposals to this training model.

In response to the research question above, the objective of this article is to conduct a descriptive-interpretative analysis of the systematized and emerging theoretical assumptions in academic literature, which show hints of a training model based on professional performance as an alternative for teacher training in a context of social and cultural diversity. Its intention is to contribute to the reflection in the current debate associated with PTE from an intercultural perspective.

Theoretical Framework

The reflections and analysis carried out in this article are based on the intercultural educational approach, an academic alternative to the colonizing process of Western Eurocentric pedagogy (Ferrada & Del Pino, 2019; Maheux, 2020; Quintriqueo & Quilaqueo, 2019). In this sense, the underlying coloniality of Western pedagogical traditions standardizes the formation of people under the precepts of scientific epistemology, thereby denying other ways of knowing and understanding the world, such as indigenous lore and their ways of education (Chilisa, 2017; Kristoff, 2022). As a result, a monocultural process of PTE has been imposed in a context of social and cultural diversity, aligned with the cultural exclusion and social marginalization of minority groups. In the case of the indigenous population, they have developed their own educational rationality (Harvey & Russell, 2018).

Conversely, an intercultural educational approach contains an analytical and critical aspect that questions cultural domination and social injustice imposed by Western culture in indigenous contexts by means of the competency-based training model (Dietz & Mateos, 2019). In this sense, some studies (Balakrishnan et al., 2021; Kristoff, 2022) have argued the urgency of decolonizing teacher training in contexts of large indigenous populations.

The current article is an attempt to promote the intercultural educational approach in Chile, a model of education that values and respects cultural, ethnic, and linguistic differences of all students (Blanco-Figueredo & Arias-Ortega, 2022). Also, it progressively incorporates other views into the training of the new generations, such as indigenous educational contents and views to understand the world (Ferrada & Del Pino, 2019). Likewise, it promotes incorporating indigenous educational methods such as learning by doing, observing, listening, and inquiring about family members and the community to transmit knowledge (Arias-Ortega et al., 2022). From an intercultural educational approach, it seeks to offer a relevant training process from a sociocultural point of view for children and young people based on the educational needs and purposes of their respective territories (Harvey & Russell, 2018). This argues in favor of including the history, culture, and languages of indigenous peoples in the educational curriculum, as well as the promotion of equal opportunities for students of different cultural backgrounds, progressively reversing the educational gap between indigenous and non-indigenous students in higher education (Ibáñez-Salgado & Druker-Ibáñez, 2018; Maheux, 2020).

However, advances in educational policies in Chile have remained disconnected from initial teacher training (Quintriqueo & Quilaqueo, 2019). So, inequality and discrimination towards indigenous peoples, such as the Mapuche, continue to be installed in the curricula of pedagogy programs in higher education and the teachers' rationale (Arias-Ortega et al., 2022). In recent years, there has been a greater emphasis on implementing the intercultural educational approach in Chilean schools, especially in rural areas and indigenous communities (Peña-Cortés et al., 2017). At the same time, a latent challenge in the country's educational policy is to guarantee that in regions with high indigenous demography, such as the Araucanía region, teachers should be trained in pedagogical skills to understand and value other rationalities other than the Western one, such as the Mapuche culture that has struggled to survive and develop (Blanco-Figueredo & Arias-Ortega, 2022).

However, indigenous rationalities, such as the Mapuchean one, continue to be excluded from higher education in Chile, especially from the PTE process (Quintriqueo & Quilaqueo, 2019). The lack of an intercultural educational approach in the educational policy of Chile is a consequence of the imposition of the training model in pedagogy programs that denies the epistemic value of the social, cultural, and linguistic diversity, typical of a globalized world (Ferrada & Del Pino, 2019).

PTE is understood as the first stage of professional development, in which teachers in training acquire a set of teaching, disciplinary, methodological knowledge, skills, values, and cultural models associated with the requirements of the social context in general and the school institutions, which precede the professional performance stage (Mas-Torelló, 2015; Schon, 1992; Shulman, 2005; Ruffinelli, 2017). However, Westernized professionalization of educational sciences programs has turned PTE into a positivist and utilitarian process, through which learning scientific and methodological material related to education must precede the development of practical skills for teaching (Chilisa, 2017; Dietz & Mateos, 2019; Fickel et al., 2018). In this positivist, hegemonic and monocultural pedagogical framework, competency-based training is presented as the ideal model for the professional training of teachers, regardless of the cultural identity of the actors involved. The current model implies professional training in ignorance of the characteristics of sociocultural diversity of the children and young people that trainees might educate in the future (Harvey & Russell, 2018). This current situation hinders training of future teachers in pedagogical and intercultural skills (Fickel et al., 2018; Hansen et al., 2020).

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The term competency arose in the educational realm in the mid-20th Century, when the production and academic frameworks began to question whether the use of intelligence tests, ranking of scores from positivist evaluations and the level of schooling reached would successfully guarantee insertion of people into the job market (McClelland, 1973). The competency-based training approach is based on the dynamics of job training, which diminishes the prominence of higher education in holistically training professionals for the structural change of society (Powell et al., 2012).

In consequence, competency-based training in a context of social and cultural diversity has been conceived of as an essentially practical scientific (Chilisa, 2017), hegemonic, and professional education, based on work and action (Ferrada & Del Pino, 2019), in which diversity is negated or unseen (Jiménez & Montecinos, 2018). It is questionable whether the competency-based training model for educational sciences programs promotes a professional preparation that is relevant to the context, or whether it alternatively inhibits teacher autonomy (Miller, 2008).

Methodology

The study has a qualitative paradigm (Corbin & Strauss, 2014) since the research focuses on understanding and explaining the process of formation of pedagogical competencies in the context of social and cultural diversity through the interpretation of the data obtained in an in-depth review of the state-of-the-art literature. Thus, the research consists of a systematic literature review which is a rigorous method of collecting and analyzing previous studies on a specific topic (Creswell, 2013) to identify trends, patterns, or common conclusions in existing research (Makarova & Birman, 2016). This survey of scholarly sources provides an overview of the research problem.

The findings were organized and coded through a qualitative content analysis (Denzin & Lincoln, 2012) since it is a data analysis technique used to understand the meaning and context of the data (Makarova & Birman, 2016). To conduct the study, a varied, significant, and sufficient literature was selected that allowed the construction of a decolonizing theoretical framework regarding the PTE process in the context of social and cultural diversity (Blanco-Figueredo & Arias-Ortega, 2022). The selection of the literature and codification of the information was carried out in five steps.

Selection of Varied Literature

The selection of studies from different authors, methodologies, and theoretical approaches allows for a more complete and objective perspective on the topic in question (Ruffinelli, 2017). The criteria for selecting varied literature are:

- a) to include studies from different authors and countries,
- b) to select studies with different theoretical and methodological approaches, peer-reviewed,
- c) to include studies published in different internationally recognized databases,
- **d**) to include studies with contradictory results in order to be able to analyze the differences and similarities between them.

As a first step, a literature search was conducted in Spanish, English, and French with the following keywords: intercultural competencies, initial monocultural training, curriculum design, initial teacher training (Creswell, 2013). The literature consulted is of local, national, and

international scope. This ensures that the selected articles address the topic of interest from different cultural perspectives and from different scientific positions (Blanco-Figueredo & Arias-Ortega, 2022). In this step, 328 texts were selected.

Selection of Relevant Literature

The selection of relevant and significant studies allows obtaining more accurate and reliable results (Creswell, 2013). It is important to obtain results based on the available scientific evidence (Blanco-Figueredo & Arias-Ortega, 2022). Criteria for selecting significant literature include:

- a) to select up-to-date studies on the topic,
- b) to include studies that present novel results in the field,
- c) to select studies that use rigorous methodologies and clear methods of data analysis,
- d) to prioritize studies published in the last 5 to 10 years.

As a second step, most of the selected literature is indexed in the Scopus database, a globally recognized data archive that applies rigorous procedures for the approval and publication of scientific studies (Makarova & Birman, 2016). Scientific papers published in other databases, peer-reviewed or conducted by recognized authors on the object of study were included in the selection.

The search is conducted after 1973, as this year marks the first academic publications on the competency-based training model. However, in the search strategies, priority was given to the selection of recently published literature. In this step, the number of selected articles was reduced to 173 texts.

Selection of Sufficient Literature

The selection of sufficient literature minimizes a bias in the selection of studies (Creswell, 2013) and increases the validity and reliability of the review, which in turn increases the reliability of the results obtained (Denzin & Lincoln, 2012). As inclusion criteria we established theoretical saturation of the emerging categories.

As a fourth step, after the literature was selected and examined, summaries of the most relevant articles and texts were written down (Creswell, 2013). The summaries were evaluated by two reviewers working independently using (a) *include*, (b) *exclude*, or (c) *maybe* as evaluation options. Choice conflicts were resolved in reviewer team meetings by inviting an expert as a third party to ensure that there were no threats to validity. In this step, the literature selection was reduced to 97 academic, scientific texts.

In the fifth step, the literature review was organized around the description of three areas of PTE: teaching, research, and practice until the theoretical saturation of the content was reached (Corbin & Strauss, 2014). As a result of this last step, 55 academic, scientific texts were selected for the systematic review. They are referenced at the end of this article.

Coding of Information

Coding is the process of identifying significant themes or patterns in the data collected during qualitative research (Creswell, 2013). It is a process of analysis that involves examining the content of the data and grouping it into thematic or conceptual categories that reflect the main ideas

or themes that emerge from the data (Corbin & Strauss, 2014). The coding of the information is carried out as follows: (a) data processing, (b) conceptualization and interpretation of the data, and (c) discussion of the findings.

Data Processing

The first step in the coding of the information was to identify the key concepts that emerge from the data and that allow us to have a first approach to understanding the object of study (Corbin & Strauss, 2014). The coding of the information was carried out with the help of the Atlas.ti-9 software. This software allows that, once the selected documents have been entered, the data can be segmented into units of meaning in accordance with the objective of the study. This software reveals data in the form of networks of key concepts.

First, a list of key words, phrases, and concepts related to the objective and research questions was made. The significant phrases were organized according to their meanings into groups of common content called codes (Creswell, 2013). For reasons of space, the list of codes is not included in the article, they are implicit in the discussion section.

The codes were regrouped according to patterns and relationships between them into subcategories (Gibbs, 2012). Subcategories possessing the same meaning were grouped into new units of meanings of a higher order of abstraction called categories (Corbin & Strauss, 2014). The emerging categories were interpreted as the professional performance guidelines applicable to initial teacher education in an indigenous context.

Conceptualization and Interpretation of the Data

During the development of the system of codes, subcategories, and categories, the researcher goes in a constant back-and-forth reading and coding of the data (Corbin & Strauss, 2014). In that sense, as a second step of coding, links among sets of data were established to group them into thematic networks (Bleton et al., 2022). This search for common denominators involves thinking procedures: induction-deduction (Corbin & Strauss, 2014) and analysis-synthesis (Gibbs, 2012).

The study of the competency-based training model starts deductively, i.e., it is carried out from the general to the specific (Makarova & Birman, 2016). This occurs because general statements based on existing theory are applied to the specific circumstances of initial teacher education in an indigenous context (Gibbs, 2012).

Parallel to deduction, inductive inferences were made (Bleton et al., 2022; Ruffinelli, 2017). In that sense, the analysis of the information moves from the specific to the general (Gauthier & Bourgeois, 2020). This type of argument has as its starting point the accumulation of many specific events or similar cross-cultural PTE experiences to identify, based on the repetition and likelihood of the collected data thematic patterns and emergent categories (Gibbs, 2012).

Inductive and deductive inferences from the data indicate that the professional contents of pedagogy programs (learning to know, learning to do, learning to be, and relational contents) are of little relevance to intercultural teacher education in the context of social and cultural diversity. Therefore, comparing the competency training model systematized in the literature with the facts of initial teacher training in the context of social and cultural diversity revealed the urgency of deepening the logic and content of a model of initial teacher training based on intercultural professional performance.

At the same time, the analysis-synthesis of the extracted data was carried out. The analysissynthesis consists of the organization, classification, summary, and interpretation of the selected information (Gibbs, 2012). The gathered information was broken down into three areas of PTE: teaching, research, and practice, to go deeper into each area of professional training. As a result, irrelevant concepts for the study were eliminated, and the data sample or simplified into smaller units of importance.

Then, through synthesis, the integration of information takes place without juxtaposing the analyzed data (Corbin & Strauss, 2014) to make the units of signification extracted from the text as meaning (Creswell, 2013). The analysis-synthesis has been fundamental to capture in depth, the richness and diversity of meanings systematized in the documentary sources consulted that indicate the importance of including intercultural professional performance in PTE.

Discussion of the Findings

Finally, as a third step, the theoretical triangulation of the three areas of PTE: teaching, research, and practice (Varpio et al., 2017). The triangulation allows mapping the emerging qualitative relationships (Creswell, 2013), which characterizes the modes of intercultural professional performance. In that sense, the theoretical triangulation allowed the discovery of ten subcategories, which were grouped by the theoretical affinity, in three categories of a higher level of abstraction (Corbin & Strauss, 2014): (a) development of intercultural critical thinking, (b) autonomous search for intercultural knowledge, and (c) intercultural communication. As a result, a conceptual framework was developed to synthesize the relationships among codes, categories, and subcategories identified in the qualitative systematic review. This conceptual framework helps explain the results and provides a solid basis for understanding the object of the study (Creswell, 2013).

Critique of the Monocultural Educational Sciences Curriculum in an Indigenous Context

Most of the definitions of the term professional competency agree on relating this to the accumulation of professional contents: conceptual (learning to know), procedural (learning to do), and attitudinal (learning to be), which the competent individuals can activate to optimally resolve situations and problems that are specific to their work profile (Mas-Torelló, 2015).

PTE professional content is part of the pedagogical cultural background transmitted to teachers in training from diverse sources (academics, stakeholders, textbooks, scientific articles, audiovisual material), which is appropriated throughout the course of the degree program (Chilisa, 2017). The conceptual contents are associated with the system of knowledge (concepts, categories, hypotheses, proposals, models of thinking, principles, laws, and theories) that must be mastered by the subjects training to be teachers (Coll, 2007). The procedural contents are associated with the system of skills, habits, actions, procedures, problem-solving methods that the agents in training structures around the value placements they make on their social and cultural environment such as: values, interests, convictions, feelings, and attitudes, out of which decisions are made (Zabalza, 2009). Teachers are competent when they are capable of mobilizing and integrating all these cognitive resources, capacities, and practical skills to efficiently face determined situations in their professional performance (Mas-Torelló, 2015).

The professional content in the curricular framework responds to these questions: What to teach? What to learn? (Coll, 2007). The answers to the previous questions urgently demand a rethinking of the professional content of teacher training programs, considering the diversity of

outlooks, points of view, and different identities in existence in the context of training (Fougere, 2021; Ibnelkaïd, 2012). A summary of the main competencies implemented in PTE is as follows:

- a) Cognitive competencies, associated with pedagogical and disciplinary knowledge of the subject taught (Villarroel & Bruna, 2017). Generally, this type of competencies is biased by scientific knowledge, so that indigenous knowledge is generally excluded from the professional content of PTE (Fickel et al., 2018). This results in cognitive competencies that do not fit the ways of teaching and learning styles historically developed by indigenous peoples (DesRoches, 2016).
- b) Metacognitive competencies, associated with the development of reflective, critical, and self-critical thinking about pedagogical work (Villarroel & Bruna, 2017). Generally, in Western culture the development of teachers' metacognitive competencies is based on the understanding of Western reason and logic that ignores the indigenous vision of a holistic and integrated world (Blanco-Figueredo & Arias-Ortega, 2022). In that sense, metacognitive competencies are directed to the development of an individualistic conception of professional performance, without taking the community and cultural dynamics, which affects learning process of indigenous students (Burgess, 2017).
- c) Social competencies related to communication, participation, and knowledge of the educational environment (Villarroel & Bruna, 2017). These competencies are developed by teachers in training from the Western perspective of power hierarchies (Dietz & Mateos, 2019). This causes student teachers to conceive their teaching work as a linear and hegemonic act of communication, without valuing the pedagogical importance of other forms of pedagogical communication such as dialogic or symbolic, typical of indigenous cultures (Ferrada & Del Pino, 2019). In this way, the forms of education developed by indigenous families, which are based on close and horizontal relationships among people, are made invisible in initial teacher training (Hansen et al., 2020).
- d) Competencies to plan and organize the teaching and learning process (Villarroel & Bruna, 2017). These competencies are centered on a linear and homogeneous conception of teaching, which does not take specific learning styles of indigenous individuals into account (Del Pino et al., 2019). Therefore, teachers in training develop competencies such as the design of standardized lesson plans, selection of teaching materials and evaluation types. This standardization does not integrate the specific needs and realities of indigenous contexts into teaching (Balakrishnan et al., 2021). It also hinders inclusion and equitable education for all students.

Consequently, the competency-based model has no intention of promoting the contributions of the indigenous worldview to understanding the world and the education of people as part of PTE (Bissonnette et al., 2022; Bleton et al., 2022). Thus, the model of training by competency, by not projecting an inclusive vision towards the whole of society, constitutes a mechanism of social control through which the dominant culture has historically determined an ideological orientation of education to legitimize itself in power (Chilisa, 2017; Sleeter, 2018).

On the other hand, from an intercultural and critical standpoint, Ferrada and Flecha (2008) maintain that curricular design is a social construct contextualized to the teaching and learning requirements defined by the people who make up an educational community, through multiple sociohistorical interactions of power and dialogue. These ideas distance the PTE process from the standardization imposed by the competency-based training model and place it in a process of

interpretation of experiences, which in a context of social and cultural diversity are necessarily different from Westernized ones.

From this perspective, we must urgently reinterpret the PTE process in a context of social and cultural diversity, in terms of the connections and tensions that occur between people in the exchange of meanings from culturally distinct positions. From this perspective, UNESCO (2010) and the Organisation for Economic Co-operation and Development (OECD, 2010) maintain that PTE – based on intercultural development – is essential to ensure that future professionals be capable of developing professional performance methods that are consistent with diversity in teaching and learning processes in a region which those demographic characteristics.

Another limitation of the competency-based training model in context of large indigenous populations is the fragmented position of pedagogical and disciplinary knowledge in the training itinerary, through the areas of professional education: teaching, research, and practice (Quintriqueo et al., 2014; Shulman, 2005). This is an educational conception that equates to the Westernized cultural vision in terms of understanding the world, which is transmitted to new generations through education and especially through teacher training.

Consequently, the central focus of the teaching area of curricular design is the acquisition of theoretical, disciplinary, and normative knowledge of the teaching profession (Shulman, 2005). The priority in the competency-based training model is scientific knowledge (Coll, 2007; Mas-Torelló, 2015). Therefore, learning the conceptual contents of the disciplines, their methodologies, and procedures (learning to know and learning to be) becomes a hegemonic approach where the professional content excludes the ecology of types of knowledge that could be present in the training context (Dietz & Mateos, 2019). Furthermore, the historical teacher-student relationship in intercultural contexts has been sustained by a hegemonic hierarchy of the teacher towards the subjects in training (DesRoches, 2016), through the transmission of scientific knowledge as the only civilized option for understanding the world (Chilisa, 2017).

However, for Zabalza (2009), pre-service professional education is a process that encompasses more than learning disciplinary content, to integrate a much broader set of capacities, dispositions, and attitudes. The, according to Larochelle-Audet et al., (2016), demands that educational sciences programs train teachers to learn to act in a particular context. For this reason, the urgency of training teachers – who might work in contexts with large indigenous populations – in professional performance calls for the development of intercultural critical thinking. This is why some scholars, such as Freire (2005), have supported the feasibility of adapting the teaching and learning process to the social, historical, and cultural characteristics present in the school context, favoring the emancipation of children and young people having a strong sense of sociocultural belonging. At the same time, this process of adaptation might give them tools to develop in a globalized world.

In the competency-based training model, the research area is associated with the ability to discover and interact (learning to know and learning to do). This is significant in the acquisition of new knowledge on education and its practices within the framework of educational interactions (Fougere, 2021). However, the barriers imposed in academics to intercultural dialogue have meant that, historically, in the curricular framework of educational sciences programs, research competencies from an intercultural perspective have been overlooked (Chilisa, 2017). For this reason, the PTE process in indigenous educational contexts should encourage teachers to autonomously search for intercultural knowledge, a way of professional performance that provides teachers with tools to handle intercultural problems that emerge in contexts of sociocultural diversity.

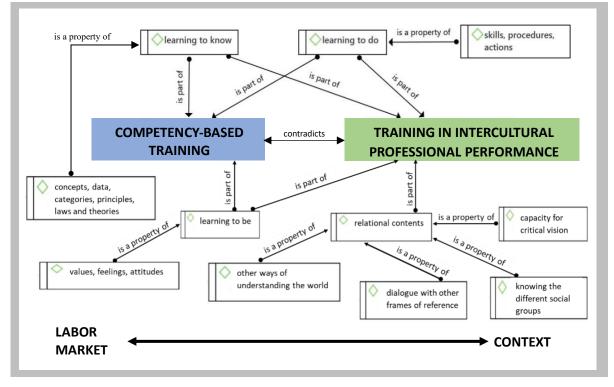
In the competency-based training model, the area of pre-professional practice involves the interaction of the subject in training with the object of the profession (Zabalza, 2009). This is the most professionalizing curricular area in curricular design (Schon, 1992). According to Shulman (2005), this is about the knowledge obtained from the practice itself (learning to do and learning to be). In this sense, the teacher appropriates learning to do in education that is based on two components. The first has a theoretical nature associated with the disciplinary and professional domain, which in essence is knowledge, and the second component comes from the practice itself, the operative, spontaneous, and dynamic element, knowledge in action (Nuttall & Brennan, 2016; Schon, 1992). However, according to Quilaqueo et al., (2017), the competency-based training model does not prepare pedagogy students in pre-professional practice to communicate and interact with indigenous students, their families, and the community in their native languages.

The preceding demands that pedagogy students be trained in indigenous customs and languages and professional performance to allow them to establish appropriate intercultural communication in the indigenous educational context (Maheux, 2020).

The issue raised so far confirms that curricular design in educational sciences responds to the question posed by Sleeter (2018): What is the perspective from which we want to teach students to see the world and to see themselves in the world? (See Figure 1). The answer, within a framework of a culturally and socially diverse society, places pre-service teacher education at the crossroads of the conflict between the hegemony of occidental teaching (Schon, 1992; Zabalza, 2009) and the interpretation of life experiences in context (Freire, 2005; Maheux, 2020).

Figure 1

Relationships between the Competency-Based Training Model/Professional Performance Training Model



Note. Author's own elaboration, with the help of the Atlas.ti-9 software.

This dilemma challenges institutes of higher education to rethink the day-to-day modes of learning to know and learning to do enclosed in the competency-based model of teacher training programs, to move towards other forms of intercultural knowledge (know how to relate to each other), relevant to the diversities of the training context (Burgess, 2017; Harvey & Russell, 2018; Radhouane, 2017). Historically, however, institutes of higher education have been known to make cultural differences invisible in professional training processes (Sosa & Quintana, 2020). In this sense, the logic and content of a training model for teachers based on intercultural professional performance will be delved into in the following section.

Training in Intercultural Professional Performance

From a constructivist (Denzin & Lincoln, 2012), critical (Freire, 2005), and intercultural standpoint (Arias-Ortega et al., 2022), PTE curricular designs in a context of social and cultural diversity must integrate relational content (Radhouane, 2017) to conceptual, attitudinal, and procedural content (Gélinas-Proulx et al., 2017).

In the curricular design, relational content includes the system of interactions of people with the natural and social world, where these are associated with learning to live together, learning to understand, and learning to connect (Fougere, 2021). When it takes on a professional character, this content expresses the awareness, knowledge, understanding and sensitivity that the graduate demonstrates towards other cultures that are epistemically different from Western culture (Blanco-Figueredo & Arias-Ortega, 2022). However, this type of content is usually absent or minimal in most educational sciences programs (Ferrada & Del Pino, 2019).

According to Fougere (2021), teacher training in intercultural professional performance is composed of five main components:

- 1. Intercultural point of view and approach, which implies being able to be oneself based on one's own frames of reference (learning to be). This implies the development of an attitude of epistemic openness, to address and discover other ways of understanding the world from one's own frame of reference in articulation with other culturally different frames of reference (Ibáñez-Salgado & Druker-Ibáñez, 2018).
- 2. Knowledge (learning to know), which implies knowing the different social groups in interaction, their products and their practices, awareness of their interactions between society and individuals; this includes knowledge about intercultural theories and different cultures context (Dietz & Mateos, 2019).
- **3.** Mutual understanding (learning to understand), which implies putting interpretations into dialogue based on the subjective and intersubjective meanings and standards of the sociocultural frameworks in interaction (Sosa & Quintana, 2020); a way of systematizing knowledge about one's own culture in epistemic articulation with other frames of reference that interpret natural, spiritual, and social phenomena differently (Maheux, 2020).
- **4.** The ability to discover and interact (learning to be and learning to do), to acquire new knowledge about a culture and its practices, making it possible to negotiate different points of view and aptitudes within the framework of real-time communication and interaction (Hansen et al., 2020). It is essential for teachers to develop skills that allow them to put into practice diverse learning strategies from other cultures, promoting analysis and self-analysis to respond appropriately in a context of social and cultural diversity (Gélinas-Proulx et al., 2017).

5. The capacity for critical vision (learning to connect), which refers to the ability to critically evaluate points of view, practices, and products in one's own frame of reference with other frames of reference in interaction (Chilisa, 2017).

Burgess (2017) found that teachers who have been trained in intercultural professional performance feel more confident and willing to engage in educational relationships with indigenous peoples. From this perspective, PTE becomes a multilateral learning process, in which future teachers learn to coexist with other teachers and students with epistemic frameworks other than the Western framework, learn from them, and assimilate new individual and collective responsibilities in the face of diversity (Sosa & Quintana, 2020). Consequently, professional performance methods acquire an intercultural character when they enable teachers to establish appropriate and effective relationships with knowledge, worldviews, and people with different cultures.

In short, training and development of intercultural professional performance methods in teachers enable education in the context of social and cultural diversity to respond to two big challenges for sustainable development. The first is associated with ensuring access to equitable quality education and lifelong learning for all (United Nations, 2018). The second refers to an awareness of the importance of social and cultural diversity without hierarchy, where individual experiences are valued and promoted (UNESCO, 2017).

From the previous analysis, this study raises the intercultural professional performance methods that are most frequently discussed in scientific productivity in relation to PTE.

Results and Discussion

Fifty-five texts were selected for the study. Forty-two scientific articles were included, representing 76.36 % of the selected literature, of which 69.05 % were published in the Scopus database, the rest of the articles were indexed in other peer-reviewed databases. In addition, seven books (12.73 %) published by authors widely cited in the research topic and one doctoral thesis report were included. This means that the consulted material has been validated by experts. In addition, five reports or articles (9.09%) published on the websites of relevant international organizations were selected to support the social significance of the study.

Of the 55 titles included in the review, 40 texts have been published in the last 10 years. Thus, 30.91% of the total number of systematized references are between six and nine years old and 41.82% are less than five years old. This has made it possible to identify the current state of research in the field, epistemic gaps in theory, and emerging trends.

It was found that qualitative methodological approaches prevail in the research community in relation to the formation of teaching competencies in the context of social and cultural diversity. Therefore, results consulted are influenced by the subjective perspective of the authors. Nevertheless, three studies with a quantitative approach and three with a mixed methodological approach were included, which provides a point of comparison. Although the search was carried out in international databases, 14 studies of local and national scope were included, which shows the contextualized perspective of the problem in a globalized world. The main findings of the study are discussed below.

After applying the theoretical triangulation to the content of the three areas of PTE, namely teaching, research and practice (Varpio et al., 2017), information is graphically represented (Figure 2). It was known that, in the context of social and cultural diversity, the content of the areas of professional training interacts in the curricular design in a logic of unity and reciprocal opposition among them (Freire, 2005).

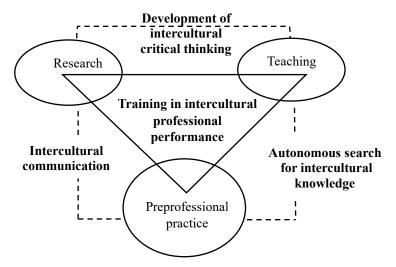


Figure 2

Map of Qualitative Relationships between Professional Training Areas

Note. Author's elaboration.

Consequently, the dynamics of the initial teacher training process in indigenous context provokes methodological (Ibáñez-Salgado & Druker-Ibáñez, 2018), epistemological (Harvey & Russell, 2018) and ontological (Ferrada & Del Pino, 2019) interactions of a transdisciplinary and holistic nature (Denzin & Lincoln, 2012) in which it is important to delve deeper.

The theoretical triangulation of the content of the three areas of PTE (teaching, research, and practice) revealed three categories which are latent in literature: (a) development of intercultural critical thinking, (b) autonomous search of intercultural knowledge, and (c) intercultural communication, which are interpreted as useful professional performance for the initial training of teachers in the context of social and cultural diversity.

Category 1: Development of Intercultural Critical Thinking

This first category emerges from the epistemological and transdisciplinary relationships between the areas of professional training for teaching and research. Undergraduate teaching is the training area associated with learning to know and learning to be because this is where an individual learns to feel the profession and build a professional identity (Bissonnette et al., 2022).

In the training model in intercultural professional performance, student-centered learning is prioritized in undergraduate teaching (Hansen et al., 2020). Under this concept, subjects in training are responsible for their learning and the development of their professional skills (Freire, 2005). However, historically in the field of Western monocultural teaching, academics have sustained their formative influences within the framework of disciplinary teaching, which has limited students' construction of educational meanings associated with other logics of understanding the world, such as indigenous worldviews (Arias-Ortega et al., 2022). Teacher training in intercultural professional performance implies transmitting a diversified set of knowledge to future teachers, both in terms of skills and intercultural strategies, to conceive of teaching and learning situations with social, cultural, and territorial relevance (Ragoonaden, 2011).

Table 1

Develo	pment o	f Intercu	ltural C	Critical	Thinking
Dereto		inter cut		nuccu	I TUTTING

Definition of the category	Subcategories
The development of intercultural critical thinking is a social practice through which individuals develop	Epistemological pluralism
epistemic curiosity to understand the position of another person in juxtaposition to their own, by giving meaning to situations in daily life (Blanco-Figueredo & Arias-Ortega, 2022). It is a way to develop	Self-training in the knowledge of the profession
intercultural curiosity, by trying to analytically examine the relations of oppression and inequality that have historically been legitimized through education	Autonomy capacities
and PTE (DesRoches, 2016). This category is associated with learning to connect.	Questioning power relations

Undergraduate teaching linked to the research of teaching, experiential and methodological knowledge of epistemological plurality favors the development of intercultural professional performance (Bellagoun, 2022). Therefore, the undergraduate teaching-research relationship is the fundamental epistemological combination for teachers in training to develop the professional performance method of intercultural critical thinking (Blanco-Figueredo & Arias-Ortega, 2022).

Intercultural thinking is associated with teaching epistemological pluralism (Quintriqueo & Quilaqueo, 2019). Harvey and Russell (2018) propose the formalization of an intercultural curriculum raised in neutral terms that trains teachers in the creative selection of educational content based on the articulation between indigenous knowledge and the understanding of scientific knowledge. This is an aspect that still represents a challenge to higher education in Latin America (Dietz & Mateos, 2019).

Extrapolating from Freire (2005), the development of intercultural critical thinking is a means of lifelong reflective learning, which requires the development of professional autonomy and self-training capacities. Consequently, Chilisa (2017) argues that intercultural critical thinking is based on the understanding and recognition of one's own culture and the culture of the others through research into educational reality to understand the effects of these intercultural relations. This can be achieved through dialogue and reflection with subjects who have been placed in a subaltern status to then build common knowledge (Balakrishnan et al., 2021).

Professional action based on critical ways of thinking questions hegemony and social inequality rooted in contemporary society, which has historically conditioned the construction of meanings in the educational system (Freire, 2005; Burgess, 2017). Teachers are expected to become empowered as agents of educational change to promote the shared wellbeing of the most dispossessed, such as indigenous peoples.

Category 2: Autonomous Search for Intercultural Knowledge

This category emerges within the framework of methodological and transdisciplinary relationships between the areas of research training and pre-professional practice. In the training model in intercultural professional performance, the research area contributes to the appropriation and development of autonomous and innovative professional performance, which allow teachers in training to learn to solve professional problems that arise in the classroom, applying acquired

knowledge to new situations (Chilisa, 2017). It is possible for the subject in training to critically reflect on and research their own professional practice (Sosa & Quintana, 2020). Therefore, curricular relationships between the areas of research training and pre-professional practice are relevant for future teachers to learn to build a tailored educational intervention that considers the sociocultural relevance of the other (Bellagoun, 2022). It is within the framework of intervention in intercultural educational practice through research that intercultural professional performance is formed in teachers: autonomous search for intercultural knowledge.

Table 2

Autonomous Search for Intercultural Knowledge

Definition of the category	Subcategories
The autonomous search for intercultural knowledge seeks to provide teachers in training with the set of knowledge, skills, and values needed to search for information on new	Training based on professional problems
methodologies and teaching resources (Sosa & Quintana, 2020) for independent construction through reflection in and on educational action, of new knowledge in context that provides answers to problems that emerge in the	Learning in context
intercultural classroom (Hansen et al., 2020). This mode of intercultural action is associated with learning to understand (DesRoche, 2016).	Co-construction of educational knowledge

The autonomous search for intercultural knowledge is associated with learning to understand, which requires teachers in training to learn to get involved in the social diversities of all their students, indigenous or otherwise to interpret the origin of intercultural tensions that may arise in an educational arena (Fougere, 2021). Thus, PTE based on the autonomous search for intercultural knowledge helps teachers in training to continually develop the ability to learn to learn, learn to educate, and learn to research, or put another way: learn to make the act of instructing relevant and to educate in a context of social and cultural diversity (Brassier-Rodrigues et al., 2022).

For this, it is necessary to focus on training based on professional problems (Chilisa, 2017). The pre-professional practice of teachers in training can focus on the research of some professional problems such as: a) the need to characterize and diagnose students, the group, the family and the community environment in diversity (Riquelme et al., 2016), b) the search for intercultural procedures and alternatives that stimulate plural learning in indigenous and non-indigenous students (Peña-Cortés et al., 2017), c) school evaluation from a bias of Western pedagogical rationality (Del Pino et al., 2019), d) the coordination of predominantly Western monocultural educational work with culturally diverse educational stakeholders and community leaders (Quintriqueo & Quilaqueo, 2019). It is also important to identify the dynamics of rejection or isolation that can affect children and young people who come from vulnerable social contexts, such as indigenous communities (Ragoonaden, 2011).

It is important to note that training based on resolving professional problems prepares teachers in training to teach indigenous and non-indigenous students to identify and resolve difficulties that affect relationships between people with different cultural origins (Chilisa, 2017). In addition, Fickel et al. (2018) reports that the autonomous search for intercultural knowledge demands learning in the context of professional content. Learning in context consists of the

mobilization and integration of epistemic, cognitive, methodological, and practical resources into professional work with a sense of social, cultural, linguistic, and territorial belonging (Ferrada & Flecha, 2008). Consequently, it is important that the search for information carried out by teachers in training is developed through horizontal epistemic relationships with actors from the intercultural social environment (Burgess, 2017). In other words, through the co-construction of knowledge with fathers, mothers, elders, and other preponderant indigenous stakeholders in the territories where training takes place (Hansen et al., 2020).

Kristoff (2022) found that the co-construction of professional knowledge develops a respectful representation of indigenous knowledge in subjects in pre-service education and contributes to reducing cultural gaps between people of different cultures. Ibáñez-Salgado and Druker-Ibáñez (2018) found that to the extent that teachers in training are able to autonomously delve into the co-construction of intercultural knowledge, they develop the ability to constantly reconstruct new meanings in relation to diversity and their profession.

Hansen et al. (2020) found that, by co-constructing knowledge with the elders from an indigenous community, educational sciences students developed transformative learning outcomes in a spirit of collective reciprocity. This enabled them to consolidate skills to develop relationships of trust and mutual respect with other people.

As a result of this, the autonomous search for intercultural knowledge is an intercultural professional performance method that helps future education professionals to develop greater sensitivity toward issues that affect indigenous cultures. It is also a way to learn the role of cultural mediator that falls to teachers in intercultural school contexts.

Category 3: Intercultural Communication

This category emerges from the ontological process associated with the system of influences that teachers in training receive through undergraduate teaching, which they interpret and then transmit to new generations through pre-professional practices. In the intercultural professional performance training model, the area of pre-professional practice is of vital importance so that future educators can appropriate professional performance methods and procedures that allow them to adequately handle problems and situations in a space of social and cultural diversity (Brassier-Rodrigues et al., 2022).

Therefore, training to be a teacher implies the development of learning to connect and learning to live together based on a symmetrical educational relationship between oneself and the other (Hansen et al., 2020). This is achieved through dialogue, through intercultural communication (Balakrishnan et al., 2021).

Intercultural communication implies using education to create a dialogue on the multilateral relations between the teacher-student/student-student and between these and other social stakeholders (Heyman, 2017), based on the subjective and intersubjective meanings and standards of the sociocultural frameworks in interaction (Fougere, 2021).

Balakrishnan et al. (2021) found that intercultural communication between subjects from different cultures facilitates cooperation between them by promoting mutual understanding in contexts of respect, appreciation, and acceptance of the other from a global and local perspective. Development of the intercultural communication professional performance method is associated with the contextualization of teaching, an aspect that requires teachers in training to have the ability to acquire and assess knowledge, educational traditions, and worldviews of the indigenous world (Ferrada & Del Pino, 2019). The pre-professional practice, as a formative element of the intercultural communication professional performance method, challenges educational sciences

students to distance themselves from their own culture and be attentive to misunderstandings and erroneous interpretations that can emerge in the context of interaction with subjects belonging to different cultures, such as indigenous students. According to Heyman (2017), the intercultural communication professional performance method implies a paradigm shift to advance the knowledge of the other's culture, to come to share the general values of humanity and the specific values of indigenous peoples in a shared sphere of action. However, for teachers to appropriate intercultural professional performance, it is important to use teaching methods associated with educational traditions, customs, and worldviews relevant to the training context in undergraduate teaching activity (Kristoff, 2022).

Table 3

Intercution Communication	
Definition of the category	Subcategories
Intercultural communication implies training future	Development of shared
educators to interact through intercultural dialogue	attitudes and behaviors
with subjects from different cultures (Heyman,	
2017), based on negotiation and mediation processes	Systematization of
of the heterogeneous cultural knowledge that enters	intercultural dialogue
the interaction (Ferrada & Del Pino, 2019). This	
implies being able to put oneself in the place of the	Contraction of
other as a legitimate other, to build multi-referential	Contextualization of
knowledge (Hansen et al., 2020). This is associated	teaching
with learning to live together (Freire, 2005).	

Teaching methods have an instructive function and an educational one (Coll, 2007). Consequently, Quilaqueo et al. (2017) found that where the importance of intercultural methods for education is valued in PTE, significant modifications are produced in the perceptions of the actors in training regarding the meanings of indigenous educational knowledge for education.

In this sense, the use of dialogical methods in PTE (Freire, 2005) is essential for the development of intercultural communication in teachers in training, since language acts as a significant mediator between the context and the creation of meanings (Toussaint & Fortier, 2002). Thus, the construction of the intercultural communication professional performance method becomes a social space that counteracts the monocultural linearity of the educational sciences curriculum in the context of social and cultural diversity.

Conclusions

The study concludes that the competency-based teacher training model in the context of social and cultural diversity must move from a Westernized monocultural conception that negates the logic of indigenous knowledge toward a comprehensive assessment of interculturality as a positive element that generates professional performance in teaching that is relevant to diversity. Courses of action include the urgency to redesign the educational sciences curriculum to promote a pre-service training focused on the acquisition of knowledge, skills, and values that develop critical intercultural thinking in teachers in relation to the social and educational reality. This would make PTE a link between the social, cultural, and technological demands derived from globalized intercultural relations and the aspirations of equity, equality, and diversity of the most vulnerable people.

The autonomous search for knowledge implies preparing education professionals in the pedagogical capacity for reflection and action to reverse the historical submissiveness of teaching, research, and professional practice to the dominant contents and methodologies. This considers that teachers in training must feel empowered to analyze difficult situations that arise daily in educational praxis to innovate new learning that is appropriate to the context of social, cultural, and territorial diversity in which training takes place.

The study of intercultural communication suggests that intercultural dialogue is a significant educational tool for developing anti-racist, anti-discriminatory attitudes, and behaviors in teachers. This leads to educational sciences graduates with the capacity to continuously reconstruct learning to know, learning to do, and learning to be from an intercultural perspective. Finally, this study poses the hypothesis for future studies that teacher training in intercultural professional performance can improve academic educational success of all students, especially those who are in a situation of vulnerability or belong to social minorities, such as indigenous people.

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Notes on Contributors

Lázaro L. Blanco-Figueredo, Ph.D. in Educational Sciences from the Universidad Católica de Temuco (UCT), Chile, having 20 years of experience in undergraduate and graduate education in Chile and abroad. He has taken part in several national and international research projects. Lines of research: initial teacher training, educational innovation, and intercultural education.

Katerin E. Arias-Ortega, Ph.D. in Educational Sciences from Universidad Católica de Temuco, Chile. Associate Professor, Department of Psychology, Faculty of Health Sciences, Universidad Católica de Temuco (UCT), Chile. Associate researcher at the Laboratoire d'études, de recherche et de didactique de l'univers social-LERDUS Campus de Rouyn-Noranda, Quebec, Canada. Line of research: Education and interculturality.

ORCID

Lázaro L. Blanco-Figueredo, https://orcid.org/0000-0001-9501-826X *Katerin E. Arias-Ortega*, https://orcid.org/0000-0001-8099-0670