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Educational policies and reforms

The ever-changing society requires educational and training processes that respond to contemporary challenges; in this sense, education develops according to those transformations that occur in the light of educational policies and reforms. Educational policies, due to their importance in the ideal of guaranteeing and improving the quality of education, have been the object of various reforms in search of responding to the needs of a complex and diverse social reality. Those policies, understood as strategic guidelines that orient an educational system, guide the formation of citizens from structural actions that materialize in the different areas of the educational process. However, it is also analyzed to what extent these policies are translated into concrete actions that are implemented in the daily life of the classroom according to the particularities of the context. Thus, the critical investigation of these policies is key to achieve sustainable educational change.

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Large-scale education reforms and policies *Reformas y políticas educacionales a gran escala*



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The expansion of federal education policy and its impact on the indicator of adequacy of teacher training in Brazil

La expansión de la política educativa federal y su impacto en el indicador de adecuación de la formación docente en Brasil

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Abstract

The initial teacher training for basic education gained prominence on the Brazilian public agenda in the 2000s, leading to a series of public policies. One of these policies involved reserving 20 % of the seats in the newly created Federal Institutes for initial teacher training, in what were called undergraduate teaching courses. At the time, there was a growing shortage of teachers, both in quantitative terms (reflected in the lack of teachers) and qualitative terms (with many professionals in the classroom who did not have specific graduation in the subject they were teaching). This study specifically focuses on the Federal Institutes, with the aim of analyzing their impact on improving the educational indicator "teacher training adequacy," an instrument used by the Ministry of Education to monitor the progress of public policies designed to address issues related to teaching in basic education. Using a quantitative and descriptive correlational approach, the study uses three statistical databases from the Ministry of Education to explore the relationship between the availability of seats in teaching courses and the teacher training adequacy indicator. In the end, it confirms the hypothesis that the Federal Institutes contributed to raising the mentioned indicator: on average, the 336 Brazilian cities that have Federal Institutes showed a 5.2 % higher performance in teacher training adequacy when compared to cities without the presence of the institution.

Keywords: teacher training, educational indicator, adjustment of teacher training, Federal Institute of Education, Science, and Technology, educational public policy.

Resumen

La formación inicial de docentes para la enseñanza de la educación básica ganó protagonismo en la agenda pública brasileña en la década del 2000, generando una serie de políticas públicas. Una de estas políticas implicó reservar el 20 % de las plazas en los recién creados Institutos Federales para la formación inicial de docentes, en las llamadas carreras de licenciatura. En su momento se diagnosticó el agravamiento de la escasez de docentes, tanto en términos cuantitativos (traducidos en falta de docentes) como cualitativos (con muchos profesionales en las aulas que no contaban con una titulación específica en el componente curricular que impartían). Este estudio depende precisamente de los Institutos Federales y tiene como objetivo analizar su impacto en la mejora del indicador educativo "adecuación de la formación docente", instrumento utilizado por el Ministerio de Educación en el seguimiento de los avances en las políticas públicas destinadas a enfrentar los problemas que orbitan alrededor de enseñanza en la educación básica. Con un enfoque cuantitativo y de carácter descriptivo y correlacional, el estudio utiliza tres bases de datos estadísticas del Ministerio de Educación para explorar la relación entre la oferta de plazas en carreras de licenciatura y el indicador de adecuación de la formación docente. Al final, se confirma la hipótesis de que los Institutos Federales colaboraron para elevar el indicador antes mencionado: en promedio, las 336 ciudades brasileñas que tienen Institutos Federales que ofrecen cursos de licenciaturas presentaron un desempeño 5,2 % mayor en la adecuación de la formación docente en comparación con las ciudades sin la presencia de la institución.

Palabras clave: formación docente, indicador educativo, adecuación de la formación docente, Instituto Federal de Educación, Ciencia y Tecnología, política pública educativa.

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1. Introduction

A series of debates on the professionalization of teacher training marked the 1990s (Beraza & Cerdeiriña, 2012; Libâneo & Pimenta, 1999; Nóvoa, 1999; Tardif et al., 1998; Tardif, 2000), influencing changes in the format of initial teacher training courses in the approach to knowledge and in the structure and duration of practices. Tardif cited the impact of these debates on European, Latin American and North American countries, highlighting what he called “[...] a vast stream of professionalization of educational agents in general and teachers in particular” (Tardif, 2000, p. 6). Several initiatives were implemented, at different institutional levels, in the movement to expand and perhaps modify teacher training, although immersed in difficulties and contradictions, particularly with regard to the multiplication of neoliberal policies (Castelao-Huerta, 2021), the growth of the private sector (Altbach et al., 2009; Camargo and Medeiros, 2018; Neuhold & Pozzer, 2024) and the diffusion of degrees in distance learning and marketing (Rivas-Flores, 2014).

In Brazil, these debates resulted in a set of public policies from the mid-2000s onwards. The urgency of rethinking careers and training more staff for teaching in basic education gained prominence in 2007, when the National Council of Education launched the report *Teacher shortages in secondary education: structural and emergency proposals* (Ruiz et al., 2007). The study estimated, at the time, the lack of 235,135 professors of Portuguese Language, Mathematics, Biology, Physics, Chemistry, Foreign Language, Physical Education, Art, History and Geography in secondary education, whose audience are young people in the ideal age between 15 and 18 years. This number rises to 710,893 teachers if one also considers the second cycle of primary education, which caters for children aged 10-14.

In addition to the critical quantitative aspect, the literature highlighted two other dimensions: the “rate of places”, characterized by the retirement of teachers and the non-occupation of their positions

by new staff; aggravated, among other aspects by the high rate of student abandonment and the “hidden shortage”, referred to the exercise of teaching by professionals without the considered adequate qualification (Abrucio et al., 2020). In this last aspect, the document points out that only 9% of the people who teach Physics in secondary school had the appropriate training, i.e., they had completed the degree in Physics. In other curricular components, the scenario was similar, with 13% in Chemistry, 20% in Art, 26% in Geography, 27% in Mathematics, 29% in Foreign Language, 31% in History. The best performing subjects had just over half of teachers with specific training in the area in which they worked, such as Biology (57%), Portuguese Language (56%) and Physical Education (50%) (Ruiz et al., 2007). The report projected a “blackout” on secondary education, in the sense that there would be no teachers to fill existing places without structural and emergency measures (Ruiz et al., 2007).

It was in this context of diagnosis of shortages of teaching professionals and debates that highlighted the need to renew teacher training that, during the governments of Luiz Inácio Lula da Silva and Dilma Rousseff, both from the Workers’ Party, a series of reforms were implemented. Actions were planned to restructure initial teacher training in higher¹ education in Brazil (Neuhold & Pozzer, 2024). The Coordination for the Improvement of Higher Education Personnel (CAPES), a postgraduate and research institution linked to the Ministry of Education, assumed responsibility for planning and promoting initial training, with initiatives such as the Institutional Program of Initiation to Teaching Scholarships (Pibid) (Capes, 2012; Paniago et al., 2018) and the Pedagogical Residence Program (Ordinance No. 38, 2018; Faria and Diniz-Pereira, 2019). In 2007, Decree No. 6.096 of 24 April established the Program to Support the Plans for the Restructuring and Expansion of Federal Universities (Reuni). In addition to expanding places in established universities, the Reuni created eighteen new public universities in the period from 2003 to 2014,

¹ The complete undergraduate teacher training courses for basic education at higher education levels are called, in Brazil, “bachelor’s degrees”. Resolution of the National Council of Education/Plenary Council No. 2 of February 19, 2002, which establishes that the hourly load for undergraduate courses is at least 2800 hours, distributed among practices experienced during the course (400 hours), supervised curricular practices (400 hours), classes of curricular components (1800 hours), in addition to two hundred hours for other activities of an academic, scientific and cultural nature.

sixteen of which offered undergraduate degrees (Camargo and Medeiros, 2018). In the same scenario, in 2008, Law No. 11,892 created the Federal Institutes of Education, Science and Technology, a new institutionality (Ciavatta, 2015; Frigotto, 2018; Pacheco, 2015; Pozzer & Neuhold, 2024) with national capillarity, which must allocate at least 20% of its places to “[...] undergraduate courses, as well as special pedagogical training programs, with a view to the training of teachers for basic education, especially in the areas of science and mathematics, and for professional education” (Law No. 11,822, 2008), made possible by the innovation constituted by the verticalization policy, which allowed a close dialog between theory and practice, between the academic environment and everyday school life (Neuhold & Pozzer, 2024). With a multicampus structure, the 38 Federal Institutes arrived in 2022 distributed in 602 units, present in 552 of the 5668 Brazilian cities (Neuhold & Pozzer, 2023).

It is precisely to this public policy to which this work refers, inquiring on the impact of the implementation of the Federal Institutes on the increase of the “adequacy of teacher training”, educational indicator of which the Ministry of Education, through the National Institute of Educational Studies and Research Anísio Teixeira (Inep), began to use it in 2013. The Inep clarifies, in technical note No. 020 of 2014, that the indicator of adequacy of teacher training classifies teachers in service in Brazilian basic education considering their academic training and the subject they teach. To analyze the adequacy of teacher training, the Ministry of Education establishes as a reference the legal precepts, which require a higher education degree to provide the fifteen compulsory curricular components in primary² and secondary education.³

To investigate the impact of the Federal Institutes on the increase in teacher training, this study compared the performance of Brazilian cities with the institution’s campus with those without,

in the period between 2013 and 2022. The guiding hypothesis was that the Federal Institutes increased the indicator of adequacy of teacher training, especially in small and medium-sized cities. It is worth noting that, historically, institutions of higher education in Brazil, especially universities, were located in large cities or metropolitan regions, which also resulted in the unequal distribution of professionals in the territory. In the case of the Federal Institutes, although they are present in all capitals and metropolitan regions, they were also strategically created in cities of up to 200 thousand inhabitants. This is because, beginning in 2003, the federal government began to recognize and prioritize local socio-spatial dynamics in its public policies. It is not surprising that the new Federal Institutes campuses were also distributed in small and medium-sized municipalities, offering defined careers based on participatory diagnoses committed to promoting the productive, cultural and social arrangements of those territories (Pozzer & Neuhold, 2024). These factors justify the central hypothesis, insofar as the territorial expansion of the Federal Institutes contributed to a greater capillarity and adequacy of teacher training, taking into account regions that previously did not receive assistance from higher education institutions.

The article is divided into five sections, including this introduction and final considerations, to which is added the methodology, presentation and discussion of results.

2. Methodology

This quantitative study used three statistical databases of the Ministry of Education: the Nilo Peçanha Platform, which collects, processes and disseminates official data from the Federal Network of Professional, Scientific and Technological Education, to which the Federal Institutes are linked; the School Census of Basic⁴ Education, the main instrument of the Ministry of Education to collect information on

2 Art, Natural Sciences, Human Sciences, Physical Education, Religious Education, Geography, History, Modern Foreign Language, Mother Language (for indigenous populations), Portuguese Language and Mathematics.

3 Art, Biology, Physical Education, Philosophy, Physics, Geography, History, Modern Foreign Language, Mother Language (for indigenous populations), Portuguese Language, Mathematics, Chemistry and Sociology.

4 The School Census is coordinated by the National Institute of Educational Studies and Research (Inep), an agency of the Ministry of Education. Microdata open for public consultation are available on the Inep website.

Brazilian basic education; and the Higher Education Census, which collects data from higher education institutions, undergraduate students and teachers and sequential courses. To these three sources was added the Demographic Census (Brazilian Institute of Geography and Statistics [IBGE], 2023) to outline the profile of the cities served by the Federal Institutes of Education, Science and Technology.

With a descriptive and correlational nature, the study explored the relationship between the offer of places in the undergraduate courses, with emphasis on the Federal Institutes, and the indicator of adequacy of teacher training. Table 1 summarizes the analysis dimensions and data sources of this study.

Table 1. *Analysis dimensions of the study*

Dimension	Sub-dimensions	Data sources
Adequacy of teacher training	Time change of indicator	School Census
	Variation of the indicator according to the implementation of Federal Institutes	School Census
		Nilo Peçanha Platform
	Modality of teaching	Higher Education Census Nilo Peçanha Platform
Bachelor's Degree Offer	Records	Higher Education Census
		Nilo Peçanha Platform
	Finalizers	Higher Education Census
		Nilo Peçanha Platform
	Geographical profile	Demographic Census Nilo Peçanha Platform

It is worth clarifying that the indicator “adequacy of teacher training”, to move away from a dichotomous approach that categorizes who has or does not have the expected training, classifies teachers in five groups, considering gradations, as shown in table 2. For the purposes of this research, however, only teachers classified in group 1 were

considered, since the National Plan of Education, in force since 2014, established as a goal for the year 2024 that “[...] all teachers in basic education have specific training of higher level, obtained in a degree course in the area of knowledge in which they act” (Brazil, 2014).

Table 2. *Categories of adequacy of teacher training in relation to the subject taught*

Group	Description
1	Teachers with a bachelor's degree in the same subject they teach, or a bachelor's degree in the same subject with a completed pedagogical complement.
2	Teachers with a bachelor's degree in the corresponding discipline, but without a degree or pedagogical complement.
3	Teachers with a university degree in an area other than that in which they teach, or with a bachelor's degree in the subjects of the common curricular base and pedagogical complementation taken in an area other than that in which they teach.
4	Teachers with other higher education studies not considered in the above categories.
5	Teachers who do not have a degree in higher education.

Note. Technical Note No. 020 of 2014 of the Inep/Ministry of Education.

Finally, for comparison purposes, the Basic Education Census of 2021 was used, since the most updated data from the Higher Education Census available during the preparation of this work referred to that year.

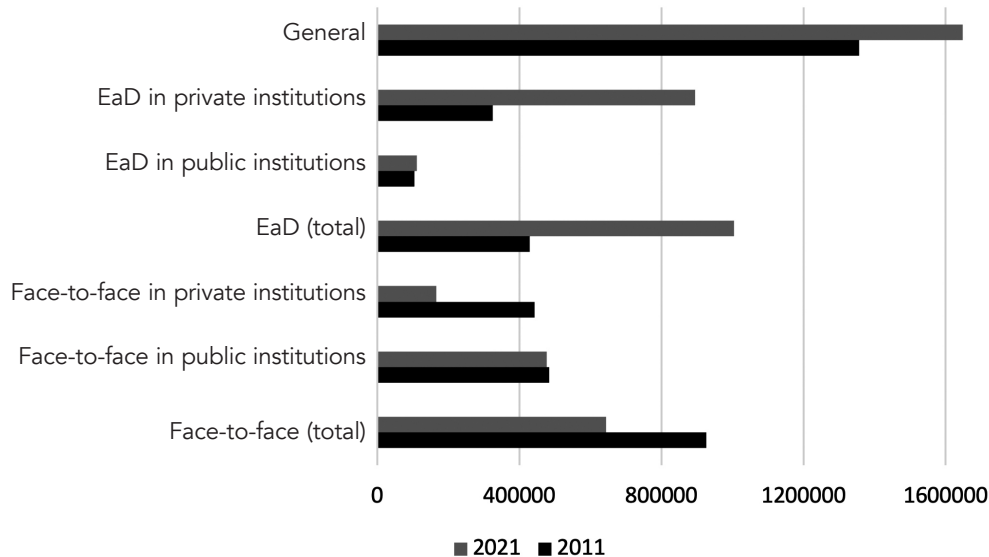
However, the data for 2022 were also presented, as they are the most up-to-date and constitute a potential trendsetter.

3. Results

The expansion of higher education in the 2000s in Brazil followed, on the one hand, the trend

of the previous decade, marked by the growth of the private sector, in line with the advance of neo-liberal policies (Camargo & Medeiros, 2018). If in 2002 there were 1637 higher education institutions (88% of which were private and 12% public), ten years later there were 2416 (87.4% private and 12.6% public) (Brazil, 2002, 2012; Sguissardi, 2015). In addition, the period also experienced the expansion of higher education in public institutions, from 195 in 2002 to 304 in 2012 (Brazil, 2002, 2012), a growth of 56%, compared to 46.5% in the private sector.

Figure 1. Enrollment in undergraduate courses by teaching modality (in person or EaD) - Brazil, 2011 to 2021



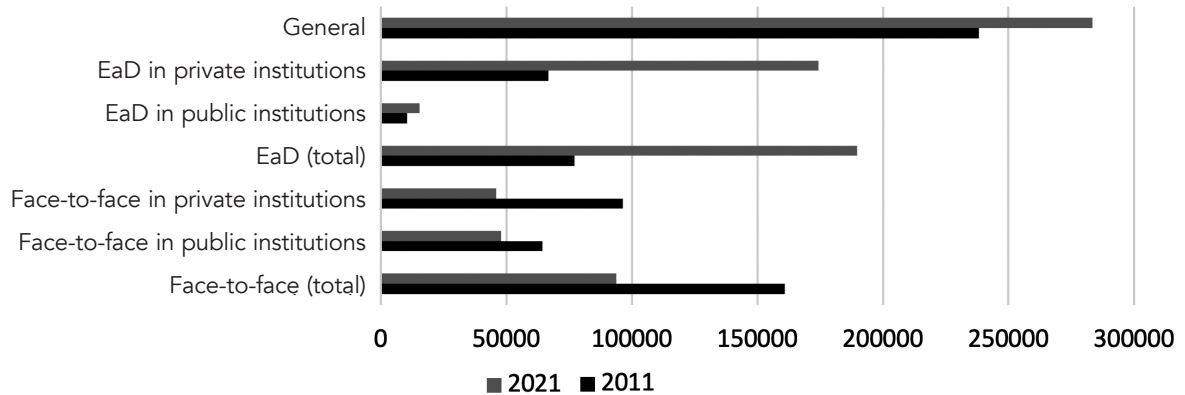
Note. Own elaboration based on data from the Higher Education Census (2021).

The latter is necessary to locate the historical series of the following years, particularly as it relates to bachelor's courses. To a large extent, the expansion of higher education has stabilized while the private sector has continued to advance. According to data from the Higher Education Census, between 2011 and 2021, enrollment in bachelor's degrees increased by 21.6 per cent from around 1.3 million in 2011 to 1.6 million in 2021. This growth, according to figure 1, was linked to the expansion of enrollment in courses in private institutions, offered mainly in distance education. This process was reflected in the number of graduates of these courses, 19.1% higher in 2021, compared to 2011.

Overall, the expansion of distance learning is notable: in 2011, 68.3% of undergraduate students were in-person, while in 2021 this percentage fell to 39% of students.

In relation to graduates, if in 2011 67.5% were in-person, in 2021 this percentage fell to 33.1% of the total (Figure 2).

Figure 2. Number of graduates in undergraduate courses by teaching modality (in-person or EaD) - Brazil, 2011 to 2021



Note. Own elaboration based on data from the Higher Education Census (2021).

Regarding the Federal Institutes, it should be recalled that they were founded on the same legal framework that created, in 2008, the Federal Network of Professional, Scientific and Technological Education, becoming part of it. The Federal Network went from 144 pre-existing⁵ units to 656 campuses in 2022, of which 602 are linked to Federal Institutes (Pozzer & Neuhold, 2024). Each of the 38 Federal Institutes

is distributed in units, called campuses, which have relative administrative, financial, and academic autonomy with their own directors, ranging from six (in the smaller Federal Institutes) to 38 (in the larger ones, in the case of the Federal Institute of São Paulo). Figure 3 illustrates the capillarity of the Federal Institutes in the national territory.

5 The Federal Network of Professional, Scientific and Technological Education is the heir to a centuries-old history. Its history goes back to the 19 apprenticeship and craft schools founded in 1909 (Santos, 2016). Throughout the 20th century, those origins of what would later become the Federal Network underwent numerous transformations: from an institution focused on technical training to educate poor white men in the nascent urban centers that aimed for industrialization, it expanded its objectives to technical and technological training at the level of secondary education and, subsequently, to higher education. Especially in the Federal Centers of Technological Education, in addition to incorporating rural technical education, model farms were added to the scope of action of the Ministry of Education. The fact is that, between 1909 and 2002, on the eve of the beginning of the government of Luís Inácio Lula da Silva, of the Workers' Party, as president of Brazil, there were 114 institutions that were part of a federal system of professional education (Pozzer and Neuhold, 2019).

Figure 3. Territorial distribution of the campuses of the 38 Federal Institutes - Brazil, 2022

Note. Nilo Peçanha Platform, 2022.

While Law No. 11,892 (2008), which created the Federal Institutes indicated that each campus should allocate at least 20% of places to bachelor's degrees and special pedagogical training programs,

only 363 campuses out of 602 offered bachelor's degrees in 2022. Although deficient, this supply expanded by 30.9% between 2017 and 2022, as shown in Table 3.⁶

Table 3. Number of careers offered by Federal Institutes-Brazil, 2017 to 2022

	2017	2018	2019	2020	2021	2022
IF Baiano	7	8	10	10	11	11
IF Farroupilha	19	22	25	24	28	30
IF Goiano	11	16	18	20	20	20
IF Sertão PE	18	19	20	21	21	21
IF Sudeste MG	7	8	8	9	11	11
IFAC	8	7	7	7	7	8
IFAL	18	19	20	22	21	24

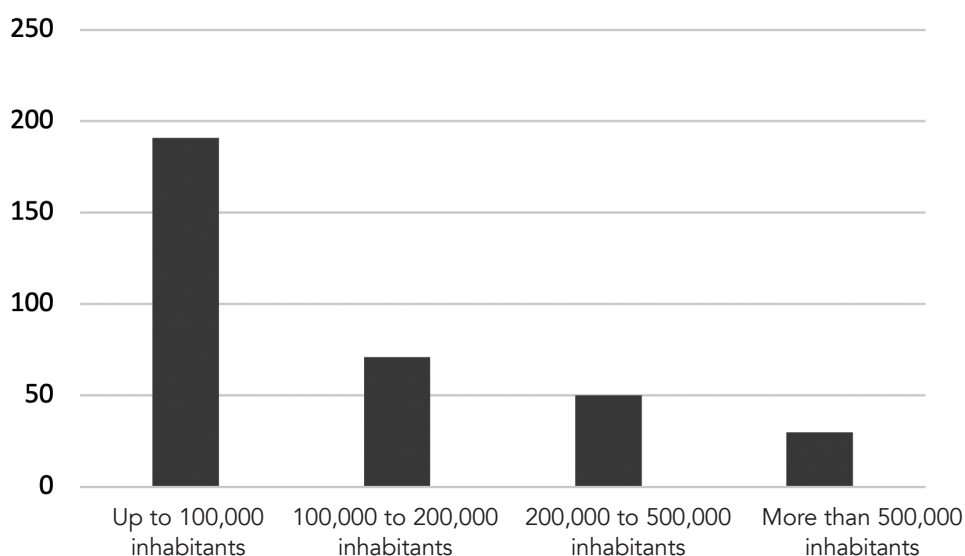
⁶ The table does not detail the campuses, it only presents the sum of courses from each of the 38 Federal Institutes.

	2017	2018	2019	2020	2021	2022
IFAM	15	13	13	11	12	11
IFAP	10	12	24	24	24	23
IFB	17	16	17	17	17	17
IFBA	19	24	26	31	26	27
IFC	12	14	14	14	15	15
IFCE	62	75	85	91	93	98
IFES	18	18	17	19	21	21
IFF	12	14	15	14	14	16
IFG	19	25	26	26	28	25
IFMA	45	49	49	53	53	51
IFMG	9	9	11	11	11	12
IFMS	1	2	2	2	2	2
IFMT	16	16	18	17	18	18
IFNMG	13	14	15	15	15	15
IFPA	47	44	37	44	48	52
IFPB	12	12	14	15	16	18
IFPE	9	9	12	12	12	13
IFPI	31	36	38	38	38	39
IFPR	17	21	26	28	27	27
IFRJ	9	9	11	10	10	10
IFRN	33	33	35	39	38	41
IFRO	7	8	12	12	12	12
IFRR	13	14	11	11	10	11
IFRS	21	26	24	26	24	24
IFS	3	3	5	4	4	5
IFSC	14	14	14	14	12	10
IFSP	51	55	57	59	61	69
IFSUL	5	16	16	21	23	21
IF Sul de Minas	16	16	19	20	20	20
IFTM	10	10	11	11	9	9
IFTO	12	13	13	14	15	15
Total	666	739	795	836	847	872

Note. Platform Nilo Peçanha (2023)

The 872 undergraduate courses offered by the Federal Institutes are distributed across 363 campuses, located in 336 cities,⁷ 78% of which are established in cities with up to 200,000 inhabitants (Figure 4).

Figure 4. Number of cities with Federal Institutes of Education, Science and Technology campuses offering undergraduate courses by population-Brazil, 2022



Note. Platform Nilo Peçanha (2023)

In terms of teaching modality, of the 872 teacher training courses offered in 2022 by the Federal Institutes, 754 courses (86.5% of the total) were face-to-face and 118 (13.5%) were distance learning. A year earlier the percentage was similar, being 86.2% and 13.8% respectively (Table 4).

Table 4. Bachelor's degrees on the Federal Institutes of Education, Science and Technology campuses by modality-Brazil, 2021 and 2022

Year	Modality	Campus	Courses (%)	Places (%)	Graduates (%)	Titled by places
2021	In person	319	730 (86.2)	22 635 (88.4)	4251 (72.3)	18.8%
	Distance education	85	117 (13.8)	2969 (11.6)	1629 (27.7)	54.9%
	Total	359*	847 (100)	25 604 (100)	5880 (100)	--
2022	In person	324	754 (86.5)	23 280 (88.5)	5639 (80)	24 %
	Distance education	82	118 (13.5)	3023 (11.5)	1412 (20)	47 %
	Total	363*	872 (100)	26,303 (100)	7051 (100)	--

* It does not correspond to the sum, since there are campuses that offer face-to-face and distance courses.

Note. Own elaboration from data extracted from the Nilo Peçanha Platform (2021, 2022).

Brazil's 2021 National Census of Basic Education showed that 85% of early childhood teachers in the Brazilian public network had higher education, a 27% increase compared to 2013. In primary education, teachers with higher education accounted for 92%, up 15% from 2013. In secondary

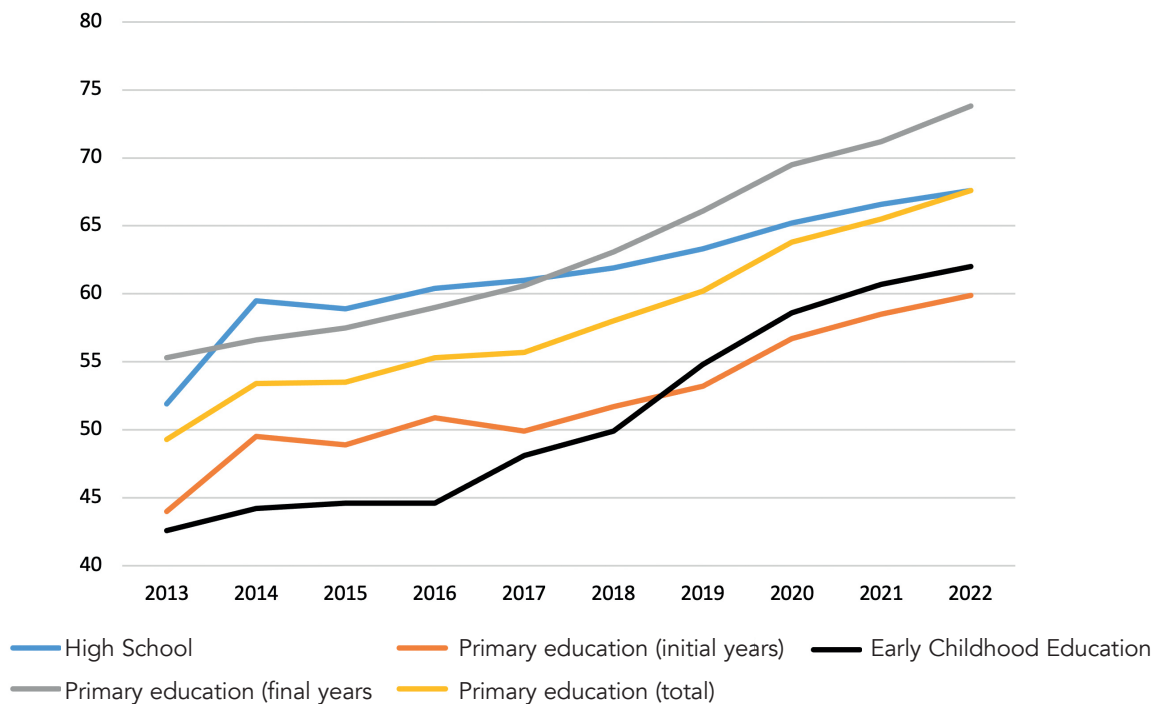
⁷ Some cities, in general the capitals that are constituted as metropolis, have more than one campus.

education, 97% of teachers had higher education, 4% more than in 2013 (Inep, 2021). However, as seen in Figure 3, this increase in teacher training did not necessarily occur with the subjects taught in schools.

Although the National Education Plan (PNE) for the decade from 2014 to 2024 has established in its target number 15, aimed at the training of education professionals, the guarantee that “[...] all teachers of basic education have specific competences of higher level training, obtained in a bachelor’s course in the area of knowledge in which they teach”

(Brazil, 2014), this reality is still distant. Although there has been a significant improvement in the adequacy of teacher training (Figure 4), by 2024, the deadline defined by the National Education Plan, the target has not been achieved. According to the 2022 Basic Education Census, the best indicator was that of primary education in the initial grades, with 73.8% of teachers with adequate teacher training. However, in the last grades of primary education, the indicator suggests that only 59.9% of teachers have adequate teacher training.

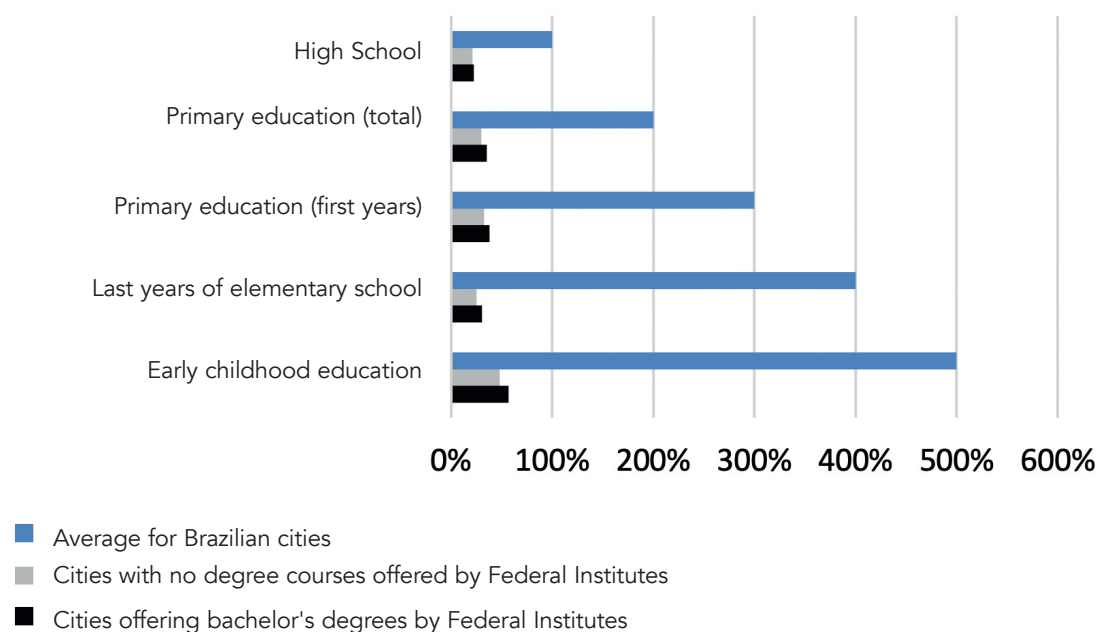
Figure 5. Average change in the adequacy indicator of teacher training-Brazil, 2013 to 2022



Note. Own elaboration based on data extracted from INEP (2013-2022).

The rate of growth of the indicator of adequacy of teacher training was higher at all levels of education when compared with the performance of cities that have degrees offered by Federal Institutes compared to others (figure 5). In secondary education, cities with Federal Institutes degrees performed 1.40% better, on average, than others. This difference

was, on average, 5.25% in primary education and 9.07% in early childhood education. In this way, the impact of the presence of Federal Institute bachelor’s degrees on the teacher suitability index can be seen by the difference in the average growth rate achieved by cities that enjoyed the public policy implemented by the federal government.

Figure 6. Average growth rate of the teacher adequacy indicator-Brazil, 2013 to 2022

Note. Own elaboration from data extracted from INEP (2013, 2022).

The data show that, on average, cities with bachelor's degrees offered by Federal Institutes perform better in the adequacy index of teacher training in the Basic Education Census 2022 (Table 5), a factor that was not observed in all stages of teaching

in 2013. In that survey, the adequacy rate of teacher training in early childhood education in cities with Federal Institute campuses was 40.59%; and the rate was 42.78% in cities without institutions.

Table 5. Average adequacy index of teacher training in cities-Brazil, 2013 to 2022

Teaching stage	General (2013)	General (2022)	Without bachelor offered by Federal Institutes (2022)	With bachelor offered by Federal Institutes (2023)
Secondary education	51.9	63.2	63.2	68.0
Primary education (initial years)	44.0	44.0	55.5	59.6
Primary education (final years)	55.3	55.3	73.5	74.6
Primary education (total)	49.3	49.3	64.4	67.3
Early childhood education (initial?)	42.6	42.6	64.1	63.7

Note. Own elaboration from data extracted from INEP (2013, 2022).

The progress in the indicator of adequacy of teacher training reflects a higher qualification of teachers in relation to the subjects they teach, indicating progress in public policies aimed at the initial and continuing training of teachers. In addition, it highlights the impact of initiatives such as the expansion of federal institutions of higher education, programs to promote teacher training, such as PARFOR

and PIBID, and the strengthening of undergraduate careers in priority areas. This movement demonstrates a coordinated effort to comply with the requirements of the Law of Bases and Guidelines of National Education (LDB), which establishes the objective of adequate training of all education professionals, thus promoting greater equity and quality of teaching throughout Brazil.

4. Discussion

The data collected in this article show that, between 2011 and 2021, there was a significant growth in the enrollment of bachelor's degrees, with an emphasis on distance education, especially in private institutions. This increase was reflected in the number of graduates, which also showed growth in the period, although with regional differences and academic efficiency between teaching modalities.

It is beyond the scope of this article to analyze this complex data on the types of face-to-face and distance courses. However, it is important to contextualize them to place the participation of the Federal Institutes in the offer of higher education teacher training courses.

At the origin of the Federal Institutes, it was established that 20% of their places would be allocated to undergraduate courses. Although it can be observed that the Federal Institutes have not been able to reverse the logic of discredit faced by teacher training in society (Neuhold et al., 2025) and only 363 of its 602 campuses effectively offered courses of this type until 2022 when the Federal Institutes expanded the offer of degrees in small and medium municipalities. In this way, they began to serve historically underserved regions, contributing to the internalization of teacher training (Neuhold and Pozzer, 2023). In other words, higher education courses for teachers have traditionally been concentrated in public universities, most of them in urban centers, or in the private sector in distance education, for which small and medium-sized cities have less economic interest. This scenario changed from the middle of the first decade of the 2000s.

Based on a solid policy of expansion and internalization of the Federal Institutes, the federal government established a vector to promote local and regional development. It is true that, at that time and for the same purpose, there was an effort by the federal government to internalize universities as well, understanding this process as “[...] essential to combat the imbalance in regional development and reach students unable to travel to other regions” (Brazil, 2014). In 2003, 29 of the existing 44 federal universities were located in state capitals, compared to 14 in the interior. In 2014, of the 63 federal universities, 31 were located in capitals and 32 in cities of the suburbs (Camargo & Medeiros, 2018).

It should be noted that the Federal Institutes are divided into 602 campuses, reaching 552 cities, considering data from 2022. This means that the territorial capillarity is more extensive than that of universities, although the latter, in general, offer a greater variety of careers. In addition to this territorial capillarity and the legal provision to allocate 20% of their places to teacher training, the Federal Institutes also have unique characteristics that position them as an innovative response to the initial and continuous training of teachers. As Neuhold and Pozzer (2024) highlight, the institutional architecture of the Federal Institutes shapes them as a unique environment for teacher training, by reducing the distances between university, school and profession. This is due, among other factors, to the fact that in the same academic environment teachers-researchers who train teachers in higher education also teach students of basic education.

Hence the potential of the Federal Institutes' teaching, research and outreach activities not only to boost local productive, cultural and social arrangements (Pozzer & Neuhold, 2024), but also to affect the socio-economic indicators themselves, including educational indicators. An example, addressed in this work, is the indicator of adequacy of teacher training.

Regarding the indicator of adequacy of teacher training, there have been significant advances since it began to be used in 2013, monitoring the relationship between higher education of teachers and the subject taught. However, the target set by the National Education Plan (2014-2024) has not yet been achieved.

In any case, the impact of the Federal Institutes in improving the indicator is remarkable. Cities with campuses offering bachelor's degrees showed higher growth rates than others at all levels of education. In secondary education, for example, the average difference was 1.40%, while in early childhood education it reached 9.07%. These data reinforce the strategic role of the Federal Institutes in the qualification of the teaching staff, although fully adapting the training to the area of activity remains a challenge in different contexts.

Without ignoring the policies combined with the objective of advancing in the adequacy of teacher training in the country, in addition to the proliferation of places in educational institutions, the expansion and internalization of the Federal Institutes

(Neuhold & Pozzer, 2023) constituted an accelerator of the process. Although insufficient to achieve the stated objective, the capillarity of the campuses throughout the territory and the profile of the cities served were important in the process of expanding the adequacy of teacher training.

The process of decentralization and territorialization promoted by the Federal Institutes may be serving as an “alternative” to distance learning, since it brings the student closer to the territory, minimizes the need for large displacements and even migratory processes to search for professional qualifications, which constitute a great differentiator for distance learning courses (Karpinski et al., 2017). It also allows course graduates to work, after graduation, in their home territory.

The 102,626 students enrolled in undergraduate degrees at Federal Institutes in 2021 accounted for 6.2% of all undergraduate students in Brazil. In terms of the academic offer in public institutions (federal, state and municipal), the Federal Institutes absorbed 17.5% of the enrolled students. Of the enrollments in careers offered by public institutions, 18% of the students of face-to-face courses were from Federal Institutes, as well as 15.3% of the enrollments in distance careers, which represents the rapid relevance of the network began within the policies of teacher training.

Of those who completed undergraduate courses, in 2021, 9.3% of graduates from public institutions came from Federal Institutes. In the field of face-to-face careers offered by public educational institutions, 8.9% of students graduate from Federal Institutes, a percentage that rises to 10.5% if considering graduates of distance careers.

In conclusion, it can be suggested that the political process of decentralization of higher education institutions, which led to the creation of the Federal Institutes, consisted of a paradigm shift in that public policies of teacher training ceased to concentrate on large urban centers and extended to small and medium-sized cities, also constituting an alternative to the degree courses offered remotely.

5. Final considerations

The initial training of basic education teachers gained prominence in the Brazilian public agenda in the 2000s, which resulted in several public policies.

One of these policies involved the allocation of 20% of places in the newly created Federal Institutes for higher education teacher training courses, in so-called degrees, with the aim of addressing the shortage of teachers, both in terms of quantity (lack of teachers) and quality (professionals without the appropriate degree to the subjects they teach).

This study focused on the Federal Institutes, with the aim of discussing its impact on the improvement of the educational indicator “adequacy of teacher training”, used by the Ministry of Education to monitor the progress of public policies related to basic education. With a quantitative approach and a descriptive and correlational character, it used three sets of statistical data provided by the Ministry of Education: the School Census, the Higher Education Census and the Nilo Peçanha Platform.

Based on data from these sources, the relationship between the offer of places in undergraduate careers and the indicator of adequacy of teacher training was explored. The Nilo Peçanha Platform provided information on the offer of undergraduate courses for initial teacher training by the Federal Institutes, from 2017 (when the data were initially available) to 2022 (the last available data collection). The data of the educational indicator “adequacy of teacher training” were obtained from the School Census of Basic Education, referring to the years 2013 (year of creation of the indicator) and 2022 (last data collection available). The Higher Education Census allowed data to be collected to identify changes in the careers and participation of the Federal Institutes.

The study confirmed the hypothesis that the Federal Institutes contributed to raising the indicator mentioned. On average, the 336 Brazilian cities that have Federal Institutes showed a 5.2% higher performance in the adequacy of teacher training compared to cities that do not have this institution.

In short, as emphasized throughout the article, the implementation of the Federal Institutes sought to influence the economic, cultural and social dynamics of the territories in which they operate, from the relationship with the community and from courses and research and extension projects, among them those aimed at the initial and continuous training of teachers. It was found, however, that, despite the legal requirement to offer 20% of places for initial

teacher training, 60% of Federal Institutes campuses do not have bachelor's degrees.

In this sense, it is possible to conclude that, although the Federal Institutes have an undeniable potential to contribute to the initial and continuous training of teachers, there are important challenges to face so that this contribution reaches its maximum potential. The first issue concerns the need for more accurate diagnostics, capable of mapping the careers offered on each campus and relating them directly to local demands and the indicator of adequacy of teacher training, especially in subjects in which the shortage of teachers is more pronounced.

In addition, it is essential to investigate the factors that have inhibited the full implementation of the legislation that provides for the allocation of 20% of places in the Federal Institutes for undergraduate courses. Understanding the reasons that limit the opening of new courses and creating strategies to overcome them are fundamental steps. This also implies the formulation of policies that guarantee the technical and pedagogical conditions to consolidate the role of the Federal Institutes as centers of teacher training, strengthening the relationship between higher and basic education and expanding the impact of these institutions on the educational indicators of the country.

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Neoliberal educational policies: academic work and health of female teachers

Políticas educativas neoliberales: trabajo académico y salud de profesoras

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Abstract

Neoliberal educational policies have been implemented for more than three decades in Latin America and they have altered teaching practices. Likewise, the educational reforms have not considered the characteristics or idiosyncrasies, in this case, of Mexico, and they have been a copy of the European and U.S. educational models. Based on these problems, the main objective was to: make evident some problems in professional teaching practice, as well as the health repercussions of high school and university teachers as a consequence of neoliberal educational policies. There was the participation of 10 teachers who work at different educational levels: High School and Higher Education; in the State of Mexico, Hidalgo and Chile in South America. The research was divided into three phases: before, during and after the pandemic. The methodology used was qualitative, with a descriptive and interpretive approach. The results were presented as a "novel" constructed from the participants' narratives. Their problems related to teaching work, trigger a series of sickness at a biopsychosocial level. Definitely, the educational institution is going through a crisis and a rethinking of teaching work is urgently needed so that, the meaning of the teaching role does not die and along with it, the educational institution.

Keywords: educational policy, educational reform, neoliberalism, teaching, violence, health.

Resumen

Las políticas educativas neoliberales se han implementado durante más de tres décadas en Latinoamérica, alterando el quehacer docente. Además, las reformas educativas no han considerado las características ni la idiosincrasia, en este caso, de México, debido a que han sido una copia de los modelos educativos europeos y de los Estados Unidos. Con base en estas problemáticas, el objetivo central de esta investigación consistió en evidenciar algunas problemáticas en la práctica profesional docente, así como las repercusiones de salud de profesoras de bachillerato y Universidad como consecuencia de las políticas educativas neoliberales. Se contó con la participación de diez profesoras que se desempeñan en diferentes niveles educativos: Bachillerato y Superior; en el Estado de México, Hidalgo y Chile en Sudamérica. La investigación se dividió en tres fases: antes, durante y después de la pandemia. La metodología utilizada fue cualitativa, con un corte descriptivo e interpretativo. Los resultados se presentaron como una "novela" construida a partir de las narraciones de las participantes. Sus problemáticas relacionadas al quehacer docente, desencadenan una serie de padecimientos a nivel biopsicosocial. Sin duda, la institución educativa atraviesa por una crisis y es urgente un replanteamiento de la labor docente para que el sentido del rol docente no muera y junto con él, la institución educativa.

Palabras clave: política educativa, reforma educativa, neoliberalismo, docencia, violencia, salud.

1. Introduction

Neoliberal educational policies have been present in Mexico since the Porfiriato, although they intensified from 1982 with President Miguel de la Madrid Hurtado. One of the neoliberal educational policies more rejected in Mexico was the reform promoted by President Enrique Peña Nieto (period 2012-2018), which was rejected by teachers because its content threatened their job security, since it sought to measure the productivity and effectiveness of teachers both for the provision of incentives and for the conservation of their work (Ávila & Casas, 2022). In addition, for its elaboration, the participation of teachers was never resorted to (Castillo, 2013).

In Mexico, as in other Latin American countries, plans and programs developed in other countries have been adopted, most of them unrelated to the idiosyncrasies of each country. In the case of Mexico, the institutional managers in charge of education generated endless problems due to reforms ranging from preschool to graduate school, regardless of the biopsychosocial costs for teachers, students and parents.

Although the revaluation of the Mexican teaching profession has been sought, the truth is that it faces other problems, as a result of the loophole of educational reforms, one of them is the significant administrative overload. The former secretary of the Ministry of Public Education (SEP), Esteban Moctezuma Barragán, acknowledged this problem by pointing out that teachers spend up to 50% of their time attending to matters outside their professional practice (SEP, 2018).

Neoliberal educational policies have generated a dynamic of competitiveness and violence in the daily dynamics of schools. The reforms led to individuality, personal gain, and the division of institutional actors. Ávila and Casas (2022) point out that education, in this context, went from being a right to be considered as a commodity, where access is increasingly conditioned by the rules of supply and demand. Moreover, the systematic assessment of teaching performance that has been used to establish salary categories and provide monetary stimulus has fostered the logic of competition and rivalry.

Schools, like many other institutions, are battlegrounds in which power struggles are characterized by the existence of real or potential conflicts

between their members, due to ideological diversity (Ball, 1990, 1994). The diverse perceptions that institutional actors have around the school generate disagreements between them, violence and suffering. Everyday conflicts are over “budget allocations, both in terms of the distribution of money and in relation to appointments, schedules and control of space, influence on school policy” (Ball, 1994, p. 219).

In addition to the existence of conflicts within educational establishments, many schools are surrounded by external dynamics characterized by violence as a result of organized crime. Many times, these dynamics occur within educational institutions, since students threaten those teachers who are not to their liking or with whom they have had some kind of disagreement. This situation generates fear and impotence in the teaching profession (Herrera et al., 2021) and contributes to the appearance of problems at the biopsychosocial level in teachers.

Regardless of the educational level in Mexico, institutions and actors have suffered from neoliberal educational policies, until the COVID-19 pandemic annihilated and allowed the restructuring of the educational model in turn as a result of emerging needs.

Hence, a large number of teachers have begun to suffer from the Syndrome Acquired by Academic Work (SINATA), which is characterized by being:

A physical or psychological discomfort that may be manifested in some part of the body, or latent in the teacher's feeling. These sufferings cause mild, moderate and severe damage to the social and personal life of the teacher inside and outside the educational institution, causing a temporary, partial or permanent disability. (Herrera et al., 2019, p. 3)

According to the literature, the biological-medical health problems detected in teachers are related to the existence of nerve, muscle and tendon disorders (Antonelli et al., 2012). Olmedo-Buenrostro et al. (2013) indicate that it is common to find: cavities, overweight or obesity, digestive diseases and eye fatigue; and those teachers who are exposed to excessive levels of workload present: headaches, insomnia, chronic fatigue and venous insufficiency.

Regarding psychological problems, there are several psychopathological mismatches that manifest mainly in: lack of motivation, acute stress, depression, anxiety and sleep disorders (Ortiz, 2011). The presence of some phobias and paranoid symptoms has also been detected (Alonso, 2014); as well as epi-

sodes of panic and emotionally unstable personality (Fundación Médico-Preventiva, 2004).

Teachers' social relationships are also affected as a result of their professional practice, having to postpone personal projects, sacrifice time with family and friends, and having to negotiate the time dedicated to their partner in order to comply with institutional requirements (Herrera et al., 2019). These situations regularly generate conflicts, since teachers must play their professional role while seeking to be present with friends and family, which is often incompatible (Cifre et al., 2009).

Because of the latter, this research aims to highlight some problems in the professional teaching practice, as well as the health consequences of high school and university teachers due to neoliberal educational policies. This article seeks to answer the following questions: how do neoliberal educational policies intervene in teaching practice? How was the restructuring of the educational approach experienced during the COVID-19 pandemic? How does the presence of violence affect academic work? What biopsychosocial health conditions do teachers present?

2. Methodology

A descriptive and interpretive research was carried out to know in depth the problems, "to find the final cause of a phenomenon" (Zhizhko, 2016, p. 23) and describe it. An inductive-analytical method was used, since during the course of the fieldwork new questions and categories of analysis could be added, because at no time was it intended to evaluate hypotheses or pre-established theories (Herrera et al., 2019).

Educational ethnography was used because it provides "descriptive data of the contexts, activities and beliefs of the participants in the educational scenarios [...] and it can be deepened in the socio-cultural context investigated" (Zhizhko, 2016, p. 23). Educational ethnography also deals with the problems of teachers "as individuals and not only as members of a profession, with special emphasis on the importance of the notion of strategy to organize their work, their relationships and even their survival in difficult contexts" (Vázquez and Valenzuela, 2013, p.13).

It should be borne in mind that the educational institution should not be considered as a separate

entity from the "rest" of society, since it is directly influenced by it, so it will always involve macrosocial referents (Escolar, 2010). For authors like Barriga (1979), institutions are the result of an instituting society of a specific time, therefore, they reflect the philosophy of the moment. They have the ability to modify the aspirations of the subjects, so they are not restricted solely to promoting or limiting them, and their durability is related to the ability they have to create stable expectations with respect to the behavior of others (Hodgson, 2006). We can therefore conclude that the educational institution reflects what happens in its context, hence we must look inside the school to know under what conditions the teachers carry out their professional practice.

The population considered for this study includes ten professors who work in: Baccalaureate and/or University. The educational institutions where informants located in the State of Mexico, Hidalgo (Mexico) and Chile.

The research was conducted in three phases: the first, prior to the pandemic, during the months of January to June 2019; the second, during the pandemic, in the months of March to June 2021; and the third, after the pandemic, in August 2022.

In the first phase, three teachers participated. The following keys were used to identify them: Professor 1 (PF1), Professor 2 (PF2), Counselor (InO1). During the pandemic, seven female teachers participated. The following keys were used: Teacher of Baccalaureate (PB), Professor of Bachelor/Baccalaureate (PLB), Teacher of Baccalaureate in Hidalgo 1 (BCH1), Teacher of Baccalaureate in Hidalgo 2 (BCH2), Teacher of Baccalaureate in Hidalgo 3 (BCH3), Teacher of Baccalaureate in Hidalgo 4 (BCH4) and Teacher of Baccalaureate in Hidalgo 5 (BCH5). And after the pandemic, two teachers participated: a Mexican researcher and a Chilean researcher. The following keys were used: Research Professor of Mexico (PIM) and Research Professor of Chile (PICH).

Sampling is non-probabilistic and key informants were chosen by having "political influence on the subject matter, degree of participation in decision-making; mastery of the subject; readiness to report, among others" (Quinn, 1990, p. 68, cited in Zhizhko, 2016, p. 92). The participants decided to collaborate voluntarily.

Naturalistic observations were made *in situ* using a pre-set format, and photographs were taken. Interviews were also conducted because, according to Zhizhko (2016, p.61), “the interview technique is used to confirm, deepen and compare data obtained through other instruments, in particular, the opinions of the people previously surveyed.”

For the interviews, semi-structured formats with pre-established categories were used. The inquiries were audio-recorded and for protecting those involved, the aforementioned keys will be used. In the case of investigations carried out during the pandemic period, these were carried out remotely, through the Zoom platform. Similarly, a field diary was kept for interviews and observations. Finally, it is necessary to mention that the participants are authorized to publish the results for academic purposes.

The research was articulated in three dimensions that allowed triangulating the data that helped to respond the established objective. This technique was chosen because applying different strategies to examine the same phenomenon achieves greater accuracy (Robles, 2011), because “triangulation is based on the verification and comparison of information obtained at different times and by different methods” (Zhizhko, 2016, p.105).

The systematization and analysis of the results obtained were carried out manually, i.e., no *software* was used, to avoid as far as possible that the research became a rigid approach.

3. Results

Neoliberal educational reforms led to the exploitation and precariousness of teachers by overburdening their academic activities with the minimum of possible resources. For decades, a large number of teachers have been hired for hours and have to travel to different schools to cover a working day. There are other teachers who, although they are hired for a certain number of hours, are always demanded more. Counselors are hired full-time, consisting of 25 hours a week, although they actually spend more time doing their activities “I start at 7:00 in the morning I leave at 2:00 in the afternoon. We don’t have lunch hours” (InO1).

In other cases, high school teachers have to invest extra time to meet institutional demands, as our participant says they *will never respect your sche-*

dules. “When they see you doing overtime at school, they even like it and say, ‘*Oh good, you stayed more time to work*’” (DBH1). This situation occurs regardless of the level of education, since in universities it is also common to encounter this scenario:

There is little money directed at hiring more staff and that implies the overload of teachers on a personal level. We are filled with administrative work... [...] The university teacher seems more like a worker than someone who is forming a learning process from other humans (PIM).

Administrative work has always existed for the participants who have been working for years in the field of teaching, no matter the educational reform that is in force “they only change the format and put another name on it” (DBH1) and their perception is that, over the years, in reality this work has increased “teaching is increasingly demanding, administratively speaking, by filling formats. When I arrived, they didn’t ask for so much documentation or so much paperwork” (DBH5).

The labor overload of teachers inside and outside educational institutions produces multiple discomforts and increases due to the various deficiencies, among which those related to material and economic resources. Many of the schools are characterized by rudimentary infrastructure, obsolete computer equipment and scarce consumables, among other deficiencies. A high school teacher comments: “Some curtains were put by parents, but there are other rooms where the kids put bond paper to protect from the sun. There are only two bathrooms” (PF1) for a population of more than 500 students, including teachers.

During the naturalistic observation, in a Technological Baccalaureate Center (CBT) of the State of Mexico, the participants corroborated this infrastructure: halls with a sheet roof, windows without glasses and very austere electrical installations. Not only is the lack of adequate infrastructure for the development of basic tasks evident, there are also shortcomings for the delivery of classes, since there are not even basic consumables: sheets, toner, as well as computers and printers.

Neoliberal educational policies have exacerbated educational inequalities, as they tend to favor educational institutions in large cities and families with greater economic resources, while families with low economic income and rural areas are at a disadvantage.

While one might think that those who work as researchers at State Public Universities have greater possibilities of access to funding to conduct research that contributes to the country's development, the reality is that "there is no funding. I have gone to conferences, research meetings with my own money... [...] *They tell me that they will pay me, but that you have to check expenses.* I present the receipts on time, and they tell me that there is no money" (PIM).

Although it is true that teachers already had to invest unpaid extra time to meet institutional demands, this situation increased with the arrival of the Covid-19 pandemic, where the response to this global crisis consisted of the abrupt transition from traditional face-to-face classes to remote classes.

In Mexico, the Ministry of Public Education (SEP), together with the Ministry of Health (SSA), announced the suspension of in-person classes from March 23 to April 3, 2020. School heads ordered teachers to implement an emerging educational model, although the suspension of in-person classes lasted for more than two years in some states of the country. At the beginning, there was much bewilderment "I observed that there was no clear objective, they were redirecting with the circumstances" (PB).

The lack of experience in distance education of schools was clear, since institutions and actors did not have the necessary competencies for implementing the virtual modality. "It caught us off guard. In fact, as teachers we could think that we were prepared for using technology; however, we were not (PB). "Teachers had to learn about online platforms, get guides. Transform a classroom into an online one" (PIM).

The school we had known vanished from the pandemic and with it the educational models imposed by the neoliberals, at least as they had worked since its foundation, the educational institutions moved to the house of the institutions and the institutional actors and the classroom to the monitor. The teachers provided what they had at hand: "everyone had to get their digital tools to be in communication with the students. We did not receive extra support, with our salary we always look for some technological tool (PLB).

Moving the classrooms to the homes of the institutions and the institutional actors represented a challenge for teachers and students, who also faced a host of problems, mainly related to "network saturation" (DBH1) and the fact that many students "lived

in rural areas and returned to their homes where there was no internet, there was no connection" (PICH). In addition, the teachers had to find a way to balance the work environment with the staff: "Now that I finished my class, I went upstairs to dry the clothes that I had washed last night. Between one class and another, when I have time, I do the dishes" (DBH3). With women on the verge, "women have to be cooking all day, taking care of young children and also teaching online. It was double or triple work" (PICH).

The educational institution resisted thanks to the work carried out by the teachers, who adapted their spaces and personal life to a reality never lived before. However, when returning to institutional spaces, it was found that some institutional dynamics remained unmoved, as in some educational institutions, they cling to the educational colonialism imposed from Europe and the USA.

Educational institutions as transmitters of culture, are a sounding board of society, and a reflection of social problems in each country. Inside its facilities, there are disagreements between the institutions and the actors, mainly against the managers, there was "a confrontation where violence and screams were presented. The former director started fighting to the deputy director" (DBH5). And, in the most serious cases, teachers have become victims of workplace harassment by their bosses. "My relationship is very bad, because if you talk to someone and they don't answer, what do you feel as a person? You don't exist for them. I denounced for workplace harassment the then deputy academic director, who is now the director" (DBH3). In the most serious cases such as that of one of the informants, they preferred to resign "I did not accept that they continue to mistreat me, that they do not speak to me and would not tell me what is happening. So, I resigned, because I was not willing to accept that, because it was abuse" (PICH).

Parents have also become protagonists in confrontations, since sometimes they question and hinder academic activities. "Some dads get upset. They want their kids to get 10. They think that we teachers fail, but when you show them the activities that were developed and evaluations, they realize that their children are failing" (DBH3). On multiple times it is believed that it is the teachers who wrongly assess the performance of the students.

Faced with these and other situations, it might seem that the teachers would be united; however, the participants shared that conflicts have also arisen between the peers themselves. The disagreements have gone as far as verbal violence among older teachers against new generations of teachers “the division between the groups of teachers is very noticeable. When we had general meetings, the older ones made very unpleasant comments towards those of us who were new” (DBH4), generating that those who have been victims of these aggressions seriously consider resigning and comment to me: “I no longer want to come or share with them [with the teachers of greater experience] because the environment is very tense” (DBH4).

As shown, institutional spaces present violence and chaos, inherent to the various social problems, among which the presence for *Organized Crime* stands out. Academics, managers and the State know that it is present in many schools in the country. Both teachers and counselors say that very close to a CBT in the State of Mexico, there are “whole families who steal, we know who they are” (PF1). While in Hidalgo, there have been cases of enforced disappearances “I have had students who have recently been kidnapped, they have been bulletinated by different institutions” (DBH3).

In addition, students think drug dealing is a very attractive business and it is well known by members of the school community, “in recent years, there is crime, assaults, and also drug sales inside the school” (DBH3). Regarding the illegal sale, the issue is openly discussed by students, who mention their teachers that they know or distribute drugs “the students say: ‘I sell huachicol, teacher and I know a person who sells such a thing’. I was thinking, is he threatening me or reporting to me?” (DBH1). For some teachers, educating students is complicated, causing them a series of ailments at the biological-medical, psychological and social levels.

As for the physical part, it is common to present a certain level of tiredness during classes “I must be standing all day and that makes you tired” (DBH1). Another area that presents pain is the area of the back “it hurts a lot, just last night my mom told me that she was giving me a massage” (DBH4), as well as the waist “there are some days that it hurts less than others, just last night I was giving a massage because it hurt up to the coccyx” (DBH3). It should

be noted that, although the presence of musculoskeletal pain is common in face-to-face classes, its prevalence increased during the distance modality, due to long and strenuous working hours, as well as the low or no level of physical activity.

In addition to the pain in the different areas of the body, the throat is affected, “I have had hoarseness, so I always have something to drink. I talk a lot, especially when classes restarted, but then the voice adapts to the rhythm of the work” (DBH3). And in the pandemic, being in front of a computer meant that teachers began to use lenses or increase the graduation of them “I have increased the graduation of my lenses, and none of the ones I had serve me. I started using them shortly before the pandemic, but my graduation has gone up a lot. I hardly see, it costs me a lot, especially the cell phone” (DBH3).

As a result of work schedules, teachers have to neglect their diet, which can be related to the appearance or aggravation of conditions such as colitis or gastritis “I had a very severe gastritis, I had to go to a gastroenterologist and although you follow the treatment you do not stay at 100” (DBH2). The presence of medical conditions is part of the epidemiological profile of teachers and are the result of demands inside and outside the educational institution.

In addition to their medical problems, teachers also have a number of psychological effects as a result of their professional practice. The conditions presented most often are stress and anxiety, among others, which are aggravated by the accumulation of work during evaluation periods “when we have to deliver grades I feel stressed. Students claim their qualification. Andou have to upload the averages to the platform, and you have to do it quickly and well” (DBH2).

Stress can also be associated with a hostile work environment “the violence I suffered was presented in a systematic way, it was not a day or two, it was two years of constant harassment I suffered and that generated stress” (DBH3); and during online classes you could relate to failures when using Information and Communication Technologies (ICT). The effects of stress can be manifested in multiple ways, either through hair loss, “stress affected me physically and detonated in the fall of my hair” (DBH3), the presence of gastrointestinal problems “due to stress gave me colitis” (DBH5), pains in the neck area “due to stress I get pellets in my neck”

(DBH4), or social withdrawal “you don’t say it as it is, but suddenly you think ‘what do they care?’ and you know it is due to stress” (DBH1).

Teaching also produces states of anxiety in academic institutions and directly affects their perception, as shared by the following participant:

There was a time when I had anxiety attacks and not so much for the students because I was happy with them, but because of the pressure of the collaborative work that you must do. The pressure that I am young and many teachers in my institution were questioning me “do you know how to do it?”, that was stressing and it was discouraging me. (DBH1).

The highest levels of anxiety are especially identified in the evaluation periods. While, during the distance modality, the presence of anxiety was mainly associated with uncertainty due to the COVID-19 pandemic and the lack of physical contact with the school community.

A third psychic problem in teachers, as a result of their work, is related to some alterations in sleep, mainly during non-face classes “I have had insomnia this last year. I went to the doctor and he told me that I had stress, but he didn’t want to medicate me because if I started taking sleeping pills it would be for life” (DBH4). As well as stress and anxiety, participants reported that during the evaluation period they had greater disturbances in their rest.

The suffering experienced by many teachers is hidden, as they must continue with their work without the rest of the institutional actors suspecting what they are living. The presence of psychological conditions such as stress and anxiety, among others, has existed from the face-to-face modality; however, as a result of online classes, there was an increase in their intensity due to multiple factors.

In the social area, teachers have also been affected as a result of the demands of teaching, having to find a way to balance their spheres: social, family and work. Either in person or during the online modality, teachers have sought to negotiate with their partner the distribution of domestic work and childcare “my husband works on his own and can support me when I need it” (DBH5), although it is not always possible to carry out this type of negotiations, which implies that teachers make a double or triple day “my husband leaves in the mornings and no longer returns until the night, it has always been

so and now [during the pandemic] there has not been much difference” (DBH2).

In addition to seeking to balance work and personal life, some teachers have also postponed personal projects, from those related to continuing their academic preparation “I want to study a master’s degree abroad, but they told me ‘you have a stable job, wait until you get the papers’ and I have been postponing it” (DBH1), developing independent professional projects, starting a business, going on vacation, to those related to health care “sometimes I have neglected my health, going to the doctor when it must be or exercising” (DBH5).

Teaching requires almost exclusive dedication from its actors, making it difficult for them to find a balance between the various spheres of their lives, especially in the pandemic as traditional school classrooms were transformed into teachers’ rooms, rooms or dining rooms. The educational institution went through a crisis, but it was the teaching work that managed to rescue it and, undoubtedly, after its resurrection the institutional dynamics of the schools changed slightly.

4. Discussion and conclusions

Following Foucault (2004) “an act of failure must be established” (p. 277) for the prison system; likewise, it must be accepted that the neoliberal educational policies imposed for more than 36 years have failed. The Mexican educational system has strong bases to develop its own educational models and stop having colonizing paradigms that leave aside the idiosyncrasy of the Mexican.

Currently, various educational systems are going through a crisis because of their longevity and because society has mutated over time. The implementation of neoliberal educational policies that did not take into account the reality of life in Mexico triggered multiple sufferings for teachers, students, managers and parents.

But it was not just the pandemic and education reforms that caused a shift in neoliberal education models. The truth is that the neoliberal model alone was not sustained because the paradigm shifts are just beginning to be carried out. There are still internal and external contexts of violence, labor overload and lack of resources, among others.

Labor overload is a topic that has interested authors such as Villagra (2015), who points out that due to excessive workload, the processes related to the education of students have passed at the end, because teachers usually pay more attention to filling out bureaucratic reports. Another important point to highlight is implicitly related to the pandemic, as teachers sacrificed some of the little time left in their private lives.

The workload increased considerably, which coincided with Sánchez et al. (2020) who indicated that online classes represented an extra workload, due to the fact that adjusting the contents to be taught required teachers to dedicate more time. In addition, institutional actors faced a number of difficulties in continuing with the teaching-learning processes, since not all students had access to a computer and internet, because it represented a luxury reserved for a sector of the population (Méndez, 2020).

During this period, students have limited economic possibilities. We agree with Ávila and Casas (2022) who highlight that the Mexican educational system has reproduced the structural conditions that favor a small group, leaving aside the rest of the population, which contributes to the historical presence of social inequalities where the lack of access to technology can limit the learning of students, as well as the teaching work. Those students who were able to cover the expenses continued studying, those who could not ended up unsubscribing and losing the opportunity to access other levels of culture such as Bourdieu and Passeron (2003) argue, “for individuals from more disadvantaged sectors, education remains the only way to access culture” (p.37).

The results of this research showed that the facilities where teachers work are characterized by being rudimentary and have serious shortages of resources to perform the primary task and social mandate of the educational institution, which agrees with Fernández (1996) who states that “it is a common experience the limitation that means an inadequate space, scarce, poorly equipped, and the overeffort - sometimes impossible - that requires working as if that limitation did not exist” (p.100). Society, institutions and parents, among others, have increased utopian demands on teachers, without granting the necessary resources to carry out this task (Esteve, 2011).

Another problem that this research addressed was related to the presence of violence, either as a

result of conflicts that are emerging within educational institutions or the presence of Organized Crime. Both managers, teachers, counselors and students use the school as a “stage to demonstrate, exhibit, prove that they are capable” (Fernández, 1996, p.123), generating a power struggle that seeks to benefit those who possess it, using various strategies to preserve it and benefit people close to them (Hoyle, 1982). During the investigation, it was found that there are teachers who must face situations of harassment at work because managers do not like them.

Another cause of violence is the segmentation of knowledge by generation between the most senior teachers and those who recently joined the teaching profession and younger people have had to endure the constant questioning of their pedagogical knowledge and skills. We agree with Ball (1990, 1994) who points out that educational institutions have become battlefields, where verbal and symbolic violence manifests itself in various actions that affect those who are not part of the close circle of those in power.

As for the violence, as a result of the presence of Organized Crime, the academics said they were afraid, since educating with organized crime that is lurking outside the facilities with the threat of kidnapping is complicated and more so when some students have relatives who support illicit acts. The exchange that one has with the external context coincides with Fernández (1996) who affirms that “every individual, group or organization maintains exchanges with the medium beyond its own limits. From these exchanges, [the educational institution] functions as a sounding board for external phenomena, and seeks to influence” (p. 55), as criminal groups affect the academic life of teachers and students.

The last discussion is aimed at the physical, mental and social health of teachers. After analyzing some of the elements involved in the professional practice of teachers, a series of affectations were found at the medical, psychological and social level, i.e., some have acquired SINATA.

In the medical part, the results of this research coincide with those reported in the studies of authors such as Antonelli et al. (2012) and Cezar-Vaz et al. (2013), who point out that the most common condition in teachers is related to the presence of musculoskeletal pains. It should be noted that, according to the participants, these discomforts increased once the online modality began, due to the long and stre-

nuous working days, a situation that coincides with what García and Sánchez reported (2020).

Regarding the effects at a psychological level, the most reported condition was the presence of stress, a fact that coincides with what Ortiz (2011) said, who mentioned that the teaching profession generates various psychopathological mismatches in teachers. The effects of stress have also been indicated in the literature, such as the case of Collado et al. (2016), who mention that physiological responses are characterized by low back pain, sleep problems, tiredness, irritability, headache, flu, memory and concentration problems, changes in appetite, generalized fatigue, nervousness, and loss of pleasure. This situation is confirmed in this investigation.

Other conditions found were related to the presence of anxiety, sleep disturbances and emotional tiredness. Findings that coincide with the study of Figueiredo-Ferraz et al. (2013), which indicate that the presence of negative feelings in teachers is frequent. In this research, these conditions were reported more frequently in the evaluation periods, as well as once the virtual modality began, due to what the educational paradigm change involved.

Finally, regarding the social area, the effects mostly presented were related to the fact that teachers had to negotiate or sacrifice time with their partner, family and friends. It coincides with Herrera et al. (2019) and the research with teachers from other educational levels in Mexico. Based on what was referred by the participants, it was found that during the online modality it was difficult to separate the work environment from the staff, since both were developed in the same physical space, which coincides with Gómez et al. (2020) who mention that during this modality it was difficult to separate the personal and work areas, which generated conflicts within the teacher's home.

The decadent social contract and the crisis process that the educational institution goes through, makes us urgently consider a rethinking of the teaching work, of its working conditions including the delimitation and attention both of its rights and duties in the institutional day to day, otherwise the sense of the teaching role will be lost and together with it, the educational institution. Although the reform of former Mexican President Andrés Manuel López Obrador considered some demands of the teachers' union (Presidency of the Republic, 2019),

institutional actors are lacking in appropriating a national educational model.

In this sense, we agree with Pinos (2013) that the educational commitment should aim at an integral human formation as an essential pillar for the transformation of both individuals and society, involving teachers, students, educational institutions and other actors in the process of mutual learning. However, it requires a reorganization of teaching practice and the elimination of barriers and inequalities, being essential to address the complexity of changes in today's world.

Finally, we recognize and accept that generalizable conclusions cannot be made with what was found in the institutions of analysis. This limitation lies in the fact that the contexts of the educational institutions are diverse and dependent on the idiosyncrasy of the place, although there are many similarities that make them follow homogeneous parameters due to circumstances outside education, for example the COVID-19 pandemic, which demanded adjustments to the calendars and study programs and caused a series of changes in teaching practice and, in turn, greater suffering in the teachers.

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Challenges of interstate dissemination of educational policies in the Brazilian Federation

Desafíos de la difusión interestatal de políticas educativas en la Federación Brasileña

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Abstract

Based on the scenario of a low degree of national coordination in the educational policy of the Brazilian federation, the article aims to identify and discuss the challenges, mechanisms and contexts that motivated, in 2016, the decision by the government of Espírito Santo to adopt and institutionalize the Pact for Learning (PAES) inspired by the collaborative regime program of the state of Ceará. To achieve the proposed objective, this case study was based on exploratory research with qualitative bibliographic and documentary studies, linked to the concept of public policy diffusion. The results showed that the adoption of the program was consolidated through cooperation and learning mechanisms and that the policy adopted had, in its conception, a certain structural rigidity that disregarded local contexts and factors. The discussions emphasized the central role played by the National Council of Education Secretaries and third sector institutions in fostering a network of horizontal interaction that encouraged the spread of ideas and successful public policy models. It was concluded that the adoption of the program was an isolated government decision and that social protagonism was not taken into account in the policy formulation and construction stages. Finally, it was inferred that the lack of a National Education System compromises articulation and cooperation between education systems.

Keywords: federalism, educational policy, articulation of education, educational innovation, educational cooperation, education coordination.

Resumen

Partiendo del escenario de un bajo grado de coordinación nacional en la política educativa de la federación brasileña, el artículo tiene como objetivo identificar y discutir los desafíos, mecanismos y contextos que motivaron, en 2016, la decisión del gobierno de Espírito Santo de adoptar e institucionalizar el Pacto por el Aprendizaje (PAES) inspirado en el programa esquema de colaboración en el estado de Ceará. Para lograr el objetivo propuesto, este estudio de caso se basó en una investigación exploratoria con estudios bibliográficos y documentales cualitativos, vinculados al concepto de difusión de políticas públicas. Los resultados mostraron que la adopción del programa se consolidó a través de mecanismos de cooperación y aprendizaje y que la política adoptada tuvo, en su concepción, cierta rigidez estructural que desconocía los contextos y factores locales. Las discusiones enfatizaron el papel central desempeñado por el Consejo Nacional de Secretarios de Educación y las instituciones del tercer sector en el fomento de una red de interacción horizontal que estimuló la propagación de ideas y modelos exitosos de políticas públicas. Se concluyó que la adopción del programa fue una decisión gubernamental aislada y que el protagonismo social no fue considerado en las etapas de formulación y construcción de políticas y, finalmente, se infirió que la falta de un Sistema Educativo Nacional compromete la articulación y cooperación entre la educación. sistemas.

Palabras clave: federalismo, política educativa, articulación de la educación, innovación educativa, cooperación educativa, coordinación de educación.

1. Introduction

Cooperation between federated entities is considered challenging for National States that are structured according to the federative model, since it requires highly complex political-institutional engineering to promote integration between the federal government and subnational entities and between subnational governments among themselves, which takes into account the fundamental constitutional principles of democracy and autonomy. In addition, in the case of Brazilian education, this complexity increases due to the active and accentuated involvement of non-state actors in the conception, implementation and structuring phases of public policies in recent years.

As for Brazil's federative system and the responsibilities of each level of government, the 1988 Federal Constitution of the Citizen presented important novelties. Among the main features are the strong decentralizing guidelines in favor of municipal governments and the overlap of common powers and competences (Araujo, 2010) requiring effective coordination to achieve common objectives (Abrucio & Segatto, 2016). This joint action is detailed in Article 23, which deals with the common competences of the federated entities, in Article 211 which prescribes the regime of collaboration between educational systems and in Article 214, which deals with the creation of the National Education System (SNE) through the implementation of the National Education Plan (PNE). However, the common competences in education, the collaboration regime and the SNE are not constitutionally regulated and the PNE (2014-2024) saw most of its objectives breached, due to budgetary restrictions resulting from the approval of the Constitutional Amendment 95, in 2016, limiting public spending for 20 years.

The Pact for Learning in Espírito Santo (PAES) was institutionalized, as a public policy, in March 2017, through Law No. 10.637, with the objective of developing, in collaboration with municipal networks, strategies to increase the learning indicators of students of basic education, initial years, in Espírito Santo, with emphasis on reading, writing and numbering. To this end, the program provides municipalities with technical, pedagogical, structural, administrative-financial and management support (Espírito Santo, 2017). The program that inspired

and triggered the process of creating the PAES was the Right Age Literacy Program (PAIC), a public policy of educational collaboration established in 2007 by the government of Ceará.

Through this case study, we seek to understand how the low degree of national coordination in educational policy opened opportunities for the dissemination of policies between Ceará and Espírito Santo and to what extent the confluence of these factors led, from the interactions to the implementation of the Espírito Santo Pact Proposal.

From this scenario, we believe that the studies on the challenges in the process of diffusion of models in Brazilian federalism are relevant and, using the theoretical contributions of Farah (2006 and 2008), Abrucio et al. (2016) and Segatto et al. (2023), this article describes and analyzes the set of factors and dimensions that led, in 2016, to the decision to institutionalize the Pact for Learning, and promoted changes in the policy of collaboration in the State of Espírito Santo, going from specific and limited actions to a more institutionalized and systematized coordination.

Farah (2008) argues that the dynamics of diffusion or propagation of policies initially requires a discussion on the definition of best practices and innovation, which are fundamental elements of diffusion process theory. Unlike replication, which suggests a mere reproduction of models, diffusion implies a horizontality that entails an active choice and the adoption of innovative ideas and practices by the recipient entity. Segatto et al. (2023) record a peculiarity inherent to education policy in the context of Brazilian federalism. In education, compared to social assistance and health policies, there is a low degree of national coordination, consolidating it as a decentralized policy, giving states and municipalities reasonable autonomy in decision-making, providing space for the dissemination of policies. The truth is that the federative units are characterized by having autonomy in decision-making and this implies that they can both implement innovative policies and also promote the dissemination of these initiatives, as "recipients" or "providers" of educational programs and actions in their territories.

Considering that the PAES was the result of a policy dissemination process between Ceará and Espírito Santo, the article will cover the current factors and challenges of horizontal dissemination,

between states, addressing not only aspects of federalism and institutional factors, but also deepening the discussion on the role of actors and ideas in this process and to what extent the low degree of national coordination in educational policy affected this interstate dissemination process.

In addition to this introduction, the article is divided into four sections. The first addresses the organization of Brazil and the state of Espírito Santo in its political-administrative, geographical and educational aspects to situate the analyzed context. The second is about the methodology used to carry out the research that gave rise to this article. In the third part, the results were presented on the identification of the factors and dimensions present in the interstate dissemination of the collaboration program in literacy between Ceará and Espírito Santo and, finally, the discussions and conclusions exposed the various elements, facilitators and obstacles present in this process of adopting horizontal policies.

1.1 Political-administrative, geographical and educational organization of Brazil and Espírito Santo

Brazil is characterized by having an ethnically and culturally diverse population. With a land area of approximately 8.5 million km², the country is the largest in South America and the fifth largest in the world. Administratively, Brazil is divided into five macro-regions: North, Northeast, Southeast, South and Center-West. The political-administrative organization of the Brazilian state adopts the federative system, where power is shared and distributed among autonomous and interdependent political entities. The country, sovereign and independent, consists of 26 states and the Federal District, which houses the capital. The 1988 Constitution extended the competences of member states and gave a prominent role to the 5568 municipalities, which were elevated to the category of federated entities with their own legislation, although subordinate to federal laws. Figure 1 illustrates the political-administrative division of Brazil.

Figure 1. Political-administrative division of Brazil



The state of Espírito Santo has an area of approximately 46.5 thousand km² and a population of approximately 4.1 million inhabitants. Geographically it is located in the Southeast Region of the country. Administratively, the state is composed of 78 municipalities, as illustrated in Figure 2. The capital of Espírito Santo is the city of Vitória. The length of the coast is 400 km and the climate is humid tropical. The economy is based mainly on industry and agriculture, with coffee production standing out. The government of Espírito Santo, aligned with the federal structure, is composed of the Executive Branch, headed by the governor, the Legislative Branch, made up of 30 state deputies, and the Judicial Branch, with its various organizational instances of justice.

In relation to the educational organization of Espírito Santo, the School Census (2023) indicated that the State has 3019 schools of Basic Education, of which 2659 are public (QEdu, 2023). These schools, distributed in 78 municipalities, offer Early Childhood Education, Primary Education in the initial and final years, Baccalaureate, as well as Professional Education, Youth and Adult Education and Special Education. The Census yielded a total of 870,274 Basic Education enrollments, of which 86.47 % are on the public network. Early childhood education is basically guaranteed by municipal networks (91.6 %) and partly by private networks (8.4 %). The Census showed that only 37.7 per cent of children aged 0-3 have access to day care. With regard to preschool, it was observed that 96.1 per cent of children aged 4-5 years are enrolled in municipal public schools. Of primary school enrollments, ages 6 to 14, the Census revealed that 18.5 % are in state networks, 68.7 % in municipal networks and 13.4 % in private networks. In secondary education, the state-owned public network accounts for 82.3 % of

enrollment, the federal network for 7 %, and the private network for 11 % on average.

2. Methodology

An essentially qualitative approach was adopted, considered the most appropriate to understand the educational contexts involved in the Covenant for Learning. This is exploratory research, and the research technique was the case study. This research can also be defined as descriptive analytics (Gil, 2002), including the observation, analysis and recording of the determining elements in the dissemination process and in the construction of educational policy in the State of Espírito Santo.

As data collection procedures, in order to meet the objective of this study, a bibliographic research was adopted that involved a set of written materials, secondary sources, with information elaborated and published by other authors in scientific articles, theses and dissertations (Rosa et al., 2018); based on primary sources derived from information extracted from official documents such as management reports, legislation and regulations that allowed capturing different perspectives on the collaboration program.

The structuring of content and information processing were carried out in the light of Bardin's proposal (1970). In the material research phase, the contents were categorized, which were organized in two lines that structure the article: 1) documents and texts that addressed the process of dissemination of the policy in Espírito Santo; 2) documents that described the initial phase of implementation of the program. The next step involved a more detailed reading of the documentation to identify the presence of challenging contexts in the interstate dissemination process. The following table shows the legislation analyzed.

Table 1. *Legal frameworks of the PAES*

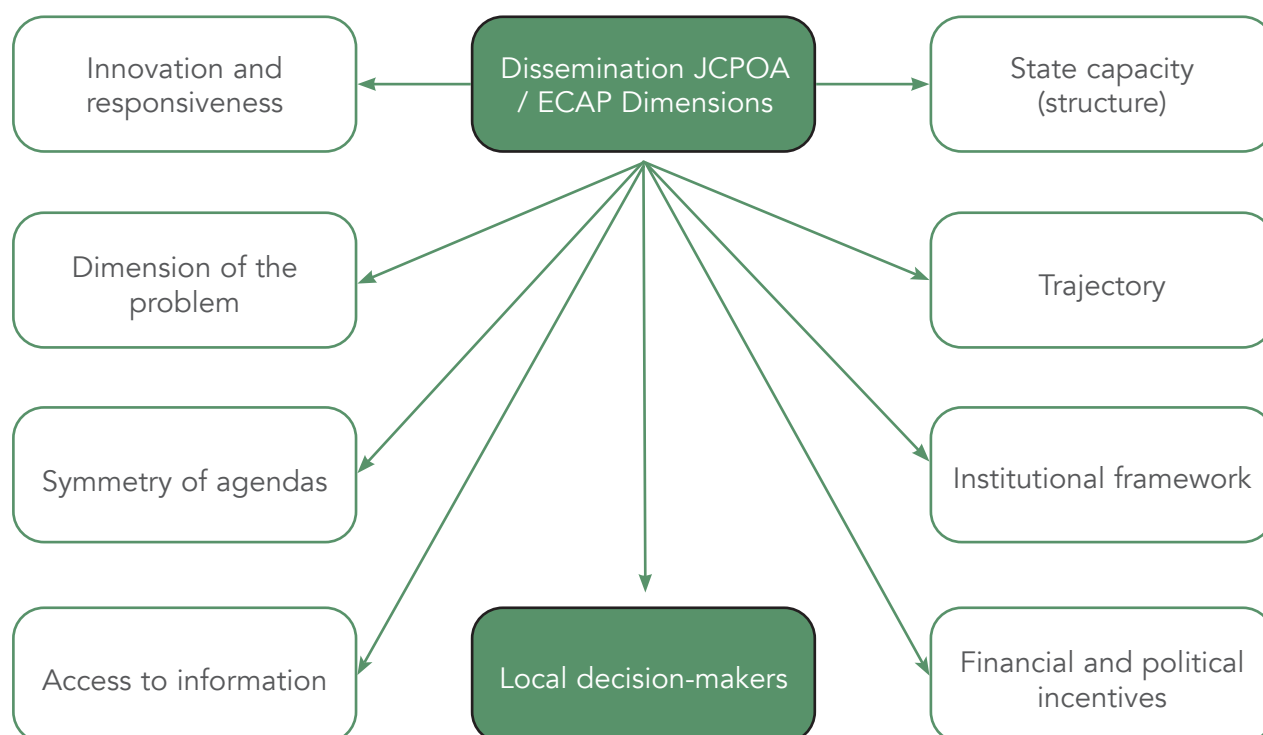
Legal device	Objective
Law No. 10.631/2017 of 28/03/2017	It establishes the Covenant for the Learning of Espírito Santo.
Ordinance No. 152-R/2017 of 01/11/2017	It constitutes the Executive Committee of the PAES.
Law No. 10.787/2017 of 19/12/2017	FUNPAES – State Fund to Support the Expansion and Improvement of the Conditions of Offering Early Childhood Education and Primary Education in Espírito Santo.
Decree n°4.217-R of 08/02/2017	It regulates FUNPAES.
Law No. 10.880/2018 of 19/07/2018	It establishes the Municipal Coordinator of Actions of the PAES, the Collaborating School Award and the Granting of Scholarships.

Legal device	Objective
Decree No. 4.346-R/2018 of 31/12/2018	It regulates the Scholarship Program.
Decree No. 4.347-R/2018 of 28/12/2018	It creates the Advisory Board of the PAES.
Ordinance No. 090-R of 11/10/2019	It restructures the functioning of SREs.
Law No. 11.227/2020 of 30/12/2020	It establishes the educational ICMS.
Law nº 11.257 of 30/04/2021	It amends Law No. 10,787 FUNPAES.
Decree No. 4.907-R of 16/06/2021	It regulates the new legislation of FUNPAES.
Law No. 11.378/2021 of 31/08/2021	It introduces amendments to Law No. 11.227 relating to the New ICMS.
Decree No. 5.410-R/2023	It regulates the Collaborating School Award.
Ordinance No. 121-R/2022 of 31/05/2022	It establishes the Regional Centers of the Pact for Learning in Espírito Santo – NUPAES.
Law No 5.474/1996	It establishes the State Municipalization Program.
Ordinance No. 090-R/2022 of 14/04/2022	It restructures the functioning of SREs.
Decree No. 5.332-R of 13/03/2023	It changes the organizational structure of the SEDU.

In this way, the analysis understood not only the institutional factors and contexts, but also the ideas that were articulated and validated from the interactions between them. The factors considered and addressed in the analysis of the JCPOA diffusion process involved: a) the elements of innovation and their potential to provide answers, b) the nature of the problem to be overcome, c) the convergence

with the agenda of different contexts, d) access to information, e) the choice of innovations by the agents of the decision-making bodies in the receiving places, f) the political and financial incentives, g) the national and local institutional framework, h) the dependence of the trajectory and i) the structural characteristics of the receiving locality, as shown in the following diagram.

Figure 3. Dimensions analyzed in the dissemination process of the JCPOA/SEAP



3. Results

The results were organized considering the factors and dimensions that contributed, or not, to the viability and implementation of the dissemination of the Cearan educational collaboration policy with a focus on the literacy cycle of children at the appropriate age. The avant-garde character of the Ceará program and the good results achieved made the JCPOA a successful alternative to mitigate the challenges of literacy learning, so its adoption was considered by the Government of Espírito Santo, as it also faced similar challenges related to learning indicators and educational level.

3.1 Ability to provide answers

In discussing the intrinsic characteristics of innovation, Farah (2006) highlights that the characteristics of an innovative policy, in terms of its responsiveness and its effectiveness in mitigating management challenges, contribute significantly to its diffusion and adoption by other entities.

The pioneering nature of the Cearan program is explained by the fact that it is, in the country, the first institutionalized program of collaboration between States and municipalities, Law No. 14.026, of 17/12/07 (Ceará, 2007). The focus of the JCPOA/Ceará is literacy for all children up to the second year through systemic actions coordinated with municipalities. Improving educational indicators in Primary Education is a common challenge for all states. One of the aspects that characterized the Cearan collaboration regime was the structuring of participatory governance with actors and forms of integration between the State and the municipalities.

The positive results achieved by JCPOA/Ceará made it an alternative to be considered by other states. According to data from the Permanent System for the Evaluation of Basic Education (SPAECE) in Ceará in 2017, 88.2 % of students in the second year of Primary Education reached the desirable level of literacy, a significant increase compared to 39.9 % in 2007. Corroborating these data, in 2017, the National Institute of Educational Studies and Research Anísio Teixeira (INEP) highlighted that 77 Cearan public schools were among the 100 best in Brazil (Faheina, 2018).

3.2 Problems and challenges of the same nature

Another relevant dimension relates to the nature of the challenge that innovation must overcome. If common elsewhere, innovation becomes potentially considered (Paulics, 2003; Farah, 2006). Ceará lived with low learning indicators (Brazil, 2005) and a lack of more structured collaboration between the State and municipalities. Historically, Ceará has always been below the national average in the indexes that measure the quality of education (Faheina, 2018).

Espírito Santo's challenge in 2017, similar to Ceará's in 2007, was to raise education levels fairly, improving competition rates, and eradicating illiteracy. The modest performance of the public education network of Espírito Santo in 2015 can be seen when analyzing the national results: tenth place in the country in primary 1; 12th place among the states of the federation in Fundamental 2, with 0.6 points below the established goal; the approval flow at the appropriate age in Primary School was 79 % and attendance at day care from 0 to 3 years was 32 % of children, a percentage lower than the target set by the National Education Plan of 50 % (PNAD/IBGE, 2015).

Regarding the degree of collaboration between the State and the municipalities, education in Espírito Santo was among the states that developed specific "joint actions", without institutionalization and with weak assistance (Segatto, 2015). As in Ceará, the lack of institutionalization of the policy of collaboration between the state and the municipalities and the low indicators of educational learning motivated the creation of the PAES in Espírito Santo.

3.3 Convergence of public policy agendas in different territories

Simply identifying similar challenges is not enough for policy diffusion to occur. Innovation will make more sense if the challenges it addresses are truly relevant and require an effective solution and innovative response (Fuks, 2000). The characteristics of innovations must converge with the agendas and contexts of the localities receiving the innovative policy, since the mismatch between them causes their diffusion to lose interest, does not respond

to a social and political priority of the local entity and mobilizes resources without compensation of the expected result. Ultimately, innovation must be linked to priority needs, considered as an object of the government's agenda and action (Farah, 2008). Ceará's innovative policy responds to the context and agenda of the Espírito Santo government: reduced institutionalization of cooperative actions and challenging learning outcomes. Law No. 13,005 of 2014 (Brazil, 2014) strengthened collaboration between the federal entities as a central strategy for the achievement of educational objectives. This discussion was strengthened in the states and municipalities when their respective state and municipal plans were approved and contributed to the inclusion of the Pact for Learning in the decision-making agenda of government actors in Espírito Santo.

3.4 Access to information

According to Segatto et al. (2023), knowledge through events and publications leads to the creation of interconnected networks of entrepreneurs that operate in the proposal and dissemination of certain innovative actions and programs. Shipan and Volden (2012), in explaining diffusion processes, point to different factors, in particular the role of ideas and networks and their respective intersections. The wide range of scientific studies on Sobral's experience, the JCPOA and its influence on the creation of the National Program for Literacy in the Right Age (PNAIC), contributed to the dissemination of important information and data about the program. (Brazil, 2005; Costa & Carnoy, 2015; Costa, 2016; Cruz et al., 2020; Marques et al., 2009; Sumiya, 2015; Fonseca, 2013; Sumiya et al., 2017; Ribeiro, 2011).

In this context, the space of the National Council of Secretaries of State for Education (CONSED), as a network for the circulation of multiple actors, was fundamental to the process of appropriation of information on the collaboration policy of the JCPOA by the political actors of Espírito Santo. Regarding the role of Consed, Segatto et al. (2023) draw attention to this articulating and mobilizing position, which has allowed the horizontal dissemination of public policies considered successful among states, such as the institutionalization of collaboration programs between state and municipal governments. The Secretary of Education

of Espírito Santo had a wide presence in the community of public educational policies, either for his position and performance in the Secretariat of Education of the State (SEDU) or for his leading role as vice president of the Consed.

It is worth noting that in the process of horizontal dissemination of policies among states, following the example of the successful experience of Ceará, the third sector played a central role: either as a lobby group, producing knowledge and promoting complex issues, or as support for the implementation of innovations, as in the case of PAES, which led to the formalization of a Technical Cooperation Agreement between the SEDU and the Natura, Lemann and Associação Bem Comum institutes. The Collaborating Movement, the Inter-American Development Bank and Espírito Santo em Ação, an institution representing the business fabric of Espírito Santo that has education as a priority, were also present in this decision-making and implementation process.

3.5 Action by local social actors and internal politicians

In addition to the conditions mentioned above, the process of disseminating innovations in the public sphere highlights the activism and action of social and political actors. They act influencing, in the recipient places, the diffusion process aimed at the incorporation of a certain innovation or its rejection (Kingdon, 2011; Evans, 2009). It is necessary to take into account the position of the citizen when planning his territory. This is a legitimate right and not just a political desire (Buele Nugra & Vidueira Mera, 2018).

In this regard, it is noted that the process of conception and institutionalization of the PAES did not present the unique elements observed in the process of creation of the Ceará program in 2007. The conception of the JCPOA resulted from extensive debate, including seminars and public meetings, hearings, conducted by the Legislative Assembly through a multi-representative committee focused on the eradication of illiteracy in Ceará. This process, initiated in 2004, involved several institutions, such as the United Nations Children's Fund, the Association of Municipalities of Ceará, the Union of Municipal Directors of Education of Ceará, the State University of Ceará, the Federal University of

Ceará, the University of Vale do Acaraú, the Regional University of Cariri and the University of Fortaleza (Costa, 2016).

In Espírito Santo, the rapid process between the decision to include it on the agenda in December 2016 and the approval of the bill by the Legislative Assembly in March 2017 (Tete & Borgo, 2017) illustrates the reduced mobilization of social organizations and political actors in the process of formulating and building Espírito Santo's policy of collaboration. The project was voted on in extraordinary session and under emergency regime.

The non-inclusion of civil society actors and the lack of a broad debate led to critical analyzes on the adopted policy model, as observed in the studies of Schwartz et al. (2021) and Rosa et al. (2018).

3.6 The influence of political incentives and financial motivation

Political incentives, according to Farah (2008), can influence the diffusion of a given innovation due to the possible political benefits derived from the adoption process. The author says innovation tends to be adopted if it increases the chances of re-election.

It is a fact that the JCPOA in Ceará is full of examples of how the success of this initiative projected exponents for local and national policy, either for the executive or for the legislative: Cid Gomes was Governor in 2007, the year JCPOA was created, was re-elected in 2010 and is currently a senator of the republic (Brazil, 2024); Professor Izolda Cela was Secretary of State for Education (2007-2014), but before she was Secretary of Education of the municipality of Sobral (2005-2006), then she was vice-governor (2015-2022), Governor (2022) and served (2023/2024) as Executive Secretary of the MEC; Camilo Santana was elected Governor, with Izolda Cela as Deputy Governor and subsequently re-elected (2015-2022). In 2023, he assumed the position of Minister of Education with Professor Izolda as Executive Secretary (Brazil, 2024). These data show nuances of linking these increases with the good results of innovative education policy and its great impact.

Espírito Santo's adoption of the policy of collaboration and its development in the period 2017-2024 does not provide direct examples of projection and political electoral return specifically linked to

the PAES. However, when thinking about political return as a strengthening of federative principles, consolidation of the institutional support base and as a municipal management anchored in the republican relations between local administrations, it is undeniable that the set of financial actions and structural support to municipalities has strengthened governance and political stability in Espírito Santo.

Farah (2008) writes that the presence of financial resources and incentives for the implementation of innovation, whether from the Federal Government or multilateral agencies or non-governmental organizations, drastically influence the decision to adopt the policy.

3.7 Dependence on the path and capacity of the state

The context of trajectory dependence is supported by Abruzzo et al. (2016). The results obtained are attributed to the continuity of policies over time, i.e., to the maintenance of a continuous program of actions that gradually paves the way for new changes and improvements. The long history of cooperation between the state government and the municipal governments of Espírito Santo, whether technical support or financial resources, was fundamental to the institutionalization of PAES. Freitas (2019) highlighted in its study that since 1974, the SEDU had developed mechanisms for the gradual transfer of responsibilities from rural education to municipalities. It highlights the creation of a specific organizational unit, the "Department of Guidance for Municipalities and Private Entities", designed to coordinate and execute actions with municipalities. In addition, it highlighted initiatives such as the Technical and Financial Cooperation Project in the 1980s and the Program for the Municipalization of Early Childhood and Primary Education. This list also includes the Espírito Santo Basic Education Assessment Program, established in 2000, the signing of agreements, regulated by Decree No. 2.737-R/2011 and the Rural School Transport Program, created in 2013.

The adoption of a new policy is conditional on the existence by the recipient of that policy of structural, administrative and financial capacity, which are decisive for its implementation and its adaptation to local conditions. The absence of this capacity limits the entity to accept innovative policies (Farah,

2008). In the process of policy integration, the institutional framework, both in the country and in the place, exerts a relevant influence, facilitating or hindering the choice of the program, since the presence of a multilevel governance agreement is decisive in this process, because it facilitates the transit of information and solutions between local political actors.

The state government of Espírito Santo demonstrated that it has the state capacity to adopt and implement the program of collaboration with municipalities. After its implementation, in 2017, the Espírito Santo Collaboration Unit for Learning was created, led by the PAES Coordination integrated into the State Secretariat of Education. The presence of a governance structure in the educational regions of the SEDU and the institution of a Program Coordination in each municipality favored and optimized the organization, articulation and participation of municipal entities around the axes and structuring actions of the program. Since its implementation, the Espírito Santo collaboration regime has made investments in continuing education, in the printing and distribution of complementary teaching materials for all students and teachers from the 1st to the 4th year of EF, in school transport, in the payment of technical scholarships, in school awards and the granting of resources for the construction, remodeling and expansion of school units and the acquisition of capital goods.

4. Discussion and conclusions

This study helped to identify, on the one hand, the reasons why the Cearan collaboration policy was disseminated and, on the other, the motivations that led the State of Espírito Santo to adopt it. The State of Ceará stood out when implementing an innovative initiative whose effectiveness can be proven by the increase in learning outcomes in the last 17 years, having the best literacy rate in the country. Espírito Santo, by adopting Ceará's collaborative solution, sought to improve literacy outcomes and the educational management of municipal networks. The current results of public education in Espírito Santo point to significant, not ideal, but promising advances. In 2024, the Ministry of Education (MEC) published the literacy rate of Brazilian states. Espírito Santo was among the three states with the highest literacy rates. The result confirmed that 68

% of students in the public school system in Espírito Santo were fully literate in the second year of primary school, an indicator higher than the national average of 56 %. The publication of the SAEB results in 2024 gave Espírito Santo the 5th national position in Primary Education I, a priority stage of the collaboration regime. Also in 2024, the State of Espírito Santo was recognized by the MEC with the Gold Seal for States that present institutionalized actions and advances in child literacy in their territory. Here, we observe the influence of outcome rankings on policy-making processes for "inter-state competition" (Baybeck et al., 2011).

The process of dissemination can be understood by the trajectories followed by policies and by the articulation of ideas and people among sub-national entities. The learning mechanism that led to the dissemination of public policies from Ceará to Espírito Santo was provided through the use of a Consed-led network of interaction and through negotiated and consensual dialog with third sector partners. Segatto et al. (2023) explain that the learning mechanism is based on the principle that a government's decision to adopt a new policy permeates rationality in which it is necessary to assess the potential benefits and harms of adoption, in addition to making a comparison with the success (or failure) of other governments' experiences, i.e., we learn from what others have already done.

This study confirmed the active role played by the "receiving" locality, in this case Espírito Santo, in the process of adopting the Ceará program. The influence of internal actors in the decision-making process was confirmed, driven by the innovative features of the JCPOA, especially the understanding that the policy of collaboration would help the state and municipalities achieve the goals set in the standardized tests.

Another verified aspect refers to the influence of external business actors and institutions, such as Consed and the Movimiento Colabora, which played the role of inducers and disseminators of information (cognitive process), making the topic of the collaboration regime relevant and composing the political agenda of the government of Espírito Santo.

It was observed that in Brazil, where education policy is marked by a very low national coordination and the absence of institutionalized instances of federative articulation and interconnection, there are

episodes of diffusion of policies as a result of political pressures depending on economic and social conditions, ideological aspects, institutional capacity and the circulation of information and ideas through formal and informal networks and instances. In the case of the PAES, it was also found that geographical proximity was not an influential factor in the adoption of the policy by Espírito Santo, considering that these are states of different regions, separated by more than 2000 kilometers. PAE reveals as an important episode of horizontal adoption between States by the elements that were present in the context of the “supplying” State, origin of the policy, and the “receiving” State, destination of the policy.

Analyzing how different explanatory contexts intersect in policy diffusion events is highly relevant to understanding current dynamics and their variations based on the specificities of the territories that “provide” and “receive” the innovative policy. Although they are close, the dissemination processes differ depending on the profile of the internal and external actors involved, the way and intensity with which information and ideas circulate, the relational nuances between the parties involved, the presence of spaces and forums for discussion and agreement, interests and political alignments present, among others. However, the prevalence of Republican relations and social interests and the conviction that a certain “adoption” is essential to qualify and expand the deliveries to society can guarantee the necessary arrangements to make this diffusion viable. Understanding the possible effects of local contexts and factors is relevant for decision makers when defining ideas and public policies that can enter the political agenda. In this sense, the findings of this article aim to stimulate discussions on the dimensions that permeate the issue of interstate diffusion and that favor, limit or even make its implementation unfeasible.

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Self-study of critical incidents from a curriculum justice perspective

Autoestudio de incidentes críticos desde la perspectiva de la justicia curricular

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Abstract

This study investigates secondary education and curricular justice amidst counter-educational reforms aligned with neoliberal ideals in Brazil, highlighting the imperatives of teacher resistance against political implications at macro and micro levels. Focusing on two critical incidents situated at the Federal Institute of Ceará (IFCE) and the Federal Institute of Rio Grande do Sul (IFRS). The research employs self-study methodology and the critical incident analysis technique to examine intersections between educational policy and Physical Education within the federal education system. The qualitative approach, grounded in the epistemology of praxis, involved eight Physical Education teachers in reflexive and dialogical processes. These educators shared (inter)subjective and (self-)critical experiences regarding the relationship between secondary education and curricular justice, revealing a pedagogical practice that challenges the prevailing technical rationality. The study underscores how collaborative movements foster active political vigilance, shaping conscious and engaged bodies capable of transforming an often oppressive educational system. Through the exchange of experiences, the teacher-researchers developed strategies to navigate the contradictions of the educational system, building a transformative praxis that values diversity and curricular justice. This articulation between life and teaching work emerges as a space for resistance and pedagogical innovation, reaffirming Physical Education as a critical and socially committed field.

Keywords: self study, curriculum justice, critical incidents, integrated high school, school physical education, teacher training.

Resumen

Este estudio investiga la educación secundaria y la justicia curricular en tiempos de contrarreformas educativas alineadas con los ideales neoliberales en Brasil, destacando los imperativos de la lucha docente frente a las implicaciones políticas a niveles macro y micro. Centrándose en dos incidentes críticos, ubicados en el Instituto Federal de Ceará (IFCE) y en el Instituto Federal de Rio Grande do Sul (IFRS), la investigación utiliza la metodología de autoestudio y la técnica de análisis de incidentes críticos para examinar las intersecciones entre educación política y Educación Física en la red educativa federal. El enfoque cualitativo, basado en la epistemología de la praxis, involucró a ocho docentes de Educación Física en procesos reflexivos y dialógicos. Estos educadores compartieron experiencias (inter)subjetivas y (auto)críticas sobre la relación entre educación secundaria y justicia curricular, revelando una práctica pedagógica que desafía la racionalidad técnica predominante. El estudio destaca cómo los movimientos colaborativos promueven la vigilancia política activa, formando cuerpos conscientes comprometidos en la transformación de un sistema educativo a menudo opresivo. A través del intercambio de experiencias, docentes-investigadores desarrollaron estrategias para enfrentar las contradicciones del sistema educativo, construyendo una praxis transformadora que valora la diversidad y la justicia curricular. Esta articulación entre vida y quehacer docente emerge como un espacio de resistencia e innovación pedagógica, reaffirmando la Educación Física como un campo crítico y socialmente comprometido.

Palabras clave: autoestudio, justicia curricular, incidentes críticos, secundaria integrada, educación física escolar, formación docente.

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1. Introduction

The political inferences (macro and micro) still bring imperatives of teaching struggles over Physical Education in the educational policy of the Federal Institutes, especially in times of democratic biases regarding educational counter-reforms reduced to neoliberal ideas. These counter-reforms expose the scope of determinism to train young people with a view to their insertion into the labor market (Frigotto et al., 2012), taking into account the need of the productive sector and the capitalist logic of a public, equitable and universal divestment belonging to a unitary school (Moura, 2024). This historical context places us in a position to face the marginalization of youth, since around 21% of young Brazilians are not in school, even without having completed secondary school (INEP, 2022). In addition to this, young people in our country represent more than a third of the labor force and almost half of the unemployed (IBGE, 2021); in addition, there was a high growth in the proportion of young people in platform jobs between 2012 and 2019, from 22.7% in 2012 to a quarter in 2019, between 14 and 29 years (IBGE, 2019).

Therefore, understanding that secondary vocational training needs to constitute educational principles that analyze the peripheral world of work (Moura and Benachio, 2021), this places us to analyze social justice and curricular justice in physical education, a thematic object that has been growing in Brazil from the progressive movement and the critical conceptual framework of physical education in schools during the last 40 years (Filgueiras et al., 2024).

In this research, we understand the analysis of critical incidents in secondary school integrated from the perspective of social justice (Gerdin et al., 2016; Gerdin et al., 2022; Venâncio et al., 2022) having the experience of a self-study (Clandinin and Connelly, 2004; Fletcher and Hordvik 2022a; Fletcher and Hordvik 2022b; 2015) as a dialogic-reflexive device. Our assumption is limited to collaborative processes in and for self-training and teaching professionalism in physical education, recognizing that our established experiences with the work environment in and for social justice are capable of affecting and altering pedagogical practice in acts of transgression.

Sharing the radicality assumed by Freire (1996), in a subversive way, in his social struggle to guarantee the rights of the oppressed, we understand social justice as a concept in transitivity of ethics, politics and morality, which operates based on respect for human dignity in liberating praxis, an avant-garde expression of solidarity and humanization. We also emphasize that it is only through reflection and analysis of practice that we bring our teaching closer to the pursuit of social justice. In addition, teachers-researchers, equipped with knowledge and facing existing complex situations are willing to undertake deliberation, evaluation and decision actions in relation to the praxis, the gesture to be made or the word pronounced before and during the pedagogical action.

Teaching practices are permeated by complex teaching situations, which contain subsumers (includers) such as the act of problematizing, solving problems and experimenting with methodological devices, and facing teaching situations around complexity, which, in turn, require experiences with collaborative assumptions (Vieira et al., 2022).

This self-study is a journey into the lives of eight Brazilian physical education teachers with self-training trajectories (Abreu, 2022) immersed in a broader international collaborative research project—Complexity and Social Justice in the Lifelong Learning of Physical Education Teachers: Collaborative Processes and Artifact Production—funded by the National Council for Scientific and Technological Development—CNPq. Imbued with an epistemology of praxis, they mobilize teaching knowledge with intersubjective and (self)critical exchanges, seeking to rethink the teaching of school physical education by revealing another educational paradigm based on pedagogical rationality. We agree with Silva (2018) that by apprehending the epistemology of praxis we confer a self-referential autonomy crossed by a pedagogical knowledge with a view to a critical and liberating education.

In thematic research on secondary education reform and curricular justice, we problematize two critical incidents of School Physical Education (Flor et al., 2024) located in the federal network in the reality of basic, technical and technological education, revealed by a teacher-researcher, both members of this research project and effective in this network. One critical incident was located in the northeast-

tern region at the Federal Institute of Ceará (IFCE) and another in the southern region at the Federal Institute of Rio Grande do Sul (IFRS), in Brazilian territoriality, producing an intertextuality of political and pedagogical experiences (Larrosa, 2017). Reading of the federal email network.

2. Methodology

We proceed based on the matrix references of self-study according to the assumptions pointed out by Fletcher (2020), Samaras and Roberts (2011), Lunenberg and Samaras (2011) regarding the identity and intersubjective dimensions of the self and the generation of data. In addition, it is a collaborative methodology located in the Self-Study of Teacher Education Practices (S-STEP), complying with some provisions and research characteristics as Laboskey tells (2004); Vanassche and Kelchtermans (2015); and Fletcher and Hordvik (2022a), namely: (a) the study was initiated and focused on oneself, (b) was aimed at improvements, (c) was interactive at different levels and intensities throughout the research process, (d) generated multiple forms of qualitative data and (e) positioned validity as a process based on reliability.

Therefore, self-study includes collaboration as a matrix element, requiring the need for interaction between participants in the research process of their own practice (Thomas, 2017), whose possibility is given through critical friendship (Vieira et al., 2022) in the problematization of critical incidents (Philpot et al., 2021).

The methodological perspective is based on the procedures recommended by the EduHealth collective for the capture and analysis of critical incidents, using a specific instrument (Philpot et al., 2021).

The critical incident technique is a qualitative methodological procedure used in educational research to identify significant factors that favor the achievement of successful or failed experiences of certain events or practices (Tripp, 2012). A critical incident can be any situation observed in the educational context, which has some relationship with social justice and allows to structure issues or problematize the relationship between teaching and learning (Philpot et al., 2021). In this sense, eight teachers with research practice in school physical

education contributed to the problematization of secondary education and curricular justice in dialogic-reflexive acts, composed of four phases of heuristic approach.

In the first phase of the research, the teacher-researcher IFCE (with teaching experience in the network since 2012 and more strongly in integrated baccalaureate for four years) and the teacher-researcher IFRS (with teaching experience in the network since 2017) shared their reflections with the other teachers-researchers, who positioned themselves as critical friends. Each teacher wrote a reflective narrative, composed of a vignette (as an introductory epigraph) and the narrative of the teaching practice itself (textual development). This narrative exposed the incidents of physical education teaching in the federal network that were critical in their teaching trajectories in secondary education integrated into the temporality of neoliberal counter-reforms.

From the socialization of these two narratives, six reflexive approaches to the production of artifacts were organized using a device (Sanchez Neto et al., 2023) to propose questions, comments, reflections and (self)critiques scanned along six axes, namely: 1) I have doubts, the intention is to identify the ability to compare different positions-argument; 2) In my opinion it is interesting, its purpose is to enumerate the hypotheses and deductions-the gaps and epistemological limits; 3) You have said that you intend to identify the mobilization for a careful listening; 4) I hope that you infer and propose directions-steps; 5) I did not know it, it emphasizes to analyze the ability of convergence of concepts-experience, experience and absences, 6) I agree with you with the idea to identify the thought-approximations.

In the second phase, the professor-researcher (IFCE) and the professor-researcher (IFRS) were individually (by email) given the complete dossier in table form from their critical friends. When responding to thoughtful statements, each topic should contain at least one question or comment. In the third phase, based on a synthesis presented by the professor, we sought shared reflections on the two critical incidents and also discussed the responses/comments together, in two 2-hour online meetings, through the Google Meet platform.

From this group discussion, in the fourth phase of the research, we identify the imperatives of the teaching struggles in each critical situation. In

this way, our intention was to point out a qualitative itinerary that would allow us to address situated nuances of our own teaching work (Luttrell, 2020) to produce insurgencies in the verticalized situations of the educational system with oppressive conditions.

The collaborative approach between teachers-researchers, fundamental for self-study, reveals both the potential and the limits of this movement in centralizing and authoritarian policy contexts. Fraser (2009) argues that social justice requires the articulation of redistribution, recognition and representation, elements often compromised in neoliberal educational systems. In the incidents analyzed, collaborative practices function as a space for resistance and awareness, allowing collective mobilization in favor of curricular justice. However, these practices also face significant constraints, such as the absence of institutional support, fragmentation of teaching staff, and the prevalence of vertically imposed decisions. Therefore, the collaborative movement needs to be continuously strengthened through greater inclusion of educational actors and deeper alignment with the social and political demands that recognize and value the diversity of knowledge.

3. Critical incident analysis in integrated secondary school: IFCE and IFRS

In this section we explain the critical incidents in the reality of IFCE (critical incident 1) and IFRS (critical incident 2) and the analytical transitivity through dialogic-reflexive acts in intersubjective appropriation.

In a brief historical context, we affirm that the Federal Institutes of Education, Science and Technology were created on the basis of Law number 11.892 (Brazil, 2008), of December 29, 2008, which creates the Federal Network of Professional and Technological Education. It is a federal agency linked to the Ministry of Education (MEC). The IFCE, whose rectory is in Fortaleza, has 33 campuses and IFRS, whose rectory is in Bento Gonçalves, has 17 campuses.

We present introductory headings and the accounts of the teaching practice of the two critical incidents; and then, we take inspiration from Braun, Clarke, Hayfield and Terry (2014) to thematic qua-

litative data in analytical comparison in a context of dismantling democratic institutions in accordance with a strong advance of conservative thinking and the intensification of existing educational inequalities, mainly after the *coup d'état* that occurred in Brazil in 2016 (Zan & Krawczyk, 2019).

• Critical Incident 1 – IFCE

The critical incident that occurred in the IFCE reveals reflectivity on the (in)curricular justice in contexts of (de)formations and tradition of technical rationality: “The inter-comprehensive resonances led me to reflect on the (in)curricular justice, [...] either in the universal context with the current (de)formations of this neoliberal project, or in the institutional singularity, by a tradition of technical rationality” (Teacher-researcher of the IFCE, vignette as an introductory epigraph).

When I got the video from a student, I cried! I haven't heard that noise in a long time. Capitalized voices: “Hey management, take your hand off me, CAEF. Hey, management, take your hand off me, IF” In addition to the noises, other notes read: “The teachers of CAEF deserve to be recognized for their work”. We do not accept the institutional degradation and devaluation of the Coordination of Physical Education (CAEF) on the Fortaleza campus, whose commissioning function was removed after 25 years of its implementation. I felt this dismissal as an outburst for management, ethics and curriculum, without so much poetics. Around this reading of the world and of words, the inter-comprehensive resonances led me to reflect on the (in)curricular justice, in which the stone thrown is the Physical Education in the Integrated Baccalaureate, either in the universal context with the current (de)formations of this project of (de)government, or in institutional singularity, by a tradition of technical rationality, predominantly, marked by the exact sciences (Teacher-researcher IFCE, teacher practice report, textual development).

• Critical Incident 2 – IFRS

The critical incident that occurred at IFRS also generates the context of (de)curricular training due to the reduction of the curricular burden of the physical education subject in reference to the

emptying of knowledge: “It was a proposal to “reformulate” the pedagogical project of the career, in the midst of a pandemic, in the process of implementing the neoliberal reform of secondary education (IFRS professor, vignette as an introductory epigraph).

The situation occurred at the Federal Institute of Education, Science and Technology of Rio Grande do Sul – IFRS, on the campus where I work as a physical education teacher since 2017. In June 2021, I took a 12-month leave before completing my postdoctoral internship, and with less than a month to go back, I checked an email from the agricultural course coordinator, which was about a proposal to “reformulate” the project. Pedagogical Course (PPC), in the midst of a pandemic, in the process of implementing the neoliberal reform of secondary education. The email presented an initial “reformulation” proposal whereby physical education as a curriculum component would be excluded from the second year of the integrated baccalaureate. It is important to mention that in the current CPP, out of a total of 4 years of studies, two periods are offered in the first year and one period in the second year, an organization that already carries out the delivery of physical education for the upper middle level. Precarious classes. Reading the email, I quickly replied indicating my disagreement with the change, the coordinator replied pointing out that the proposal would be based on the National Common Curriculum (BNCC), however, without specifying the content of the document that justifies the exclusion from physical education. The decision did not involve the participation of a physical education teacher, at the time there was only one teacher on the staff who replaced me, but he did not participate in the discussions. The aforementioned reformulation proposal did not include more in-depth discussions on the integrated curriculum and the conception of the federal institutes was unknown when choosing the BNCC as the only document to guide the process that was called reformulation; however, it was found that it was simply a reduction of curricular components, which excluded physical education without the participation of a teacher in the area. (IFRS Teacher-Researcher, Teaching Practice Report, Textual Development)

Both incidents accentuated by the political scenario in the temporality of neoliberal counter-reforms. Reflective-dialogic statements resonated with the problematization of oppressive education in

educational systems and the curricular degradation due to power relations in micropolitical and macropolitical reality, with the implication of the tension of subjectivities in the constitution of the authority and teaching autonomy.

The critical incidents that occurred in IFCE and IFRS illustrate how the guidelines of the National Common Curricular Base (BNCC) and the implementation of the New Secondary Education consolidate the curricular precariousness and the instrumentalization of teaching, aligned with the neoliberal logic. These policies reinforce the devaluation of subjects that are not directly linked to the world of work, such as Physical Education, configuring a curricular injustice that compromises the integral formation of students. According to Zanatta et al. (2019), neoliberal reforms prioritize market interests and efficiency standards to the detriment of critical and socially engaged education, limiting access to knowledge that allows the full exercise of citizenship. Thus, the incidents narrated are not isolated cases, but reflect a structural trend that compromises the democratization of education and perpetuates educational inequalities.

The analysis of oppressive education and curriculum degradation was constituted by the elimination of the commissioned role of the Coordination of Physical Education (CAEF) in the IFCE and the proposal to reduce the workload of physical education in the IFRS curriculum in the context of the National Common Curricular Base (BNCC). Physical education, often marginalized from curriculum reforms, has significant critical potential to resist the technicalistic and neoliberal logic that dominates the education system. According to Gerdin et al. (2022), critical pedagogies in Physical Education can act as tools to question power structures, promoting social justice through the assessment of students’ bodily and cultural experiences. By transcending the vision of a restricted technical rationality of technical-physical performance and competitiveness, Physical Education can offer a pedagogical space that challenges hierarchies and inequalities, creating conditions for a civic and plural education attentive to social markers. As an example, the study of Corsino et al. (2024) that analyzes the relationship between coeducation and anti-racism in school physical education, passing through the theoretical-empirical analysis of school physical education and intersectionality, by placing the mimetic experience of Thematization of racial

relations in school physical education classes. Thus, in the critical incidents analyzed, the struggle for the maintenance of the hourly load and for the valorization of Physical Education in the Federal Institutes exemplifies this resistance, showing how the field can be affirmed as an indispensable part of a curriculum committed to diversity and social emancipation with a view to omnilaterality and polytechnics.

Regarding the critical incident at the IFCE, the questions raised by the critical academics were: what was the justification for the dismissal of the position entrusted to the Coordination of Physical Education (CAEF) at the IFCE? Why choosing CAEF? (critical academic 1) and how was CAEF dismissed? (Critical academic 2).

The dismissal of CAEF occurred in the correction flow for the tasks entrusted, according to the analysis of the federal budget. The comprehensive reading of the collegiate is that this offer was seen as a political degradation of the CAEF, involved in the precariousness of the educational work and in the logic of devaluation of physical education in educational policy.

The political act of the CAEF brought, as a collegiate deliberation of the faculty, the linkage of this coordination to the Secretariat of Education of the campus of Fortaleza, in contrast to the proposal to link it to the Secretariat of Tourism and Recreation, to assert itself in education points to a political-epistemological assumption, approaching the human sciences. As Freire (1987) states, the militancy against mechanistic thought and action that subordinate our existentiality in the world becomes an imperative of struggle whose philosophical clarity is indispensable for political practice with the necessary epistemological vigilance.

The emotional impact experienced by the teacher-researcher of the IFCE before the dismissal of the Coordination of Physical Education (CAEF) shows how the processes of curricular precariousness affect not only the institutional context, but also the teaching subjectivity. According to Charlot (2013), the relationship with knowledge is crossed by the affective dimension, and situations that devalue pedagogical work generate feelings of frustration and impotence. At the same time, Giroux (1997) argues that teachers, as transformative intellectuals, have a fundamental ethical role in the fight for social and curricular justice, with emotional experience being a force that can

mobilize resistance and transformative actions. Thus, the emotional response of the teacher should not be seen as fragility, but as a legitimate expression of the fight against the impositions of a technical rationality that dehumanizes educational practice.

Through dialogic listening, critical academic 3 mentioned being unaware of the attacks on School Physical Education that take place in several Federal Institutes (IF). This struggle of the Federal Institutes incorporates macropolitical ideas, since it reflects the moment in which we are forced more strongly by neoliberal forces (Freire, 1996) whose foundations of public schools are threatened, especially by curricular injustice, through authoritarian counter-reforms that operate in banking logic, either by making invisible curricular components away from external evaluations, or by treating professional education as training for cheap labor.

Critical academic 4, in an act of radicality and anger, argued that the previous government took everyone seriously by threatening our work, but that together with student activism we can build resistance and transgression movements, since “reflective and collaborative spaces can include teachers and, in addition, other educational actors and members of the educational community, giving way to communal agreements under democratic reasoning” (Oyarzún & Soto, 2022).

In this sense, the teaching work consists of providing a strategic, located and negotiated teaching (Tardif, 2014), allowing a dialogic action with knowledge articulated to the project of society in an act of conscience, aiming at equity and social justice. To this end, it is essential to participate in resolutions on the political nature and its impact on the organizational support needed for learning at school and abroad (Day, 2001).

Regarding the critical incident of the IFRS, the questions raised by the critical friends were: Why would curriculum reformulation be a matter of (in) social justice? (critical friend 6), the others asked the question: Why did the substitute teacher not participate in the discussions on the reorganization of the CPP?

Among the dialog now established, in order to understand the answers, the reflection process produced the understanding that reducing the hourly burden limits the right of students to have access to physical education knowledge, which implies the

relationship between social justice and curricular justice, reproducing education from the perspective of and through the market that operates in the logic of capitalism, as shown by the studies of Ferreira (2017), Silva and Araújo (2021), Ramos and Paranhos (2022), Jucá et al. (2023) whose reality succumbs to the construction of autonomous citizens who have the right to plan and decide for themselves their life in acts of conscience (Freire, 1999 Giroux, 1997).

Considering that there was no participation of physical education teachers in the reform proposal of the IFRS Pedagogical Course Project (PPC), critical friend 3 stated that it is essential that the curricular changes are discussed collectively, with effective participation of actors with the specific knowledge of each area of knowledge in the construction of the school curriculum.

Critical academic 7 reinforced this position by saying that the reformulation should be addressed with the NDE/Union of Students of the course, drawing attention to the importance of collaborative authorship of students in the management of curriculum construction (Freire, 1996).

Critic 5 also asked if the substitute teacher had had the opportunity or desire to participate in the reformulation committee of the CPP, the teacher would have had questioned the proposal to reduce the hourly burden of physical education, according to the movement made by the teacher-researcher IFRS, in response to the email of the course coordinator.

Critic 3 questioned whether the substitute teacher was invited to participate in the committee.

After the question of critic 3, it was identified that all teachers were formally invited, however, the condition of the substitute teacher who participates in committees is different from the condition of permanent teachers, as known, in most cases, they do not have the option of voting or do not have the same incidence in the positioning to the permanent teachers. Critic 8 questioned the fact that physical education has been treated as a subject of less relevance compared to other curricular components.

The response to the email in an opposite position to the reduction of the hourly load generated the support of the colleagues through a teacher of the institution who approached via WhatsApp to communicate their solidarity, but without making public their position in response to the email, which was considered an attitude that could have been shared with the group of teachers.

Regarding the reduction of the hourly load of physical education classes, it is plausible to conclude that this is not an isolated movement, it seems that, in the midst of the precarious process of education, with emphasis on the implementation of what was known as New Secondary Education, the changes become recurrent and affect both the Northeast and the South region of the country, where the institutes covered in this work are located (table 1).

Table 1. Number of Physical Education classes and hourly load in the regular secondary school of the Northeast and South regions of Brazil

Status	Region	Weekly classes for each secondary year			Annual workload for each secondary year		
		1st	2nd	3rd	1st	2nd	3rd
Maranhão	Northeast	1	1	1	40h	40h	40h
Paiuí	Northeast	1	1	0	40h	40h	40h
Sergipe	Northeast	1	2	1	40h	40h	40h
Paraná	South	2	0	2	80h	0h	80h
Rio Grande do Sul	South	1	1	1	40h	40h	40h
Santa Catarina	South	2	1	1	64h	32h	32h

Note. Adapted from Jucá et al. (2023, p. 9).

We agree with Moura (2024) when he announced that the counter-reform removes from young people the right of access to knowledge historically

produced and accumulated by humanity, whose occurrence is also a reflection of the implementation of the National Common Curricular Base for

Secondary Education (BNCC-EM), which made a reduction of at least 25% in the hourly load of basic general training, promoting precariousness in the training of students.

These critical incidents operate between ambiguities and contradictions that reveal the continued advance of neoliberalism and obscurantism in Brazilian education, especially for young people.

4. Discussion and conclusion

From the critical incidents presented, it can be reiterated that educational practices are presented as ways of intervening in society whose incessant struggle is for humanization (Freire, 1999), recognizing the linkage between education and politics, since Physical Education suffers from the broader impact of advancing neoliberal policies such as the reform of secondary education and with specific contexts in institutional decisions. For Corti (2019), despite the progress of certain destructive educational policies, it is important to consider that their implementation in institutions may suffer different forms of resistance by the responsible agents, as occurred in the IFRS and also in the IFCE with emphasis on student mobilization.

The teacher's specific actions in the critical incidents of the IFCE and IFRS demonstrate how local practices can constitute spaces of resistance to the macro-structural dynamics imposed by the Brazilian educational system. According to Freire (1996), education is, by nature, a political act, in which teachers and students interact in a process of awareness and social transformation. In this context, the resistances articulated by teachers, such as the challenge of the exclusion of Physical Education in the curriculum and the mobilization against institutional devaluation, reflect not only the fight for educational rights, but also the confrontation of a neoliberal logic that prioritizes the interests of the market over the public good. These micropolitical practices resist macro-political impositions, highlighting the possibility of rebuilding, in classrooms and institutional spaces, a critical education committed to social justice.

The existentiality of Physical Education in the federal network, and its institutional interunderstanding, seeks, above all, a pedagogical alterity, which repositions the curriculum towards a critical ratio-

ality whose didactic organization, in the context of cultural diversification, produces an ethical and creative aesthetic in training of conscious bodies. In this sense, we point out that the diversification of the curriculum allows greater social and curricular justice, through the decolonization of knowledge and intercultural approaches in front of a curriculum based on technical rationality. In analytical convergence, Cajardo-Espinoza and Campos-Cancino (2022), through a review study of the literature on social justice and creativity, expand the emerging reflection around the generation of creative processes in education, which aim at social transformation in a world whose need presents, as an imperative in Latin America, a place where inequity and inequality are exposed as a problem that impacts the daily lives of millions of people.

Federal Institutes, as educational spaces catering to significant sociocultural diversity, are especially challenged by neoliberal reforms, which often ignore the specificities of minority groups, such as indigenous populations, quilombolas, women, and LGBTQIA+ people. Ladson-Billings (1995) emphasizes that culturally relevant pedagogy is fundamental to promoting social justice in education, ensuring that the experiences, identities and knowledge of these groups are valued in the curriculum. In addition, Santos (2014) argues that education should be a space for the decolonization of knowledge, breaking with Eurocentric hegemony and recognizing plural epistemologies. Therefore, it is critical to consider how counter-reforms impact these specific groups in the Federal Institutes, reinforcing exclusions or creating opportunities for intercultural education that values diversity and combats structural inequalities.

With this feeling-thinking-acting, social justice resurfaces, guided by the critical incident of curricular (in)justice, in an action that reveals the perspective of ethics in the sense of social justice that mobilizes us to fight against "utopia or the dream", with the exception that the dream of a better world emerges from the depths of its contradiction that opposes neoliberal counter-reforms that are still in tension, such as the New/Old Secondary Education proposal that produces educational inequalities.

These collaborative movements in this self-study promote political and pedagogical vigilance, mobilizing conscious bodies to action, despite an oppressive educational system (Freire, 2019). By

appropriating an intersubjective construction, the theoretical and empirical experiences of teachers-researchers generate a problematizing consciousness, driving a transformative praxis. It is in this intermediate place between life and work where these teachers-researchers face contradictions and develop survival strategies in the face of the difficulties of their professional activity (Charlot, 2013). By re-existing and resisting, they face the depths of an education at the service of neoliberalism, which reproduces oppression, especially in the most disadvantaged classes, such as the young, who become the main target of this dynamic.

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Educational policies of civil engineering in Mexico: a historical stratigraphy

Las políticas educativas de la ingeniería civil en México: una estratigrafía histórica

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Abstract

As a result of the social approach adopted in recent years by the Mexican Federal Government, a new strategy has emerged to promote higher education, focusing on the most marginalized individuals and communities, with the goal of fostering their inclusion in professional training at this level. This research presents the philosophical foundations of this initiative, based on the concept of “episteme”; it includes a review of the evolution of higher education in Mexico from the perspective of civil engineering, utilizing a stratigraphic model of knowledge. In particular, the creation of the Benito Juárez García System of Universities for Welfare and the Civil Engineering School in Texcoco, State of Mexico, is described. The latter serves as an alternative to address the consequences of educational policies implemented under the so-called neoliberal framework, representing a potential option for improved social participation in the development of specialized technical capacities. The results and conclusions demonstrate that the educational reforms implemented do not follow a continuous discursive line but rather emerge in response to the episteme or discursive stratum of the moment. As a case study, the current higher education model in civil engineering is presented. In the same way, the results of the new model of the University of Civil Engineering are presented.

Keywords: neoliberal, stratigraphy, politics, education, university, civil engineering.

Resumen

Como resultado del enfoque social adoptado en los últimos años por el gobierno federal mexicano, ha surgido una nueva estrategia para promover la educación superior, dirigida a personas y comunidades en situación de marginación, con el objetivo de favorecer su inclusión en este nivel de formación profesional. En esta investigación se presentan los fundamentos filosóficos de esta iniciativa, basados en el concepto “episteme”, la reseña de la evolución de la educación superior en México desde la perspectiva de la ingeniería civil, mediante un modelo estratigráfico del saber; y, particularmente, la descripción de la creación del Sistema de Universidades para el Bienestar Benito Juárez García y de la Escuela de Ingeniería Civil en Texcoco, Estado de México. Esta última constituye una alternativa para superar las consecuencias derivadas de la aplicación de las políticas educativas del llamado esquema neoliberal y que puede representar una opción para que la participación social ocupe un mejor lugar en la creación de capacidades técnicas especializadas para el desarrollo. Como resultados y conclusiones se muestra que, las reformas educativas implementadas, no obedecen a una línea discursiva continua, sino por el contrario, son emergencias que siguen a la episteme o estrato discursivo del momento, y como referencia demostrativa, se presenta el actual modelo de educación superior desde la ingeniería civil. De la misma forma, se presentan los resultados del nuevo modelo de Universidad de Ingeniería Civil.

Palabras clave: neoliberal, estratigrafía, política, educación, universidad, ingeniería civil.

1. Introduction

Scientific research is a process whose purpose is to understand and explain a natural or social phenomenon and whose development is framed by one or more methods of analysis proposed by the researcher (Garza, 1996). However, such research must be systematic and controlled so that the facts under study are not simply the product of chance (Hernández et al., 1997). In this way, social problems or phenomena have been approached with different methodologies and from different approaches. The most outstanding are those supported by experiences, while, as a counterpart, are those based on taking samples of reality to analyze later, i.e., there are qualitative and quantitative methodologies (Monk, 2011). In addition, a mixed-type investigation can be carried out by combining both (Sánchez & Murillo, 2021).

The argument between education and pedagogy cannot be placed through a continuous discursive line of distance or rapprochement between them, since education was not always linked to pedagogy, as Romero (2008) states, “it is until eighteenth century, when education leaves aside praxis and pedagogy claims for itself all the problems of it” (p. 138).

Likewise, the history of education policies can not only be understood as that of individualistic exercises; thus, one of the objectives of this work is to propose that educational policies far from being shown as continuities are, on the contrary, discontinuous stratigraphic discourses. It can be distinguished that, from the 19th century, education became a matter of state, directed, at least, through two aspects: one, as a project of population reform and another as a pedagogical strategy (Romero, 2008, pp. 139-140). Consequently, it can be said that it was then that something, such as a kind of policy aimed at the care of life, was shown in the two ways described above. The first, which had its origin since the late eighteenth century and Michael Foucault called anatomopolitics of the human body, concentrated directly towards the individual being and, the second, already in the following century, called population biopolitics, as a new technique directed towards man/species, (see Foucault, 2002 and 2017), and it is in this position, in which the axis of the exercise of the educational device is considered through

pedagogy and the control of the subject/species from school (see Rodríguez-Revelo, 2016 and 2017).

Thus, the relevance of the reflection on the origin of civil engineering in Mexico is useful to show that it did not manifest itself as an educational chain of the 19th century, but as an emergency or break from a colonial regime to another liberal, and as part of the stratigraphic discourse line of education, civil engineering emerges as a device to manage the life of the population, i.e., as an educational technology that will have the task of training professionals to manage the resources of a territory with the purpose of making the population live, as a massifying and non-individualistic project, whose “object of government will be the productivity of the population. Without a doubt, we can speak with the property of a biopolitical leadership that intensifies from strategies of control over the population, making productivity visible as a reason of State” (Olave & Vélez, 2017, p. 47). Therefore, and as a proposed methodology, the evolution of higher education policies in Mexico, from the perspective of civil engineering, is approached through a genealogical scheme divided into three moments: first, education under peninsular control (Saldaña, 2005, p.13); second, the irruption of Mexican engineering and its exercise as a profession at the service of the State and third, current Mexican engineering with the project of the Universities for Welfare Benito Juárez as a particular case.

2. Methodology

The methodology chosen for this research is based on a perspective that Michel De Certeau calls social praxis of discontinuities (De Certeau, 1993), which makes sense in Michel Foucault, through his concept of discursive formations or epistemes (Foucault, 2010, p. 55). Its application can be shown from different aspects of social phenomena, and education is one of them, as it is also, “the interference of politics and power over the bio, of individuals and school crowds” (Illicachi, 2017, p. 109). Epistemes are geological strata that function as social discontinuities, which remain. Everything is a discontinuity, so education is no longer seen only as a sequence of events but can be approached as a process.

[...] despite the landslides of the subsurface, it keeps words, concepts or symbolic themes identical. A simple example: we talk about the “crazy” in the 16th century, in the 18th century and in the 19th century, but in reality, here and there, “it is not the same disease. (De Certeau 1995, pp. 20–21)

For Michel Foucault and Gilles Deleuze, the statement or episteme “is a discursive formation generated at a certain moment and that engulfs the collectivity; in another sense, it is like a blanket that covers the whole society and that determines it” (Ramón, 2018, p. 122). In the words of Deleuze (2014, p. 23), “a statement is a regularity and what does it mean, what does it regularize? it regularizes some points”, or, in other words, effects, points that converge and determine the subject holding it by means of the network or stratigraphic diagram of the moment.

The diagram, according to Gilles Deleuze (2016), “It is the exposure of the relations of force that constitute power” it is also, “the map of these relations, of density, of intensity, that proceeds by non-localizable primary unions, and that in every instant passes through any point, or rather in every relation from one point to another”; (p. 63), “in other words, everything that is schematized through agencies or devices” (Ramón, 2018, p. 122) and:

As can be deduced, it is the statement or episteme of the moment, in the current case, for example, neoliberalism, which emits singularities and these are manifested through institutionalized, normative and control devices or agencies, for example, the school, the factory, the police, the shopping center, etc., so that the population, the subject, the species, become subjectivized, the student, the worker, the delinquent, the consumer, etc. (Ramón 2018, p. 122)

Thus, the teaching of civil engineering in Mexico can be understood as a historical process marked by different statements or epistemes, for example, the sovereign episteme, the modern and the contemporary. As a parallel discursive line, the epistemological ideas raised by Karl Popper and Thomas Kuhn stand out. Although they are not identical, they are complementary. Popperian epistemic truth, understood as a process of falsification and construction of new knowledge, is linked to

Kuhn’s paradigmatic discourse, based on relations of force, i.e., a new scientific paradigm entails, to some extent, an intrinsic dispute that justifies it and allows it to endure (Popper, 1962; Kuhn, 2013). The same applies to stratigraphies, as emergency processes that break out as territoriality and deterritoriality (Haesbaert, 2011; Herner, 2009).

On the other hand, we also speak of the long duration as a historical methodological proposal, which, due to its characteristics, has led to its being used to interpret different social phenomena; among them, education, taking into account time as a main element. Thus, in treating historical time or social events as slow or immobile, the phenomenon of rupture is set aside, i.e., everything is a discontinuity (see Braudel, 2002, pp. 17-18; Roman, 1997, p. 73).

Epistemes function as long-lasting devices, such as multi-line skeins. One of them, higher education from the discipline of civil engineering, appeared *in the world and in Mexico in the nineteenth century*. However, it was as a discontinuous model, so an analysis is presented from three strata or epistemes; the *old*, as a model under the Spanish sovereign domain, the *modern* that becomes from the transformation of the College of Mining of the sovereign regime in the School of Engineering of liberal court and, finally, the *contemporary*, which goes from the neoliberal model to the new welfare scheme implemented by the authorities in office. And it this last point which will show a quantitative approach of the origin and results of the, until now, only school of Civil Engineering of the Universities for Welfare Benito Juárez García, as a product of the humanist renovating scheme of the federal government called the Fourth Mexican Transformation.

3. Results

3.1 The sovereign stratum. Education under Peninsular control. From the College of Mining in the service of the Crown

The sovereign episteme addresses the time of the King, which, in general, can be considered in the history of Mexico as the viceregal period. This epistemological stratum stands out for an exercise of power from the legitimacy of the sovereign, i.e., “the

theory of sovereignty is the cycle of the legitimacy of the subject to the subject, the cycle of power and powers, cycle of legitimacy and law” (Foucault, 2002, p. 50) that manifests itself in the domain of the territory —the inert—, the material above life. In other words, the discursive statement was directed towards the territorial dominion of the Crown, even over the life of the subjects. “Seen in this way, in the old regime, the one in which, the sovereign power dictated the guidelines of death to make the population live, this, as a man of species, did not gain relevance, because the relationship between sovereign and territory manifested itself without any link between it, its territory and its vassals” (Ramón, 2022, p. 92), “the feudal lord did not care about the population, he has a lot of servants, it is everything that interests him” (Pérez, 2017).

Thus, the Spanish Crown, through the ecclesiastical hierarchy, both regular and secular, was responsible for administering education at all levels and in all the confines of the territory of New Spain (see Ricard, 1986 and, above all, Gonzalbo, 1990). An institution of higher education created in the early years of the Colony was the Colegio de Santa Cruz de Tlatelolco, known as the first College of America founded in 1536 by Fray Juan de Zumárraga, bishop of Mexico and dedicated to the higher education of the indigenous nobility (Ricard, 1986, pp. 334-335).

In that same year, the same Fray Juan de Zumárraga asked the king of Spain for authorization for the establishment of the Royal University of Mexico, but it was until April 30, 1547 when the monarch announced his agreement on this request, on September 21, 1551, the necessary ordinances were issued for its foundation and on January 25, 1553, Viceroy Luis de Velasco executed the Royal Charter for the opening of the Royal and Pontifical University of Mexico (Martín & Ramón, 2007).

During the colonial era, the development of higher education began to flourish with the creation of this institution oriented to the humanities, law and medicine. In contrast, the teachings of the technical areas were still transmitted in a practical way, from teacher to student, even more so in the field of construction, until the creation of the Royal Seminary of Mining.

Miners represent a very significant group due to its close relationship with scientific education. The rapid development of this activity in New Spain was

because it was permanently observed by the monarchy. The Spanish miners brought with them an experience accumulated since the times of the Roman Empire, when gold, silver, copper, iron, lead and tin were exploited in Hispania. These experiences were transferred to New Spain, and lasted for a long time, but the need to exploit the mineral riches to the maximum produced that the Royal General Court of Mining was created on July 1, 1776, and the Royal Seminary of Mining, on January 1, 1792 (Martín & Ramón, 2010a).

However, the Mining Seminar or College of Mining did not mean an advance in the scientific institutions of Novohispanic. Although the influence of the Creole elite is rescued, the decree of its creation totally obeyed the Spanish Crown and its interests, “since these institutions little by little fell under the control of the peninsular and were put at the service of the interests of Spain” (Saldaña, 2005, p. 13).

In other words, the Mining Seminary only dealt with the Spanish emergency of obtaining greater silver resources for its sole benefit, so, according to Miranda, (1995), “it was the spoiled child of the crematistic family” (p. 59). Therefore, it cannot be defined as the antecedent of civil engineering in Mexico, as it has traditionally been considered (Rodríguez, 2021; Ramos, 1996) as part of a discursive statement that reflected the sovereign model in which the territory was more relevant than the population, a position that would be modified in the nineteenth century.

3.2 The modern stratum. The emergence of Mexican engineering and its exercise as a profession at the service of the State

In the 19th century, and even a little earlier, the power of sovereign was replaced by a more subtle and docile one, that of the consideration of life by the power (Foucault, 2017). “A new style of governance was formed, in which life is superimposed on death, hence the logic of the new devices aimed to care life and pedagogy will be the center of the exercise of that power of life” (Ramón, 2022, p. 92). The scenario of life promoted the conditions for the appearance of an actor that would make a difference, a character that although he already had a presence,

emerges in the 19th century: civil engineering, which appears as a device from practice for the care of life.

The first element to be highlighted concerns the fact that civil engineering became a productive practice. It did not remain isolated—as in most other cases of science and technology—in mere theoretical consideration and in academic redoubts, but transcended into practical applications located outside academia and within the productive terrain. It became, so to speak, a necessary activity in the social and economic life of the Nation, and—in addition—profitable. (Domínguez, 2013, p. 12)

Worldwide, the most direct antecedent of the civil engineer is found in the military engineer, who, concerned with safeguarding the interest of the kingdom, manufactured weapons and built fortifications to defend the sovereign from his enemies. In the century of the Lights and in that of the Industrial Revolution, the epistemological rupture marks the course of engineering. At that time, the 18th century and, little by little, the stratigraphic mark of the change in thinking from “military” to “civilian” gave impetus to the Englishman John Smeaton, calling himself the first “civil engineer” (Derry & Trevor, 1990, p. 587).

In other words, the leap from the sovereign's interest in safeguarding its territory to that of citizenship, as a fundamental part of the territory, led to the military issue being overshadowed by the citizen (Heyman, 2001). It was in this context that the execution of public works was increased, such as roads, bridges, ports, hydraulic works and, above all, constructions focused on the development of cities, particularly in the health field. As a result, the term civil engineer began to be used more frequently, highlighting a new figure: the civil engineer, the “soldier of peace,” who replaced the works for war with an engineering in the service of the life and well-being of the population. This is how this profession emerged.

Seen before, and as part of a combined policy between the old regime and the liberal regime, we can realize that the Royal Court of Mining, and later the Royal Seminary of Mining, appeared as part of the Bourbon reforms implemented in New Spain. However, and as a fundamental part to be able to discern between two completely different institutions, it

is necessary to clarify that the Mining Seminary or College of Mining, as it is best known, at the end of the 18th century is an institution of the king and for the kingdom, i.e., that everything that was generated in that house of Novohispanic science was, in general terms, for the benefit of the Spanish kingdom.

On the other hand, the National School of Engineers, the name with which the College of Mining was transformed 75 years later, was an institution that would focus its work totally on behalf of the population of the nascent Mexican nation.

In addition to defense, the infrastructure required for the development of the country required the participation of more and more engineers, for which some centers of technical education were formed such as the School of Arts and Crafts, established in 1856 by President Ignacio Comonfort, and the National School of Agriculture and Veterinary founded in 1857. In the first, the education to be offered covered religious principles, linear drawing, arithmetic and practical geometry (Ramos & Saldaña, 2005).

The latter as a background explains the emergence of the career of civil engineering, thanks to the reforms of 1867, with the expedition, by President Benito Juárez through his secretary Gabino Barreda, of the Organic Law of Public Instruction in the Federal District, which in its article 6 of chapter II indicated which were the schools of higher education that would be located in the Federal District. This law established the studies of jurisprudence, medicine, agriculture and veterinary and created the career of civil engineer (León, 1974, pp. 150-151).

After the issuance of the aforementioned Organic Law, the College of Mining became the Special School of Engineers, as the heir institution of the teaching work of the Royal Seminary of Mining. Subsequently, as an annex of the School of Engineers, the Practical School of Metallurgy and Mining Works of Pachuca was established.

Two decades later, in 1883, the Special School of Engineers was transformed into the National School of Engineers and studied in it the future telegraphers and essayers; in addition, there were already the careers of surveyor engineer, hydrographer engineer, industrial engineer, mining engineer and metallurgist, geographer engineer and engineer of roads, canals and ports.

This new specialty of engineer of roads, canals, and ports obeyed decidedly to the impulse to con-

duct works of infrastructure. From 1897 he became a civil engineer, due to the enormous influence of English engineers who worked in Mexico during the regime of Porfirio Díaz (Bazant, 1984; Martín and Ramón, 2010b).

As it could be noted, one of the most important breakthroughs in the history of education:

It was the appearance or staging of the actor called population, and with it a whole system for its control; but individual, for which a security apparatus was implemented as a whole, formed by the triplet: territory-population-security. (Ramón 2022, p. 81)

3.3 The contemporary stratum. Current Mexican Civil Engineering

The “market”, as classical liberal thought, as a natural way of letting go – and its self-regulation, were modified by neoliberalism that with the same liberal flag – letting go – placed the participation of the State as a promoter of competition and spectator of the market. Thus, this economic model displaced the Keynesian scheme where the protagonist State had to take care of public spending, so the individual as a free subject must participate in the market game, where the important is the “competition” seen, of course, as something natural (see, Delgadillo, 2014, p. 19). However, from the Foucaultian hypothesis, competition is not something natural, but something that must be produced and stimulated, therefore, neoliberalism stubbornly creates conditions for it to occur.

Then, the state, far from what is believed, intervenes to generate competition through privatization. Wealth redistribution and inequality also generate competition. In that case, the individual is considered as a business subject and as simple human capital, consumption for life, his family, his education, his partner, until his retirement, everything is a constant company, but all this under the rules of biopolitics or neoliberal governmentality (for a better panorama see Fortanet, 2015, pp. 119-125).

During the 20th century, the Western world was divided, from economics, into two forms or styles of governance. The first, which as a maxim handled the let do, let go, and the second whose axis

is manifested in the purpose of directing the means of production. These two forms, liberalism and planning, were, in Foucault’s words (2023), the forms of governing to the maximum and to the minimum that predominated throughout the 20th century. Both the teaching of engineering and its practice were submerged between these two styles.

In 1916, Venustiano Carranza transformed the School of Arts and Crafts into the Practical School of Electrical Mechanical Engineers, antecedent of the current School of Mechanical and Electrical Engineering -ESIME-, and created the National School of Industrial Chemistry, ancestor of the School of Chemical Engineering and Extractive Industries -ESIQIE-. In 1922 the Technical School of Master Builders was established, which later became the Higher School of Engineering and Architecture -ESIA-. All these schools were gathered years later, in 1937, from the creation of the National Polytechnic Institute by President Lázaro Cárdenas (Martín & Ramón, 2010b). In 1929, the National University of Mexico received its autonomy and changed its name to the National Autonomous University of Mexico.

Later, as a result of a political strategy to govern to the minimum, the Mexican State reduced its intensity and allowed the generation of private schools, such as the Monterrey Institute of Technology and Higher Studies and the Universidad Iberoamericana, which were founded in 1943.

In the 1950s, the educational facilities of Ciudad Universitaria were built by the UNAM and Zacatenco -Adolfo López Mateos Professional Unit- by the IPN. At the end of 1973, on the initiative of President Luis Echeverría, a university was created whose emergency was the growth of the metropolitan area of Mexico City, the UAM, Metropolitan Autonomous University. The National Council for Science and Technology -CONACYT- and numerous technological centers throughout the country were also founded as the latest signs of a social government.

4. Discussion

4.1 Development and education

In Mexico as in other countries, at different times, development policies have shown different perspectives according to the historical evolution

and the political and ideological conception in which they were built. These policies are framed from the currents of thought in force at any time and it was in this way that the Cardinal planning had socialist influence and the current policies have a benefactor, which has affected the schemes applied in education.

It is assumed that all the actions implemented, derived from any strategy, have as their final objective the national development, at least in the terms established in their plans and programs. However, there is also a perception that the regional approach, as a key instrument for generating economic growth and well-being, is exhausted or in the process of extinction.

4.2 Basic education

As known, the third article of the Political Constitution of the United Mexican States establishes the right of citizens and the guarantee by the State, states and municipalities to receive and impart, respectively, education at all levels (Const., 2024.). Is it achieved? With what quality? How is it done? These questions have already had several answers from many points of view.

The Organization for Economic Co-operation and Development - OCDE - notes that:

[...] from primary to higher education, it has experienced exponential growth since 1950, growing from one to 36 million students, achieving virtually universal schooling up to secondary education. However, a large number of students drop out the upper secondary education, and currently only 56.3% of Mexicans are expected to complete this level of education. (OCDE, 2019)

These data show that although the coverage is adequate in basic education, the other side, that of quality, will have to be questioned, since this stage is the basis on which the processes of higher education are based. We have almost 100% coverage up to secondary education, but from then on it is reducing to 50% of the young population who do not study a university degree.

4.3 Higher education

Higher education consists of educational programs “after secondary education, taught by universities or other institutes that are qualified as

institutions of higher education by the authorities of the country and/or recognized systems of homologation” (UNESCO, 2019).

Historically, higher education has been out of reach for groups living in poverty, the disabled, racial minorities or ethnicities and the UN International Covenant on Economic, Social and Cultural Rights has spoken out in favor of accessible higher education, noting that it is necessary for the “complete development of the human person and his sense of dignity” (UNESCO, 2019).

One of the main concerns is the percentage of professionals in relation to the country's total population. Increasing this percentage is a necessity. In Mexico, that share is considerably lower than in other countries with similar conditions, and, of course, much lower than in the more advanced countries. The policy of increasing the student population at the professional level faces the contradiction of a higher demand for applicants, but with little possibility of entry due to the insufficient capacity of current universities. In addition to this, the poor quality of education at the upper middle level and other social factors, generated mainly by the capitalist economic, political and cultural system.

[...] It has been found that the highest failure rates, or non-accreditation as called in some schools, is higher in the first courses of mathematics and physics. It has also been found that students who drop out do so for the most part early in the career. Unfortunately, the main cause has been poor preparation at previous levels. There is no use, then, accepting students who will hardly finish the first semesters or quarters. (González 2009, p. 390)

Currently, the national enrollment at bachelor's level consists of 4 461 986 students, while at master's level drastically reduced to 304 153, and at the doctoral level it decreases even more, remaining in the figure of 60 086 students (ANUIES, 2024). These numbers are clear, while enrollment at a bachelor's level is important and continues to increase, at master's and doctoral degrees it declines significantly. However, although the number of students enrolling in a university degree is high, almost 5 million, it must be said that it is insufficient, because by showing and contrasting, in a general way, the figure of the population between 20 and 25 years, presented by INEGI (2020), there are more than

8 million young people between 20 and 25 years, which is the most common age to study a degree.

In general terms, university education in Mexico is managed by means of competences or, in another sense, by competition. Faced with a global world or framed in the concept of a global village, students must prove that they master a series of skills that will make them competent or competitors in a specific market. An exemplary case is engineering. Under this scheme, associations such as the Accreditation Council of Engineering Teaching, CACEI, in its 2018 frame of reference, listed a series of skills or attributes that engineering students must learn during their stay in an engineering school to be competitive on a continental or global scale (CACEI, 2020).

4.4 A new model. The creation of the Universities for Wellness Benito Juárez García

In contrast, an educational model emerges based on equality and coverage to anyone who wishes to study a bachelor's degree, which contrasts with that of competition, which is unequal by definition and by nature, because a person must compete for a place in a university, must compete for a qualification, must compete for graduation, and must compete in a labor market, while this model focuses on the exclusion that was generated by the competitive model, exclusion of young people and localities that do not have higher education. This model focuses on the young population and localities, according to the characteristics of the young population and the needs and resources of the excluded localities.

Although Benito Juárez García Universities for Wellness formally emerged in 2019, the truth is that they have their origins several years ago, at least since 2016. In fact, two major periods can be identified. The first is the one that corresponds to "political project", which without official recognition by the educational authorities, began as an initiative of Andrés Manuel López Obrador as head of the National Regeneration Movement (MoReNa) party. The second, can be distinguished as a "State project", which arises from its triumph in the 2018 presidential elections, and which was formalized on July 30, 2019, by means of the decree published in the Official Journal of the Federation -DOF-.

Months before, on December 18, 2018, in El Mexe, Hidalgo, federal and state authorities announced this University Schools program that was taken as a political flag by the Morenista legislators of the Legislative Assembly of Mexico City, who financed its creation and operation; the schools that started the program were the schools of Cuauhtémoc, Xochimilco, Tlalpan and Tláhuac, in Mexico City and the University School of Civil Engineering of Texcoco in the State of Mexico (ALDE, 2016).

The "State project" is the one that is currently in force under the name of Coordinating Body of the Universities for Welfare Benito Juárez García -UBBJ- and is part of the priority programs listed in the National Development Plan in the field of Social Policy in the Right to Education section.

With 100 campuses and coverage in 31 states, the Benito Juárez Welfare Universities began their activities on March 31, 2019:

Preference was given to areas of high population density in which there were high population density areas in which there is no offer of university studies and with a high degree of social lag, marginalization and violence. The university schools are distributed in Oaxaca (11 schools), Mexico City (10), Veracruz (8), Chiapas and Guanajuato (6). The other entities have between 2 and 5 schools. The Universities for Welfare offer 32,000 places for students, who will receive a scholarship of 2,400 pesos per month.

The permanent buildings in which the Universities for Welfare will operate will be built with the help of community work and local workers, on land donated or given by peasants, municipalities or municipal commissioners. The careers offered are Civil, Industrial, Forestry, Agri-Food, Environmental, Agroforestry, Electromechanics, Agronomy, Mining, Fish, Aquaculture, Sustainable Regional Development, Chemistry of the Oil Industry, Energy Industry Management and Oil Processes, Renewable Energy; Integral Medicine and Community Health; Nursing and Obstetrics; Veterinary Medicine and Animal Husbandry; Accounting and Public Administration; Law; Historical Heritage and Travel Industry; Integrated Water Management; Normal Basic Education; Social Studies; Historical and Biocultural Heritage; Physical Education; Municipal Administration and Public Policies; Music and Leadership and

Rural and Intercultural Bilingual Norms. (DOF, 2019b)

Its essence is based on the criticism of the educational model of neoliberalism, which is based on competition and therefore inequality. In other words, the educational model of Welfare functions as “a proposal for the inclusion of those who have been denied access to higher education and have been excluded from full participation in social life and in the exercise of their individual and collective rights” (UBBJ, 2023, p. 2).

4.5 The School of Civil Engineering of Texcoco-UBBJ

As mentioned, the Texcoco campus of the UBBJ, where the civil engineering degree is taught, was one of the pioneers in this educational project. It began in 2016, as a civil association called the University School of Civil Engineering, on the initiative of a group of Texaco political actors. This school began to work, under the auspices of Morenista deputies, with about five hundred enrolled in a headquarters that was provided by the H. City of Texcoco (A. Ramírez, personal communication, August 16, 2024).

As of today, it has approximately 600 students who are integrated, in six groups of first semester, four of third semester, two of fifth semester, one of sixth semester, three of seventh semester and two of ninth semester, which is the last. It has a staff of sixteen teachers, most civil engineers and engineers with specialization and teaching experience made at UNAM and IPN, as well as engineers from the Autonomous University of Chapingo.

The school's operating staff is seven people. The facilities have laboratories for hydraulics, computing, structures and geotechnics. With only eight years of operation, it is a relatively young school; yet it has already six generations of civil engineers.

5. Conclusions

The discussion on the evolution of policies on civil engineering education in Mexico has been focused and treated normally as a continuous line in which, at each stage, the current always has to do with the immediately above, when it has been shown

that, in reality, it is a discontinuous line that obeys a discursive stratigraphy of the moment and in this way, a critique of the situation is offered.

In general, regarding the UBBJ program, considering the number of students, the number of teachers and the administrative staff available, the results are positive, compared to other schools whose expenditure is much higher than the one they apply. On the quality of education, so far, only the quality of teaching offered, teachers with masters and doctorates and with extensive experience and that of graduate students, among which there are already successful cases in the labor market, can be taken as a reference.

In the civil engineering career, enrollment follows an upward curve. To date, 1888 students have been received and six generations have graduated, with a record of 690 students, 204 of them with full credits and continues to increase each year.

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Miscellaneous Section

(Sección Miscelánea)







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Reflections and challenges on the importance of ethics in socioeducational research

Reflexiones y desafíos sobre la importancia de la ética en la investigación socioeducativa

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Abstract

This article aims to address a theoretical-reflexive work that facilitates understanding the state of the ethical question in socio-educational research from a qualitative perspective. Faced with the predominance of quantitative research in universities at both the international and national level, we are committed to qualitative research from the perspective of Critical Pedagogies. In this way, it is understood that education and research can transform reality and a fundamental aspect of analysis is the ethical question. Firstly, key ideas about research in the socio-educational field from a qualitative perspective at the University will be addressed. Secondly, the historical view of ethics in socio-educational research will be analysed. Thirdly, it will point out key ethical issues in socio-educational research from a qualitative perspective. Fourthly, it will reflect on research competence in education, including both challenges and opportunities that we are currently facing in universities. Challenges such as the collective construction of knowledge; the need to consider the intersectionalities of gender, race, social class, etc.; the care of all the people involved in research processes. In conclusion, the political and ethical relevance of any socio-educational research process is highlighted, underlining the need to continue reflecting on this issue in relation to the construction of a participatory model that focuses on the care of the people involved.

Keywords: research, university, research ethics, qualitative methods, research competence, education professionals.

Resumen

Este artículo pretende abordar un trabajo teórico-reflexivo que facilita entender el estado de la cuestión ética en la investigación socioeducativa desde una perspectiva cualitativa. Frente al predominio de las investigaciones cuantitativas en las universidades tanto a nivel internacional como nacional, apostamos por una investigación cualitativa desde las Pedagogías Críticas. De esta manera se entiende que desde la educación e investigación se puede transformar la realidad y un aspecto fundamental de análisis es la cuestión ética. En un primer lugar, se abordarán ideas claves sobre la investigación en el ámbito socioeducativo desde la perspectiva cualitativa en la universidad. En segundo lugar, se analizará la visión histórica de la ética en la investigación socioeducativa. En tercer lugar, se señalarán aspectos éticos claves en la investigación socioeducativa desde la perspectiva cualitativa. En cuarto lugar, se reflexionará sobre la competencia investigadora en la educación incluyendo tanto desafíos como oportunidades a los que nos estamos enfrentando actualmente en las universidades. Retos como la construcción colectiva del conocimiento; la necesidad de considerar las interseccionalidades de género, raza, clase social, etc.; el cuidado de todas las personas implicadas en los procesos de investigación. En conclusión, se destaca la relevancia política y ética de todo proceso de investigación socioeducativa. Es fundamental mantener la reflexión sobre esta cuestión en relación con la construcción de un modelo participativo que priorice el cuidado de las personas involucradas.

Palabras clave: investigación, universidad, ética de la investigación, métodos cualitativos, competencia investigadora, profesionales de la educación.

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1. Introduction

It is true that there is a predominance of quantitative research in high-impact publications in Spain, however, there is also a commitment to qualitative research due to its contribution to educational research (Fernández-Navas et al., 2021). Research in the socio-educational field is increasingly taking center stage in an academic space more concerned with addressing problems, tensions, that may arise throughout the research processes and when making decisions about them (González et al., 2012; Opazo, 2016; Pascual-Arias and López-Pastor, 2024; Suárez, 2017). In addition, education and research in Social Sciences can play a fundamental role in developing democratic societies (Levy et al., 2023). In this regard, we want to point out that we understand research as a political and committed act (Darretxe et al., 2020; Murillo & Duck, 2018), because we defend a critical, dialogic-constructive and responsible academy and it is in this context that it is necessary to refer to ethics. In this sense, the university's task is also the ethical and political formation (Ramírez-Pardo, 2012) and, therefore, the formation of the deontological culture of the students (Vainola & Khliestova, 2017). Therefore, critical pedagogies allow to reconstruct new meanings marking their transformative potential (Ramírez-Pardo, 2012), since we understand that it is about generating processes of co-construction of knowledge together with the groups involved from the field of Critical Pedagogy (Visotsky, 2020).

In this line, an important frame of reflection and generation of knowledge regarding the importance of ethics in research is the whole perspective of critical and decolonial research (Avila Camargo, 2014; Dominguez, 2018; Francis, 2023; Guelman & Palumbo, 2018; Kvietok et al., 2022), which guides us to see beyond rankings and meritocracies, making us ask questions as relevant as: what are we investigating?, for what reason?, with whom?, in what way?. In addition, the importance of collecting other relevant approaches that help us to situate us times plagued by uncertainties, such as those of a feminist science of the "transition, unstable, reflexive, critical, uncomfortable, destabilizing" (Deharde, 2020, p.175), that put their objectives in change, questioning hegemonic models that perpetuate inequalities and distancing us from democratic spaces of knowledge construction and fairer societies.

2. Historical view of ethics in socio-educational research

Considering this issue from a historical perspective, it is necessary to refer to some sources by their importance and imprint they have left in the various proposals in this area. As Hirsch and Navia (2018) point out, the ethics of research with human beings has its origin and has been specially developed by the Health Sciences. From this field, it has been expanding, considering and developing in other areas. De Miguel (2021) places the beginnings in the Social Sciences from the decades of the 70s and 80s of the last century, with the constitution of ethical committees and various declarations that will investigate and demarcate the question. However, the starting point that we must consider in the current vision of ethical issues has a dramatic origin, having to refer first to the Code of Nuremberg (International Tribunal of Nuremberg, 1947). This document is a consequence of the abuses that occurred against people in biomedical experiments during World War II, outlining the first criteria regarding the question of biomedical research with humans. It meant the internationalization and socialization of this issue. The document identified essential aspects that should be taken into account, such as voluntary consent or the preponderance of the rights of the individual over the research itself. This code has been the main foundation of the research, theorizing, codes and protocols on Bioethics that have been developed.

Subsequently, the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) that contains a series of principles and guidelines to facilitate the protection of participants, basic ethical standards that provide a methodical framework to solve these problems: limits between practice and research; basic ethical principles; and applications. In addition, it provides another set of principles that are relevant: respect for people, charity and justice, based on the acceptance of these by the very "cultural tradition" in which we find ourselves. The *respect* to the person implies, on the one hand, the recognition and respect of his autonomy, i.e., the capacity of deliberation, of decision and of action that each subject has on his actions as long as it does not imply damage or prejudice to other people. On the other hand, it also refers to the protection of people whose autonomy is dimi-

nished. Issues such as denying information in order to be able to act in full consequence, for example, violates this principle. The second basic aspect is *charity*, which is understood as the obligation not to produce any damage and “to maximize the possible benefits and reduce the possible damages” (p. 3). The principle of confidentiality or professionalism in not prosecuting the information provided by the person who collaborates as an informant in the investigation, for example, must be framed within this idea of charity.

Finally, *justice* relates to two other issues. One refers to the selection of subjects and whether this selection is made with a criterion based on the study problem or if there is another reason (ease of obtaining consent, coercion, easily manipulable subjects...); the other issue, implies that the discoveries made are not for a group or sector exclusively, but extend to the whole set of people who can benefit from it. These principles in research thus entail informed consent (Meo, 2010), benefit and risk assessment, and the selection of subjects as requirements of the research designs and processes. Informed consent means that subjects are given the choice. The procedure involves three elements: information, understanding and voluntariness, i.e., that all information is transmitted and that nothing is hidden; that this information is fully understood, clarified and explained so that it is totally understandable, and it is the responsibility of the person who investigates to ensure all this. In addition, it implies that the potential participant is free from any possible coercion and is fully informed.

The assessment of risks and benefits will condition the decision of potential participants to take part in the project. It involves an assessment of nature as well as its systematic assessment. This must be related to the protection of personal data or the confidentiality of the information they provide. As the report points out, the damages can have diverse nature: psychological, legal, social damage, etc. and can affect both the subject and his environment or the group that belongs to the selected sample. From the perspective of benefits, these can be individual or group as well, but they will always have to be greater than the possible risks encountered. In any case, all this is always limited by the protection of the rights of which the participant is the holder.

The selection of subjects concerns the dimension of justice. Its relevance is given to two levels: social and individual. At the individual level, it

should be considered that the researcher will not make a selection based on personal preferences conditioned by the subject to be investigated, i.e., to choose affectively close subjects in the case of a “potentially beneficial” investigation or to choose “undesirable” subjects in the case of more dangerous or risky investigations. Regarding the social level, it is proposed that the selection should assess who should participate and who should not in relation to “the ability of members of that class to carry burdens and as appropriate to add other burdens to people already burdened” (p. 7), thinking about populations or groups that, due to their personal or environmental characteristics, have less advantageous conditions than others when participating (prisoners, family obligations, racialized minorities, sick people, ...) and assessing, also, who will be more benefited from the results. Even if the researcher is completely impartial and the Ethical Committee approves this selection, injustices in the selection can occur as a result of “social, racial, sexual and cultural biases that are institutionalized in society” (p. 7). We find that current works such as Armijo and Willat (2022), continue to take the Belmont Report as a reference.

Another document of interest is the project *Educating Staff in Community Agencies about Human Subjects Protection in Research* (Training Community Agency Staff in Human Protection in Research), which is based on the *Belmont Report*. Conducted by the *Office of Research Integrity* (2004), it provides a series of guidelines and guidance on ethics and community research. As they point out, research involves understanding the world and trying to improve it, and in turn, if it is carried out with human beings, it entails a series of responsibilities that must be guided from an ethical perspective that allows us to act in the right way, respecting all the rights of the people involved. The project presents a research protocol that starts from three general issues: recruitment of participants, confidentiality and professionalism. This protocol clearly resolves important issues regarding the role of the investigator, both during the process and after completion. In its development and level of specification-clarification, there is a clear reflection and deepening on many of the issues that should be considered during the design of any project, and to which should be answered initially before being carried out. Table 1 presents the three aspects and their key points:

Table 1. *Key elements of the training of staff of Community bodies on the protection of human beings in research*

Recruitment of Participants	1) People may be found to be suspicious of research; 2) The recruitment process is part of research; 3) Everyone has the right to refuse; 4) Seeking informed consent is a sign that participants are treated with respect; 5) People participating in research are often in a vulnerable situation; 6) Even the simplest research tools such as questionnaires, interviews and focus groups can cause harm.
Confidentiality	1) Keep information private; 2) Disclosing confidential information could have serious effects; 3) It is harder to collect intimate information if the person being investigated is known; 4) Confidentiality should last a lifetime; 5) People only go to agencies where they are treated with respect and feel safe; 6) Information acquired during the investigation should not be published. Keep it confidential; 7) Break confidentiality rules if we know that someone intends to harm themselves or another person.
Professionalism	1) Be aware of the role of the researcher in the Community; 2) Maintain appropriate boundaries; 3) Each and every one of us is responsible for our conduct; 4) Those who participate in research are people whose experiences and knowledge of life have much value; 5) Do not promise more than can be offered; 6) Be very aware of the risks to which we are exposed as researchers.

Note. Own elaboration adapted from Office of Research Integrity (2004).

Finally, we must refer to the Declaration of Helsinki, finding in 1964 its first version, and which has been revised over the last few years (last official version of 2013). The WMA Declaration of Helsinki – Ethical Principles for Medical Research in Human Beings is made by the World Medical Association (WMA). Although it is mainly intended for medical professionals, it contains sections that endorse what was stated in the Belmont Report and that, we believe, are also applicable to research in the Social Sciences. For this reason, it is important to collect those that we consider applicable to social research and see their concordance or similarity with the other sources presented.

In this way, this Declaration, from its general principles, affects how research is subject to ethical rules that must protect all people and that, this right, is always above any objective or purpose of any work of this nature. Confidentiality, privacy and informed consent must be ensured in all aspects. It speaks of the importance of voluntary participation, which can be invalidated at any time without suffering any retaliation; how participants should be properly informed in all relevant aspects of the investigation and making sure that they have understood all the information, so it is essential to consider the specific needs they may have and adapt to them. Aspects such as dissemination and publication are also subject to the ethical dimension, both the integrity and accuracy of the written, and the availability of these research to the public, sources of funding and affiliation. It also points to the need to publish negative results as positive or inconclusive or, where appro-

priate, to make them publicly available and to give participants the option to be informed of the results.

In this document, the reference to the role of the Ethics Committees also becomes relevant, as well as the issues referred to with the dissemination and publication of results, another of the main axes on which research should pivot, especially when we refer to the participants. Related to this, we collect what Yu et al. (2022) point out regarding the need to safeguard the independence of the academic and scientific bodies of the States and their related spaces. The question of the ethical dimension at the highest levels and their responsibility is undoubtedly essential and should not be left out of the debate.

3. Ethical aspects in socio-educational research from a qualitative perspective

Research personnel using qualitative methodologies are often faced with having their study designs questioned by research ethics review committees or funding agencies (Ells, 2011). Furthermore, decision-making on the ethics of qualitative research is a challenge when research design is emerging and the balance between risks and benefits for people involved in research is still difficult to determine before the implementation of the study (Ramcharan & Cutcliffe, 2001).

However, ethics in socio-educational research is related to the criteria of the scientific nature of qualitative research. This question involves fundamental matters to be taken into account. As Hortigüela et al. (2017) indicate in the current model

of scientific production, the quantity is valued more than the quality and the real contribution of the contributions, which conditions both the way of doing and of understanding the own science and leads to underline the importance of the ethical dimension in this area. In qualitative social research, the ethical dimension should focus, at least, in the academic debate (Abad, 2016). It should not be forgotten, as different works collected by Yurén et al. (2018) point out, research ethics is usually left as a value that would be below the technical-methodological competences and epistemological positioning. In this way, we must understand that ethics is indissoluble from personal qualities (Cardona, 2020).

Therefore, we must place ethics in socio-educational research as a cardinal factor since the fundamental object of research is the people. This implies the existence of issues that emerge during the process that must be questioned and answered also from an ethical perspective. Arias and Giraldo (2011) point out that qualitative research consider both the role of values and the existence of an ideological bias that mediates throughout the research process, which forces to have the ethical element present. De Miguel (2021) emphasizes that the production of knowledge is always a political act and therefore it requires taking responsibility, thus questioning the supposed positivist objectivity. Gómez and Molina (2006), regarding ethics and responsibility, indicate that the established ethical rules and regulations should not only be known, but should be internalized, leading us to a reflexive process about our work in research and the effects of our actions, demanding responsibility. This responsibility involves three aspects (Arias & Giraldo, 2011): a duty to do well; awareness of the possible consequences; and the obligation to respond to someone. Sandín (2003) relates the validity and credibility aspects of qualitative research with the necessary consideration of ethical implications, considering that both are inextricably linked. The author emphasizes that the work with people—through meetings, interviews, participation and cooperation, among others—i.e., the relational nature of the methodology, confirms and manifests this interrelationship between both issues. Many of the decisions that are made strategically, practically or methodologically are, finally, ethical questions. Finally, for Nancy Walton (2016), there are three objectives of ethics in research processes: protection

of participants; that research responds to the interests of people, groups and society; and the validation of an activity from an ethical perspective, considering elements such as risk, confidentiality and informed consent (Walton, 2016 in Hirsch & Navia, 2018).

In the educational field, Sandín (2003) considers that there are three main ethical issues in the qualitative research process: informed consent; privacy and confidentiality; and stay in the field. On the latter, the author refers to two issues: the *process of negotiation of entry* and the *type of relations* that are established. Regarding admission, it is proposed how to access sources of information in a space that is usually structured hierarchically, such as educational centers. On the relational aspect, it emphasizes both the importance of presentation and the clear explanation of intentions. It can be observed that all the aspects raised must be included both in the reports and in the statements made, being in the hands of those who investigate the obligation to carry out their work under these ethical approaches, not as dogma, but as human and investigative coherence that strengthens the own result of the investigation. As Rodríguez et al. (1996) state, the ethical component supposes “a guarantee of moral integrity” (p. 278) of the investigators.

4. Research competence in education: challenges and opportunities

The consideration of ethical principles in social and educational research must be unquestionable and a principle required in any research that has as a means and as an end the people. A small vision of its origins and development place us in front of issues that betray its importance. In this approach, we have seen how the language is changing, and this same language is the one that configures any reality, including ethics. Thus, we see a fundamental qualitative leap between the *Belmont Report* and the *Educating Staff in Community Agencies about Human Subjects Protection in Research*. The basis is provided by the *Belmont Report*, but the following document no longer talks about informing subjects, but about participants, going from being an object to a person with whom one interacts in a dialog to contribute knowledge, giving way to a collective construction of that knowledge, result of the interaction (De Miguel, 2021). As Abad (2016) points out, a review of both

procedures and ethical assessment criteria is necessary and must be adapted to the different realities and different moments of the research processes beyond standardized protocols or models that are repeated mechanically (Yurén et al., 2018). In this way, when referring to this necessary revision of the proposals and models, the realities that are gaining relevance in each time and space cannot be ignored, which must oblige to review both the epistemological and methodological aspects and any other nature that relate to this ethical dimension. As a clear example, we can mention the debates regarding artificial intelligence (AI). Firat and Kuleli (2024) refer to some works that question the lack of transparency of its structure, presenting it as “contrary to the movement towards transparency and science” (p. 225), which places us before new ethical challenges regarding new situations that are totally conditioned by new means and that, in turn, advance faster than the processes of reflection that should be promoted regarding its uses and functions.

Given all this, there are new issues to consider, reflecting the changes that are happening in our nearest world, and that have taken on special relevance making its way also, in this issue. Authors such as Sandra Harding and Donna Haraway (cited in Aguilar, 2008; Deharbe, 2020) point out the existence of an anthropocentric view of the sciences and that conditions them in all its elements. Thus, the very norms of knowledge, among which we must include ethical postulates, would be biased by this construct. Faced with this, a feminist science is positioned and proposed, with an emancipatory objective and, therefore, possessing a social responsibility, committed and critical, without being able to situate itself or present itself as independent of politics or relativism. These postulates go further, and also refer to the existence of other intersectionalities that must be considered in addition to gender, such as those of race or class.

Authors such as Vigoya (2016), point to another series of intersectionalities related to the aforementioned ones (race, ethnicity, religion...) that condition the life and social position of people or collectives. This author presents intersectionality as a tool of analysis that allows to see these categories and their interrelationships, identifying inequalities or privileges from the interrelationship of these. Following this, Arias and Giraldo (2011), briefly

collect a proposal made by Mauthner et al. (2002), which “diminishes the emphasis on laws and principles” and that decision-making is based on the “feminist ethics of care” (p. 511). Gender is something in which we must deepen more in the field of socio-educational research and the ethical dimension, not forgetting its importance (Blázquez, 2012; García and Ruiz, 2021; Jiménez, 2021). As Conesa and González (2018) point out, in recent years in scientific institutions there are organizational changes more related to competitive models that, in turn, entail all kinds of pressures and tensions in those who bet on developing work in this area. Thus, they raise the importance of relying on models based on feminist approaches, in which the ethics of care takes on a relevant importance in the ways of doing and being, a substantial change in what that production of knowledge also means. At the same time, in relation to other intertwined issues such as the importance of gender equity (Salinas Boldo, 2018), other intersectionalities linked to this, such as race and social class, conditioned by existing power relations, should not be ignored (de Miguel, 2021; Montecinos et al., 2023). How these elements are combined, also indicate the own vision of the research model and how we stand before it from the same research design and all its elements.

In addition to what has been pointed out, as Hirchs and Navia (2018) indicate in their research, although these protocols or proposals on ethics focus on promoting the protection of participants, they remind us that it may be equally important to consider the protection of those who investigate, given that there are contexts in which security is not always guaranteed. As Armijo and Willatt (2022) say, there is a tension between protection and participation that must be considered and must be resolved in an ethical way. Some of these issues are already covered in some protocols as seen, but they also require reconsideration. Firstly, due to the importance of the hierarchy relationships that exist between participants and the researcher, but also with respect to the spaces in which the research is carried out, remembering that they must be of security and trust (De Miguel, 2021). It should not be forgotten that not every person who investigates is in that position or place, for many different reasons that can be related to diverse issues such as power relations, gender, the subject of research, or the place in which it deve-

lops (de Miguel, 2021; Martínez-López et al., 2022; Montecinos et al., 2023; Pulido, 2017; Yu et al., 2023; Yurén et al., 2018) finding that, in many cases, some or all of these intersectionalities occur at once. Nor can it be forgotten that working in places of conflict, for example, puts at risk not only the work of professionals who seek to contribute with their work, but also their lives. When we talk about issues such as ethics, which traces its current vision to situations that occurred after a world war, it leads us to reflect deeply on these elements that, as they mark their principles, aim to contribute to the improvement of people's lives. In this way, the review and continuous debate on the ethical dimension in research must be continuous and respond to the challenges and relevant questions that are continuously appearing, with the focus on the elements that favor the care of all the people involved from a professional and humanly ethical work and meeting.

Consequently, care requires in-depth analysis. Currently, in the face of the frenetic pace of life in which we find ourselves and the culture of rapidity, Berg and Seeber (2016) reflect on the "Slow" movement in academia, which would also include what is related to research in terms of dedication of time and energy, for example. "The Slow University" is an idea that many supporters need to turn into an international movement (Rosso, 2019). The slow research feminist movement and its care ethic can offer ways forward for all the neoliberal reforms we face (Bergland, 2018). According to Cravens et al. (2022) knowing how to say "no" is an emotional work that involves respecting limits, i.e., saying no as an act of self-care. From self-care ethics itself has a broader, human and necessary reading.

5. Conclusions

Research in the socio-educational field is not exempt from tensions, either due to external factors such as meritocratic issues, or internal factors related to decision-making in the research process. Considering that education is political, and therefore research is also political, the topic of ethics has been analyzed as a fundamental aspect in any research process. There is no doubt that we are facing challenges such as the construction of knowledge in a more participatory and democratic way, counting on all the voices involved in the processes; the need

to consider various intersectionalities that for a long time have been limited to power relations, thus avoiding that many people are silenced from history; and the reflection on the care of both the research group itself and all those people with whom a communication is initiated in the research process.

In short, ethics drives us to think, feel and act, both in the academic and research fields. Therefore, it is essential to continue reflecting on this issue, especially from the point of (inter)action.

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Teacher professional development in early childhood education through action-research

Desarrollo profesional docente en educación infantil desde la investigación-acción

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Abstract

Teacher professional development is a key factor in enhancing pedagogical interactions. However, implementing programs that are tailored to teachers' specific needs and teaching contexts remains challenging. This article examines a professional development program in pedagogical mediation based on action research, designed for early childhood educators in Chile. The study employed a case study design, involving nineteen teachers and six trainer educators. Data was collected through semi-structured interviews and written reports, which were analyzed using reflexive thematic analysis. The findings highlight four key aspects for teacher professional development: reflective chaining, video-based training, the role of the critical friend, and work within professional learning communities. These categories form a continuous action-research and reflection spiral that enhances teaching professionalism and self-awareness of practice, promoting a shift from the individual to the collective and from the simple to the complex. This approach fosters a collaborative culture of improvement, strengthening professional development and serving as a model for other programs that contribute to quality in this educational level.

Keywords: early childhood education, applied research, pedagogical practice, continuing education, preschool teachers, teacher educators.

Resumen

El desarrollo profesional docente es un aspecto clave para mejorar las interacciones pedagógicas. No obstante, la implementación de programas adaptados a las necesidades específicas del profesorado y a sus contextos de enseñanza sigue siendo un desafío. Este artículo analiza un programa de desarrollo profesional en mediación pedagógica basado en la investigación-acción, dirigido a maestras de educación infantil en Chile. El diseño fue un estudio de caso, que consideró la participación de diecinueve educadoras y seis docentes formadores. La información se recogió mediante entrevistas semiestructuradas e informes escritos, analizados a través de un análisis temático reflexivo. Los resultados destacan cuatro aspectos clave para el desarrollo profesional docente: encadenamiento reflexivo, video-formación, rol del amigo crítico y trabajo en comunidades profesionales de aprendizaje. Las categorías analizadas configuran un espiral continuo de investigación-acción y reflexión que potencia la profesionalidad docente y la autoconciencia sobre la práctica, promoviendo un tránsito de lo individual a lo colectivo y de lo simple a lo complejo. Este enfoque fomenta una cultura colaborativa de mejora, fortaleciendo el desarrollo profesional y sirviendo como modelo para otros programas que contribuyen a la calidad de este nivel educativo.

Palabras clave: educación infantil, investigación aplicada, práctica pedagógica, educación continua, docente de preescolar, formador de docentes.

1. Introduction

High-quality pedagogical interactions are essential to foster comprehensive development in early childhood or pre-primary education (Grieshaber et al., 2021). However, recent studies indicate that these interactions often show weaknesses, especially in terms of pedagogical support, limiting their effectiveness in stimulating the cognitive and socioemotional development of children (Aumann et al., 2024; Cubillos, 2018; Gebauer & Narea, 2021).

The context described underscores the importance of focusing efforts on Teacher Professional Development (TPD) at the level, as it plays a key role in maintaining and improving the quality of teaching in Early Childhood Education on a global scale (Schachter et al., 2019). These programs strengthen the competencies, knowledge, attitudes and experiences of teachers (Brunsek et al., 2020), as evidenced by the meta-analysis of Egert et al. (2020), which shows how Continuing Education (CE) programs enhance the quality of pedagogical interactions, by strengthening classroom organization and the emotional and pedagogical support of professionals in service.

In this sense, following Bergmark (2020), the TPD has historically focused on specific events such as talks and workshops carried out by experts, seeking to improve the management of teaching skills in a decontextualized way. In Latin America, studies establish that despite improvements and the implementation of professionalization policies, CE often lacks cohesion and context, making it difficult to attend to the specific needs of teachers (Adlerstein and Pardo, 2020; Galván et al., 2023; Vezub, 2019). On the other hand, the research highlights the importance of improving training programs in early childhood education to effectively address the diversity of the classroom and face the challenging conditions that arise in this environment (Galván et al., 2023; Henry & Namhla, 2020). Recently, the importance of developing research and reflective competences in teachers, such as critical thinking, observation and the problematization of practice, improving professionalism and promoting autonomy and self-regulation of learning has been highlighted (Aldana-Zavala et al., 2021; Díaz et al., 2024; Mármol et al., 2024).

Specifically in early childhood education, successful programs combine modalities such as

workshops, individual support and teacher self-reflection, key elements to improve pedagogical interactions (Egert et al., 2020; Schachter et al., 2019). Action research stands out as an effective method for TPD, focusing on specific and relevant contexts (Hughes, 2023; Johanneson, 2022). Lewin (1948) defines it as a paradigm of inquiry focused on improving the capacities and practices of the researcher, rather than generating only theoretical knowledge. Elliott (1991) emphasizes both process and product improvement, driving needs-based changes to improve the human situation.

On the other hand, reflective practice constitutes a fundamental aspect for TPD, being understood as a cyclic, systematic and intentional problem-solving process, in which theory (based on evidence) is related to practice (Medina & Mollo, 2021). In addition, this cognitive process encompasses other subprocesses of thought and action such as: planning, evaluation, observation and collaboration, understood also as attributes of research competence (Mármol et al., 2024). In this field, Flores et al. (2022) highlight that teachers often make pedagogical decisions based on intuition, neglecting the use of reference frameworks, which hinders the development of a solid construction of knowledge through critical inquiry.

Although reflection is presented as a key skill for change and TPD, teacher education lacks clear models and effective assessments to encourage it (Mármol et al., 2024; Ruffinelli, 2017). In this sense, reflection, considered as a necessary condition for professional status, requires specific tools for its effective development (Mármol et al., 2024; Rumig & McFarland, 2022). According to Ruffinelli (2017) reflection is a social phenomenon that needs mediation and scaffolding to guide individuals in the exploration and understanding of their experiences from various perspectives. In this line, Schachter et al. (2019) underline that CE that includes expert modeling and individualized coaching meets the needs of teachers with diverse backgrounds and previous experiences. According to MacPhail et al. (2020), the TPD strategy is enriched by the inclusion of external agents, understood as *critical friends*. These provide committed support, generating dynamics that stimulate TPD in a relationship based on respect and trust, facilitating progress in the investigative spiral and professional learning.

Also, video-training has been established as an effective tool to promote educational change, reflection and analysis of teaching practices (Baustad & Bjørnstad, 2023; Figueroa-Céspedes et al., 2024). Specifically, the video recordings of the classroom facilitate reflective dialogs between trainers and teachers of early childhood education (Baustad & Bjørnstad, 2023; Varghese et al., 2022), proving to be an effective approach in training environments (Baustad & Bjørnstad, 2023; Figueroa-Céspedes et al., 2024; Walsh et al., 2020). This method allows to analyze interactions in authentic contexts, enabling a repeated and systematic observation (Walsh et al., 2020).

On the other hand, Johannesson (2022) shows that Professional Learning Communities (PLCs) allow teachers to appropriate conceptual and procedural repertoire through action research, stimulating professional learning through: development of a collaborative analytical repertoire, construction of mutual commitment and articulation of local improvement plans. In early childhood education, work at PLC supports programs to enhance learning and CE (Schachter et al., 2019), fostering trust and shared identity, strengthening TPD and collaboration among pedagogical teams (Guerra et al., 2020).

The action-research emerges as a training model that promotes the participatory appropriation of the mediating role of teachers of early childhood education, facilitating quality interactions through self-observation, practical reflection and feedback, thus enhancing the role of children and professional agency in their professional teaching development (Figueroa-Céspedes, 2016; Guerra et al., 2017). At an international level, Hughes (2023) investigates the action-research circuits among early childhood education teachers, highlighting their impact on the worldview, identity and agency within the framework of education for sustainability. However, research exploring the characteristics of action-research-based training programs is still limited, especially those aimed at improving mediated interactions in early childhood education at the local level, highlighting the need to know how it contributes to the TPD (Egert et al., 2020; Figueroa-Céspedes, 2016; Figueroa-Céspedes et al., 2024; Guerra et al., 2017).

Thus, this article proposes to analyze TPD program in pedagogical mediation based on action research, describing those aspects that, in the opi-

nion of the informants (teachers, trainers and participants), were key to the training process.

2. Methodology

The study adopts a qualitative approach with a descriptive-interpretive nature and uses a case study design. Its focus is a teacher professional development program (TPD) implemented between 2012 and 2020, aimed at educators of a public foundation in Chile that serves children between 3 months and 4 years old. This article is part of a broader research process aimed at understanding the training practices of Continuing Education (CE) projects, in which the research team also plays the role of collaborating teacher (Figueroa-Céspedes, 2016; Guerra et al., 2017; Guerra et al., 2023).

The studied program fosters an inclusive and dynamic vision of pedagogical processes through cycles of analysis of interactions in the classroom from a sociocultural constructivist perspective. Its objective is to implement Mediated Learning Experiences that promote cognitive flexibility and modifiability (Feuerstein et al., 2015). Supported by a dynamic conception of intelligence, this approach highlights the relevance of intentional, reciprocal, meaningful and transcendent interactions facilitated by a mediating educator. In this way, a constructive and enriching connection is established between each child and his/her environment, through a playful approach appropriate to the educational level, optimizing the integral development and cognitive adaptability of childhood.

The program combines face-to-face sessions and activities on a virtual platform, reaching a total of 124 hours of classes over two years. In the first year, educators analyze and optimize their pedagogical practices with the support of teachers and tutors, focusing on improving the interactions they promote. In the second year, the educators are grouped into communities according to their region of origin and develop a collaborative research-action plan, which favors a continuous reflection on their professional learning and culminates with the presentation of a thoughtful individual final report.

The sample was selected based on accessibility and availability criteria and is composed of 25 participants: six teacher educators and nineteen early childhood educators. The entire teaching staff

involved in the final phase of the 2018-2020 cohort participated. The training group consists mainly of women, aged between 30-45 years, from various

professions and with different levels of experience (Table 1).

Table 1. *Characterization of teachers sample*

Participant	Gender	Profession	Age	YearsExperience
D1	Female	Special Education Teacher	33	10
D2			45	15
D3			34	5
D4		Speech and Language Therapist	33	7
D5			30	10
D6	Male	Psychologist	43	15

The sample of participating early childhood educators is composed of nineteen women with an average age of 33 years, from various regions of Chile. These educators are at different stages of their TPD, with professional experience ranging from 3 to 22 years (Table 2). The selection of the sample was based on its active participation between 2018

and 2020 and on the accessibility of its reflective reports, ensuring relevant and representative data of the period. In addition, in-depth interviews were conducted with three volunteer educators to obtain detailed and committed perspectives on their experience in the CE program.

Table 2. *Characterization of sample of educators*

Participant	Region	Age	Years of experience	Instrument	
				Report	Interview
Q1	Arica and Parinacota	39	14	●	
Q2		28	3	●	
Q3		32	8	●	
Q4	Tarapacá	28	3	●	
Q5		31	6	●	
Q6		36	11	●	
Q7	Antofagasta	36	12	●	
Q8		29	5	●	
P9	Valparaíso	34	10	●	●
P10	Araucanía	33	9	●	
P11		31	7	●	
P12		30	6	●	
Q13		43	19	●	
Q14		28	4	●	

Participant	Region	Age	Years of experience	Instrument	
				Report	Interview
P15	Los Rios	28	5	●	●
Q16		30	6	●	
Q17		47	22	●	
Q18	Aysén	33	9	●	●
P19		32	7	●	

As information production tools, 19 reflective reports of participating educators were used, structured in (1) introduction, which establishes context and expectations, (2) a body, which narrates learning and participation in the program, and (3) conclusions, which synthesize achievements and projections. To ensure the credibility of these reports, iterative reviews were conducted and guidelines provided for their development. In addition, semi-structured interviews were conducted in two sessions of approximately one hour with six teachers and three educators, following guidelines based on previous research (Figueroa-Céspedes, 2016; Figueroa-Céspedes et al., 2024; Guerra et al., 2017). The first session explored the characteristics of the course, the role of the teacher-tutor and the reflective development, while the second focused on the process of problematization and the strengthening of reflection within the PLCs, providing detailed descriptions of those situations and experiences of the course. The interviews were conducted between July 2019 and October 2020, with the 2019 interviews conducted in person and the 2020 interviews conducted through Zoom. The combination of these methods and data sources allows a crystallization of the findings, providing a richer and more nuanced understanding of the experience (Tracy, 2021).

Subsequently, a reflective thematic analysis was carried out (Braun & Clarke, 2022) to interpret the data in a deep and detailed way, useful in exploring diverse perspectives. The process included initial reading, emergent coding, and cross-topic grouping, followed by iterative and recursive refinement of codes and categories. The joint analysis of the ins-

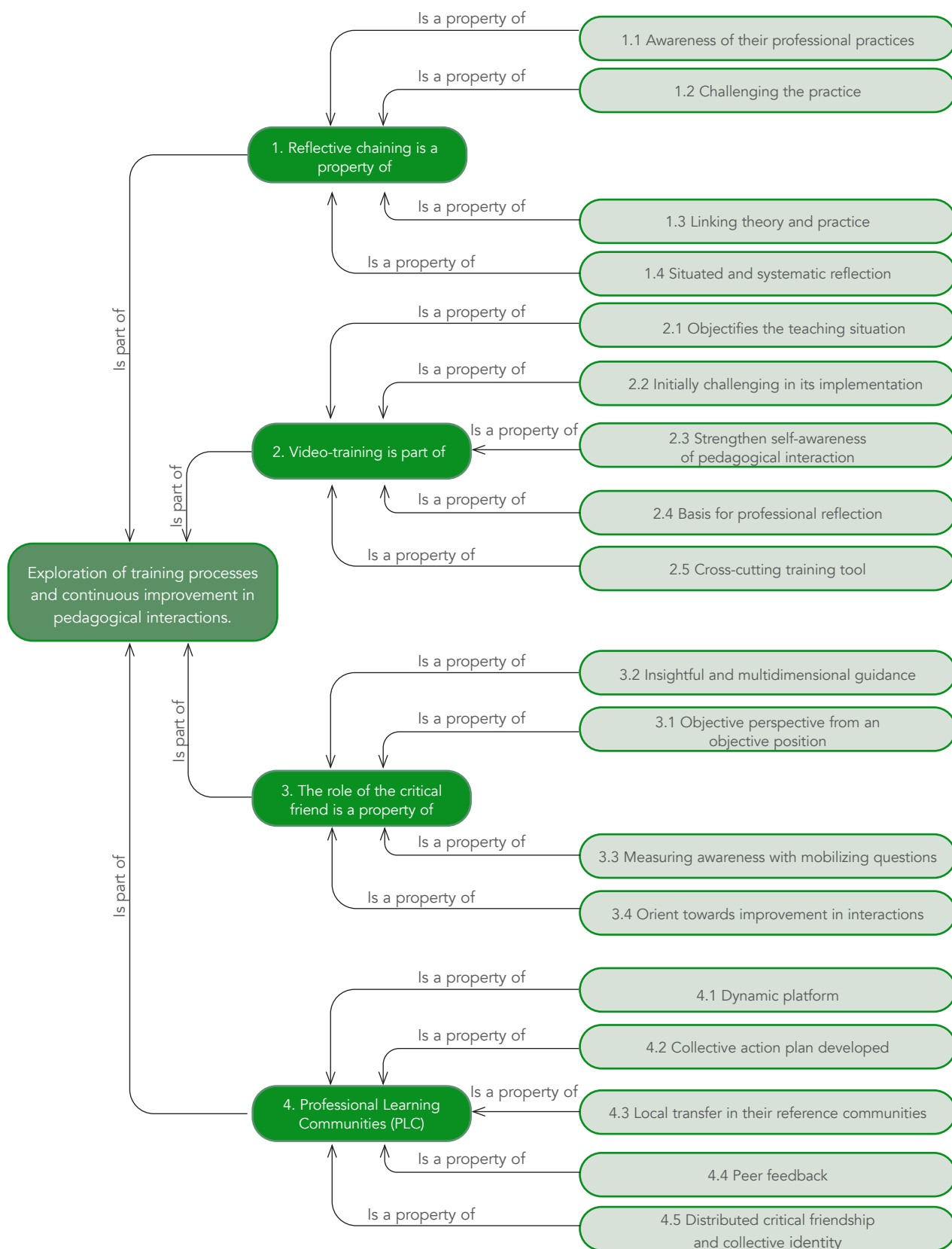
truments allowed confirming the exhaustiveness of the topics until reaching the information saturation. Rigor and quality were guaranteed following Tracy's criteria (2021), ensuring validity, transparency and investigative relevance. The analysis was performed with Atlas.ti ©24 software.

Finally, ethical guidelines were followed, informing participants about the objectives of the study and obtaining their consent validated by the university. In addition, individual complexities were respectfully addressed, guaranteeing confidentiality, anonymity, fairness, impartiality and a comprehensive commitment to knowledge (Villalta et al., 2022).

3. Results

The results reveal that the situations, tools and methodologies used promote the reflection and professional development of the participants through a action research approach in continuing teacher education. This process integrates four central themes: reflective chaining, which guarantees continuity in the critical analysis of one's own practice; video-training, which favors self-evaluation to adjust mediating skills; the role of the critical friend, which encourages constructive feedback between peers; and *professional learning communities*, which generate collaborative spaces for exchange and mutual support. These strategies, applied in a spiral process of inquiry, allow participants to consolidate their professional competencies by integrating reflection and learning at each stage of their development (Figure 1). The details of each category will be reviewed below:

Figure 1. *Synthesis of findings*



3.1 Reflective Chain: a Cycle of Theory and Practice

Reflective chaining stands out as an essential component in the implementation of the program, which consists of cyclically integrating educational theory with practice located in the context of teaching. In this regard, the participating educators point out the importance of being *aware of their practices*, analyzing that, before starting the program, their reflections were not systematic or intentional due to limitations of their institutional and sociocultural context.

I was not as conscious, nor reflective before the course, perhaps I was a little more automatic, maybe because the same kindergartens and schools have well established routines. There are few moments, or periods in which I sit down to think or to reflect, really reflect, because I can say every day that the day went well or that I lacked something, but that is as more superficial thinking(...)as but I was more aware with this course. (P14, September/2020)

This aspect is supported by the training team, who agree on the need to develop the *problematisation* competence *on the practice*. This encourages educators to face pedagogical challenges, questioning knowledge and going beyond the traditional response based solely on intuition and experience.

Many times, they have diminished problematic skills, for example: to seek reliable information from the scientific area; then there is much everyday knowledge of the practice itself on which they move and not so much from the other perspective of more formal knowledge. (D5, July/2019)

I had to unlearn a lot of the things I thought I was right about mediating to internalize new knowledge. When I put them into practice, I realized it wasn't as easy as I thought. (P13, August/2020)

Thus, the course proposes to *link theory and practice* through the development of conscious relations between the theoretical concepts related to mediation and the concrete actions carried out during the pedagogical experiences. This is achieved by providing reflection structures and practical

examples that require a pedagogical positioning and the need to base their work.

We not only teach the different ways of reflecting, but our entire working methodology is centered on reflection. In other words, we teach how to reflect through reflecting itself, rather than teaching reflection as content. (D3, August/2019)

I feel that what stayed with me from the course was that (...) theory was put into practice (...) one had to ensure that this [recorded] class had certain characteristics, and then that class would be reflected upon, analyzed, but always with others, never alone. (P17, September/2020)

In this sense, theoretical-practical integration is not simply a matter of applying abstract ideas to specific situations, but of establishing a *situated and systematic reflection*, to problematize and improve the quality of interactions. By deepening the understanding of the theory through its visible and concrete implementation, significant improvement and alignment between its pedagogical practices and the conceptual foundations that underpin the mediated interaction is oriented.

I believe that the real reflection we were able to have in the different meeting instances is a reflection that is not abstract (...) critical knots are addressed, where the reflection is around a strategy of improvement for that situation (...) I think that today they are looking very closely at this research-action spiral: something happens, let's find out why, let's find out what to do, let's put it into practice, let's look again at whether it is working out for us, let's rethink the problem. (D2, June/2019)

The program has developed in me new ways of teaching, being more aware that mediated experiences occur through moments intentioned by the adult that consider specific curricular factors. (P2, August/2020)

Consequently, reflective chaining benefits female teachers, while also establishing a professional culture that values reflection to achieve learning and continuous improvement. This synergy suggests that

reflection is not an isolated act, but an integral part of a broader process that enriches teaching practice.

3.2 Video-training: *learning and reflection with evidence*

Video-training is a tool that promotes reflection and professional learning. By integrating into the action-research cycle, it allows participants to observe and reflect on their own practices through video recordings. This detailed process helps to objectify the pedagogical situation and to identify challenges in professional learning.

[LA] I see the methodology of video-training as an excellent tool, since it allows us to objectively look at our pedagogical practices in relation to what is written in the planning and to carry out a critical analysis, which leads us to constant improvement. (P10, August/2020)

In this way, video-training acts simultaneously as a learning scenario and tool, since it catalyzes pre-existing perceptions, stimulating the identification of opportunities for improvement. Although *initially challenging*, this process allows teachers to learn to observe their practices in a balanced way, identify patterns of behavior and evaluate the effectiveness of the strategies implemented.

At first it wasn't easy for both the team and me, recording wasn't simple and you were really observing actions that weren't optimal. (P3, August/2020)

Video-training is a very valuable strategy that will be very useful in my professional practice, it takes me out of the comfort zone, advancing in search of new strategies... (P18, August/2020)

Also, this process strengthens self-awareness by allowing constant monitoring and detailed analysis of the classroom, facilitating the identification of problems in pedagogical interaction. The CE process and the analysis cycles promote a progressive appropriation of the techniques and strategies of pedagogical mediation, resulting in a more fluid and effective practice.

I swore that it was okay at first, but there was not much truth (...) then you can plan more cons-

ciously what you want children to achieve and also be aware of their skills (...) you are catching the rhythm and it is like that after a little it is coming out more naturally. (P18, October/2020)

(...) It's not just recording yourself and telling how you did but recording yourself based on a problem that you are systematically looking at, with that group of children, a problem that more or less becomes frequent in your practice. (D2, June/2019)

In this way, video-training positions as the *basis of reflection* by deepening the analysis and advancing the theoretical argumentation of classroom problems. In addition, it is perceived as a cross-cutting tool that provides solid support for educators to analyze and justify their observations and interpretations. This process of theoretical-practical integration facilitates a deeper and informed understanding of pedagogical strategies, promoting continuous improvement in teaching practice.

When you record (...) in my point of view, is when I really reflect with all the senses. (P1, August/2020)

Video-training is the cross-cutting basis to all this reflection (...), it allows to have an argued opinion about what they are saying. If they give an opinion, they are giving it in relation to what they have managed to integrate into the continuous development process. That's what I was trying to say before, deep down, how do I give an opinion that I can argue from theory that I'm seeing in my practice? I can't do that if I haven't gone through a video-training process. (D1, June/2019)

Thus, video-training is a key process for the learning and continuous reflection of teachers, especially in the framework of action research. By recording and analyzing videos of their pedagogical practices, participants identify specific challenges and improve their understanding of the pedagogical strategies of the course, integrating theory and practice. This process promotes improvements in their teaching, expanding their repertoire of strategies and strengthening their self-awareness about the needs of children.

3.3 The role of the critical friend: *facilitator of change and reflection*

The teaching educators assumes the role of critical friend by collaborating in the research of the educational practice of the participating teachers. They request arguments, offer counterpoints and provide accompaniment in individual and collective research, adopting an interrogative and empathetic style to co-investigate mediated interactions. This role offers an *objective perspective from a peripheral position*, crucial to focus on pedagogical challenges. This underlines the importance of a structured approach to enrich reflection and learning in video-training.

The critical friend (...) fulfills a fundamental role because in a process of analysis it is important to have an objective look that allows to focus (...) because being a third party in the group favors the objective look, which is a key element. (D3, August/2019)

The critical friend exercises *insightful guidance* that helps educators navigate through the complexities of their own practices. Its function is *multidimensional*, ranging from the facilitation of the communication of reflections to the enrichment of the process through active listening, orientation, stimulation of discussion and the promotion of a deeper reflection.

They share that knowledge of truth, and they make you understand it, and they explain it to you and if they do not explain it to you, they make you question about it until you see it; it is not that they tell you everything, just as look here, no!, they also make you question it and analyze it! until you see it. Construct, co-construct and deconstruct and come back and it's like "wow!" It's like your mind explodes, so, I think that opportunity was super helpful. (P18, October/2020)

The critical friend plays the role of a reflective mentor, facilitating the awareness of the quality of pedagogical interactions through the search for logical evidence. Through mobilizing questions, it guides teachers in reflecting on their thought processes and decisions, promoting critical thinking and helping to identify strengths and weaknesses. Their balanced feedback strengthens the confidence of teachers and underscores the importance of develo-

ping emotional understanding in these interactions, transforming them into valuable opportunities for learning and personal development.

We must take care that the questions that we ask are questions that cognitively involve them; argue not only from experience, but also argue from knowledge, from this analysis, of this critical capacity and for that I am standing from a sociocultural paradigm to say such a thing, I am saying that mediation is such a thing because I believe in the capacity for change. (D1, October/2019)

My tutor is a mediator who not only answers my doubts through a screen in a clear, assertive, and timely way, but also, manages to become aware of each process I go through, teaches me and enhances my way of assimilating and understanding my emotions from enrichment and love, to use everything as a source of learning. (P16, August/2020)

The critical friend's approach encourages a *focus on interactions* as aspects susceptible to change, thus increasing the levels of agency and empowerment of educators, while recognizing the relevance of the institutional context. In addition, it is highlighted that the recording and analysis of pedagogical practices can be emotionally challenging due to personal exposure and the reception of criticism, which can affect self-esteem and confidence during the training process.

So our help, in doing the analysis from the *problem tree*, is 'ok, that's a reality. Is it more of a problem, is it a consequence, is it an effect? What is it and what can we do about it?' So, let's clear everything that we have no influence on, like any institution... and let's move into the classroom. (D2, June/2019)

I remember a few words that one of the tutors said when we had to watch the videos of the pedagogical practices "the little box of self-love", It is not easy to show video, nor is it easy to tell your classroom experiences and that other people correct you, question you, criticize you sometimes in a bad way. (P6, August/2020)

Therefore, the teaching educators team, from the critical friendship, guides the educators in the investigation of their practice, encourages critical thinking and offers acute and empathetic feed-

back. Its structured and objective approach facilitates reflection and pedagogical improvement in the context of video-training.

3.4 Professional learning communities: *collaboration and collective growth*

The work in PLC characterizes by the active and participatory interaction between educators from the same territory. During the second year of the program, this methodology is implemented, transcending the simple exchange of experiences, becoming a *dynamic platform* to engage in a deep reflective dialog about their interactions in the classroom, by identifying and addressing common problems.

In the second year they arrive at a problematization and based on it they design an action plan, obviously always linked to what is the process of training in pedagogical mediation. (D3, June/2019)

In this context, PLC are an enriching space that promotes collaboration and plays a significant role in the elaboration of a collective action-research process. This approach involves a joint immersion in the dynamics of the classroom, and allows educators to share, question and reflect on their pedagogical interventions, through the elaboration of a *shared action plan*.

We have acted as a bridge, enriching our knowledge by implementing an action plan designed and carried out by ourselves. This plan responds to the needs identified in our region and in the educational practices within the classroom, both by us and our colleagues. (P12, August/2020)

This collaborative approach provides an understanding of the pedagogical scenario, noting that theory is not only an abstract component, but a practical and organizational foundation that guides analysis and informs decision-making. Thus, action research emerges as an essential component that transitions from an individual process to a collective process of local transfer of their professional learning.

That which is individual in the first year, has its decantation in the first face-to-face day of the second year for the integration of the community

and allows in this sharing of critical incidents, of individual problems, to get to something that they see common from that group of teachers and that they also extrapolate to what happens with the teachers of their gardens, to their colleagues. (D2, September/2019)

Collaboration becomes a driving force for optimizing pedagogical practices. Within communities, peer feedback emerges as a reflexive resource towards finding effective solutions to common educational problems. The generation of an affective bond and a safe space in each community favors the research-action process in the context of the PLC.

The last works where I had to analyze the work of a colleague from a video of a recorded experience helped me a lot. It wasn't hard for me to accept comments like 'look, here you could have noticed this' or 'here you could have done that'. I think that kind of trust and complicity arises more when there is greater affection and bond with someone. (P15, September/2020)

Peer feedback thus becomes a vehicle for deep analysis and collective generation of pedagogical strategies, focusing on the practical application of mediation in the specific context of each community, *extending the critical friendship approach to everyday practice*.

When you are already a mediator with other colleagues, with the communities, that is also very important, when there are other people who advise you, who see things from the same experience that you have and that you may not be able to see. (P18, October/2020)

Finally, PLCs are strongly linked to the creation of a collective identity that gives meaning and purpose to professional teaching learning. The participants underline the importance of collaboration and co-creation in mediation, highlighting the construction of a collective knowledge that mobilizes and strengthens their sense of unity and purpose. In this way, mediation is seen as a community effort that values culture and fosters integral development.

As Comunidad *Guiando Saberes* we proposed to contribute to the region, projecting ourselves over time with a plan aimed at teams, families and community, make our children thinking beings and

take advantage of every opportunity and interaction to promote their thinking. (P3, August/2020)

This beautiful, complex and even magical concept has emerged in the mediating community under the name 'Zomo Kimün' ("female wisdom", in Mapudungun). (P16, August/2020)

I have learned a lot from each of them, together we have created a collective knowledge about mediation that mobilizes us to fulfill the objective of our action plan. (P11, August/2020)

The PLC, implemented in the second year of the program, allow common problems to be identified and addressed with a joint action plan. Led by the participants, they foster collaboration and collective growth among educators. This approach facilitates action-research and provides a safe space for feedback and the building of collective knowledge that favors TPD.

4. Discussion and conclusions

This article analyzes a TPD program in pedagogical mediation based on action-research, highlighting four key aspects: reflective chaining, video-training, critical friend role and professional learning communities. Each of these elements offers valuable insights to encourage reflection and TPD in early childhood education. The importance of integrating these resources into daily practice is emphasized, strengthening research competencies and enhancing the professionalism of teachers (Aldana-Zavala et al., 2021; Díaz et al., 2024; Mármol et al., 2024).

The *reflexive chaining* acts as a powerful mediating tool that facilitates the construction of relevant pedagogical knowledge through the strategic articulation between theory and practice, revitalizing the professional practice of the participants. The conscious connection between theoretical concepts and concrete actions highlights the challenges of going beyond a merely experiential reflection, especially in the absence of an adequate theoretical framework or optimal conditions for its implementation. This finding highlights the need to understand reflective practice as a deliberate and systematic process that integrates theory and practice (Flores et al., 2022; Medina & Mollo, 2021) manifesting itself in

a transformative curricular intention. In addition, it is essential to foster self-observation and awareness of one's own practice, developing critical thinking that integrates various perspectives and reference frameworks essential for inquiry and continuous improvement (Mármol et al., 2024; Ruffinelli, 2017; Ruming & McFarland, 2022).

The *video-training*, nested in the research-action cycle of the program, focuses on pedagogical interactions and the identification of challenges for improvement. Although it can generate anxiety for fear of negative evaluations (Figueroa-Céspedes et al., 2024), recording one's own practice enhances self-awareness and facilitates active mediation in the classroom by relying on concrete evidence that confronts theory and practice. This iterative process not only builds deep and relevant knowledge, but also enriches pedagogical intentionality and strengthens investigative competencies, with a focus on the analysis of the offered mediation (Figueroa-Céspedes et al., 2024; Mármol et al., 2024). The video-training systematizes the professional vision (Walsh et al., 2020), reaffirming the key role that teachers have in early childhood education. This strategy aligns with action-research-based professional learning, which drives teaching agency and professional identity (Figueroa-Céspedes, 2016; Hughes, 2023). Moving away from univocal and decontextualized approaches that have predominated in the CE (Adlerstein and Pardo, 2020; Henry and Namhla, 2020; Vezub, 2019), this proposal adopts a sociocultural turn that empowers the teaching body as an active protagonist in their professional learning processes within their specific contexts (Figueroa-Céspedes, 2016; Guerra et al., 2017; Guerra et al., 2020; Mármol et al., 2024; Ruffinelli, 2017).

The *role of the critical friend* facilitates a deep reflection among educators about their pedagogical interactions in the classroom, acting as a reflective mentor with a multidimensional and contextualizing approach. Its emphasis on self-observation and the problematization of the practice itself enriches the professional repertoire (Figueroa-Céspedes, 2016), promoting collaboration between the teaching educators team and the teachers (Varghese et al., 2022) to develop a systematic and shared reflective practice (Mármol et al., 2024; Ruming & McFarland, 2022). In this way, the critical friend, in her reflective role, enriches the video-training by raising ques-

tions about the quality of the mediation and the consistency with the pedagogical objectives raised. This stimulates the problematization of the practice, highlighting the professional development potential of each participant. By encouraging argument, critical friends accompany teachers in a deeper and more conscious understanding of their work and beliefs to the grassroots, agreeing with MacPhail et al. (2020), who emphasize the longitudinal and adaptive character of critical friendship.

PLCs highlight pedagogical leadership and peer dialog as essential drivers for improving educational practices, creating a sense of shared purpose. Mobilizing feedback practices among educators poses the challenge of promoting critical friendship and collaboration, essential elements for teacher professional development (TPD), in a similar

link to coaching and peer scaffolding (Ruffinelli, 2017; Schachter et al., 2019). Active participation in collaborative analysis allows identifying areas for improvement and sharing proposals, based on theories that value teacher collaboration as a key element to improve practice (Johannesson, 2022). This approach not only responds to the need to raise educational quality in childhood (Aumann et al., 2024; Cubillos, 2018; Gebauer & Narea, 2021), but also promotes trust and shared identity (Guerra et al., 2020) and aligns TPD purposes with staff interests, positively impacting educational communities (Schachter et al., 2019). In this framework, PLCs consolidate a collaborative culture of continuous improvement and research-action, positioning itself as an effective model for the TPD (Johannesson, 2022).

Figure 2. *Diagram of the professional learning process*



By way of conceptual integration, the results reveal a clear spiral of progression in which educators move from individual reflection to integration into learning communities, a process that drives their TPD, establishing a transition from the individual to the collective and from the simple to the complex (Figure 2). During the first year of the program, the participants focus on theoretical exploration by questioning their pedagogical conceptions through personal reflection on their practices, which allows them to identify and analyze their teaching approaches and lay a solid foundation for a deeper understanding of their teaching role and the principles of pedagogical mediation. In the second year, the process becomes more complex, as educators face practical challenges that require negotiation of ideas, conflict resolution, and co-creation of effective pedagogical strategies. This action-research approach allows individual experiences to be articulated in a collective effort to improve educational practice (Guerra et al., 2017; Guerra et al., 2020), advancing towards the construction of knowledge relevant to their own practice.

This approach expands mediation and reflective practice beyond the classroom, integrating the sociocultural context into its transformative purpose. The incorporation of tools such as video-training and critical friendship presents as a promising model to optimize practices in early childhood education, since they promote self-reflection (Egert et al., 2020; Schachter et al., 2019) and collaborative action research (Johannesson, 2022).

This experience shows that a situated and relevant teacher professional development (TPD) requires overcoming obstacles such as the lack of self-awareness about the pedagogical practice itself, the absence of a solid theoretical framework, the scarcity of spaces for reflection and resistance to constructive criticism, factors that can undermine trust and hinder collaborative learning. In addition, complex group dynamics and low motivation for continuous learning can restrict exchanges to superficial dialogs. To face these challenges, it is essential to implement proactive strategies that strengthen TPD aimed at enhancing the mediating role of educators in learning processes (Figueroa-Céspedes, 2016). This requires designing systemic policies that drive TPD programs focused on promoting cultural change where action research and interdisciplinary

collaboration are consolidated as pillars of teaching practice (Adlerstein & Pardo, 2020; Aldana-Zavala et al., 2021; Johannesson, 2022).

Although this research provides a rich and detailed understanding of a specific case, it presents certain methodological limitations. On the one hand, findings derived from a single case cannot be generalized statistically, and emerging issues may vary in other contexts, limiting their direct extrapolation (Tracy, 2021). However, the depth of the analysis offers significant value in terms of transferability, allowing this knowledge to be applied to similar situations. It would also have been relevant to incorporate methods of ethnographic recording of learning activities and create dialogic spaces to discuss the results with the participants, which is suggested as a challenge for future research. Finally, it is recommended to explore how the key aspects of the analyzed program can be adapted to different educational contexts and evaluate their long-term impact on pedagogical practices.

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Ontology of the present of being a teacher and cyberformation in university teaching

Ontología del presente del ser maestro y ciberformación en docencia universitaria

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Abstract

The study/research presents the results of a thesis that is justified by the search for understanding how the subjectivation of the teacher takes place and what processes of cyberformation and modes of subjectivation emerge in contemporary university teaching even in the face of the appeals of cyberculture, contemporary culture mediated by networked technologies and their implications for everyday processes of communication, creation and dissemination of knowledge. The aim of the research is to understand what discursive practices constitute being a teacher and what cyberformation processes result from university teaching that can emancipate subjects in contemporary times. Qualitative, multi-referential and articulated with the methodology of conversation, the research has an archaeogenealogical approach and seeks to create an ontology of the present of being a teacher. The data produced and analyzed in online conversations with twenty-nine teachers working in higher education in licentiate courses on four continents, America, Africa, Europe and Asia, constituted three Categorical Units of Analysis of teachers' discursive practices: virtuality, intersubjectivity and cyberformativity. Intertwined with the research's theoretical framework, namely Agamben, Ardoino, Arendt, Bruno, Deleuze, Freire, Foucault, Han, Hooks, Lemos, Lévy, Moraes, Morozov, Najmanovich, Nietzsche, Nóvoa, O'Neil, Santaella, Santos Silva, Silva, Vieira Neto e Zuboff, the data revealed clues, pointing to how, in university teaching, being a teacher and the processes of cyberformation can promote principles that foster emancipation and critical technological awareness in subjects.

Keywords: Being a Teacher, cyberformation, discursive practices, ontology of the present, university teaching, emancipation.

Resumen

Este estudio/investigación presenta los resultados de una tesis que se justifica en la búsqueda de comprender cómo ocurre la subjetivación del docente y qué procesos de ciberformación y modos de subjetivación emergen en la enseñanza en las universidades contemporáneas, incluso frente a los atractivos de la cibercultura, la cultura contemporánea mediada por las redes tecnológicas y sus implicaciones para los procesos cotidianos de comunicación, creación y difusión del conocimiento. El objetivo de la investigación es comprender qué prácticas discursivas constituyen el ser maestro y qué procesos de ciberformación resultan de la enseñanza universitaria que pueden emancipar a los sujetos en la época contemporánea. Cualitativa, multirreferencial y articulada con la metodología de la conversación, la investigación tiene un enfoque arqueogenealógico y busca crear una ontología del presente del ser maestro. Los datos producidos y analizados en conversaciones en línea con veintinueve docentes que trabajan en educación superior en cursos de licenciatura en cuatro continentes, América, África, Europa y Asia, constituyeron tres Unidades Categoricals de Análisis de las prácticas discursivas docentes: virtualidad, intersubjetividad y ciberformatividad. Entrelazados con el marco teórico de la investigación, a saber, Agamben, Ardoino, Arendt, Bruno, Deleuze, Freire, Foucault, Han, Hooks, Lemos, Lévy, Moraes, Morozov, Najmanovich, Nietzsche, Nóvoa, O'Neil, Santaella, Santos, Silva, Vieira Neto y Zuboff, los datos dieron lugar a pistas que señalan cómo, en la educación universitaria, los procesos de enseñanza y ciberformación pueden promover principios que promuevan la emancipación y la conciencia tecnológica crítica entre los sujetos.

Palabras clave: Ser Maestro, ciberformación, prácticas discursivas, ontología del presente, docencia universitaria, emancipación.

1. Introduction

The COVID-19 pandemic revealed and aggravated an unprecedented ecological, ethical, aesthetic, political and economic crisis in our society, making us pay special attention and realize our inconsistencies and weaknesses. Faced with the vital need to survive and carry out basic activities, the crisis caused the integration of new social conditions such as the use of masks, social isolation, remote work, the greater use of mobile resources, hybrid teaching that changed the ways of survival, coexistence, communication, as well as the creation, appropriation and dissemination of knowledge, impacting the proposals of knowledge and learning in the field of Human Sciences in general, and in the field of Education in particular.

The importance of returning to Nietzsche's demand for contemporary relevance was evidenced, which is the attempt to "[...] understand here, for the first time, [...] why we all suffer from a burning historical fever and, at the same time, at least, we should recognize that we suffer from it" (Nietzsche, 2017, p. 6). To infer about contemporaneity "a unique relationship with time itself is necessary, one that adheres to it and, at the same time, moves away from it" (Agamben, 2009, p. 59). Being contemporary, living and relating to the present requires distance to have a sharp look. Because "those who coincide very fully with time, who in all aspects adhere perfectly to it, are not contemporaries because, precisely because of that, they cannot see it, they cannot keep their eyes fixed on it" (Agamben, 2009, p. 59).

Today's lack of distancing has led to strategic mistakes and contradictions in government during the pandemic. This was evidenced when we analyzed the university institutions that suffered under a frank political, economic and commodified attack on intellectual capital, since the condition arose that "[...] the crisis becomes the cause that explains everything else [...] [as] cuts in social policies (health, education, social security) or the degradation of wages" (Santos, 2020, p. 5). Even so, universities continue to struggle to keep alive their role as teacher trainers and to include, share and create conditions for teaching and learning (Ibidem., 2005) in a qualitative and emancipatory way.

Despite this, we can highlight the following implications caused by the social conditions to which we were subjected with the health crisis: on

the one hand, in the face of conditions of social isolation, students needed to appropriate digital technological resources on the Internet, through Virtual Learning Environments (VPAs), platforms, resources and technological applications or networks and connections, which for many of them were unknown or difficult to access, highlighting the increase of social and digital inequalities in society. On the other hand, universities, managers and teachers faced the lack of adequate and necessary professional training for using technological resources, including the lack of equipment in institutions and even the impossibility of access to networks and connections, highlighting the lack of adequate and necessary professional training for the use and critical and creative appropriation of digital technological resources combined with the lack of implementation of principles, methodologies and specific teaching procedures of open and hybrid online teaching (Bruno, 2021), so necessary for teaching and learning in cyberculture.

Reflecting and analyzing this problem is justified when seeking to understand Cyberculture, the contemporary culture composed of a universal without totalizations and mediated by network technologies (Vieira Neto, 2013), which expresses the aspiration to build "[...] a social bond, which would not be founded on territorial links, nor on institutional relations, nor on power relations, but on the gathering around a center of common interests, in the game, in the open processes of collaboration" (Lévy, 1999, p.130). However, contemporary culture has characteristics that have allowed us to look at the subject more cautiously when we seek to understand its effective relationship with current technologies. In Cyberculture and alongside capitalism, subjects have become slaves of themselves and have lost their primary status of "human being" through three main factors: (1) the perverse logic of current positivism, since "the positivity of power is much more efficient than the negativity of duty" (Han, 2017, p. 25), and the excess of performance sickens the subject; (2) the surveillance capitalism that has been unilaterally claiming "[...] human experience as a free raw material to translate into behavioral data" (Zuboff, 2020, p. 18), making the subject hostage to logic and algorithmic dynamics; and (3) the social relations of control, characteristics of the commitment of democratic States to the manufacture of human misery, which prevents us from having "[...]

a secure means to preserve and, mainly, achieve the becoming, even in ourselves” (Deleuze, 1992, p. 213) to become conscious and emancipated individuals. These factors impose on subjects competitive, cognitive and behavioral pressures that seek purely economic results to the detriment of healthy human relations, with themselves and with others, conscious and promotive of contemplative life, since “the crisis of the present consists in everything that could give meaning and orientation to life being broken [...] [Because], life has never been as fleeting, ephemeral and mortal as it is today”. (Han, 2023, p. 87)

The effects of this human and social condition result in the fact that we are living a whirlwind of changing eras, in which industrial society has been transformed into a post-industrial society, late capitalism is transformed into surveillance capitalism (Zuboff, 2020), technoculture begins to coexist with cyberculture (Lemos, 2008) and disciplinary imposition relations give way to social relations of control (Deleuze, 1992) and positive subjection of oneself on oneself, triggering what has today been called the society of fatigue, “[...] as an active society, [which] slowly unfolds towards a society of performance” (Han, 2017, p. 69) in which the subjects and their bodies become “an acting machine” (p. 69).

Faced with these facts, the significance of the research is the return of one of the most important questions of the philosophical inquiry: to try to understand, once again, what the “Being” is and how it is constituted in the current society, given the scenario that arises as a permanent crisis of the “Being”. In other words, the question of “Being” is once again the quintessential approach to philosophical research, which is currently presented as the crisis of the ontological dimension of the human being. As suggested, the permanent crisis of society and the ontological crisis of the human being have greatly affected the subjects and their formative possibilities, (1) framing the condition of permanent change in the modes of subjectivation; (2) the processes of knowledge creation and the methods and procedures of meaningful learning; (3) the conditions of life in society, of cultural and ethnic multiplicities and diversities; (4) the ethical and moral conditions that regulate collective life; (5) the reflections, actions and political positions that make us an integral part of human and democratic life on Earth. We are, therefore, facing significant and unprecedented “[...]

changes of a profound and structural nature, which involve being, knowing, doing and living” (Moraes, 2008, p. 17) in the cybercultural social field.

Therefore, given the spirit of the cybercultural era, in which “the appetite for virtual communities finds an ideal of deterritorialized, transversal and free human relations [and] virtual communities are the motors, the actors, of the diverse and surprising life of the universal through contact” (Lévy, 1999, p. 130), people have lived interspersed with different types of discourses, networks of relationships and knowledge that have seemed instigators and uplifting for human formation and subjectivity and, consequently, for individual freedom, but that, if carefully examined, are revealed as traps that imprison subjects.

In this scenario, we glimpse the object of this study/research, which is to understand: what discursive practices constitute the Being a Teacher and what processes of cyberformation result from contemporary university teaching that promote emancipation and critical consciousness of the subjects? Therefore, if in philosophical research the question of “Being” raises the crisis of the ontological dimension of the human being, in the same way, philosophical-scientific research allows us to infer that the question of the “Being a Teacher” raises the reflection of a crisis of ontological dimension of the master being and of the cyberformation processes that constitute it and that integrate the subjects that participate in these processes.

We intend, therefore, to create an ontology of the present of the Being a Teacher to understand the origins and effects of educational discursive practices in the enunciations of the teaching discourse, taking into account the knowledge, the enunciations of the teaching discourse in the didactics of the discursive educational formations that constitute the Being a Teacher of the subjects and the processes of cyberformation in university education.

Thus, the enunciations of the teaching discourse confronted with the theoretical framework of the research will allow us to see beyond; see, in the interstices of the teaching discursive practices, the elements of connection, the entanglement and even the dissociation between the data produced in the field and the theoretical reference framework of the research, as we will demonstrate below.

2. Methodology

Understanding how we become what we are is an important ontological question and a powerful genealogical problem raised in modernity and inquired with the Nietzschean question of how to become what we are: “foreseeing that soon I must present myself to humanity with the most serious demand that has ever been required of it, it seems essential to me to say who I am” (Nietzsche, 1995, p. 17).

This problem allowed us to design the objective of this philosophical-scientific research, since the Nietzschean question has a direct relationship with Foucault’s problematization regarding the modes of subjectivation of the subject that is constituted by recognizing itself in the current events of history. So:

Continuous history is the indispensable correlate of the foundational function of the subject: the guarantee that everything that escaped him can be returned; the certainty that time will not disperse anything without reconstituting it into a recomposed unit; the promise that the subject will one day—under the form of historical consciousness—once again appropriate all these things kept at a distance by difference, he will be able to re-establish his control over them and find what can be called his home. (Foucault 2008, p. 14)

This qualitative study/research seeks, therefore, the origin (*Herkunft*) of the historical events of the Being a Teacher, creating an Ontology of the Present, a critical search for the understanding of ourselves and, in our case, of us educators, of the Being a Teacher, since through discursive practices, they will allow us to find the ways to understand the processes of cyberformation in university teaching, which promote emancipation and the critical consciousness of the subjects.

To create the ontology of the present of the Being a Teacher, the methodological approach of the research is based on the multireferential perspective, with plural and contradictory readings (Ardoino, 2005), integrated into the methodology of the conversation, whose approximation and mobilization of the relationships lived by the participants implies a dialogic political act with and not for and about

them (Ribeiro et al., 2018); integrated also into the Foucaultian archeogenealogical methodology that allows:

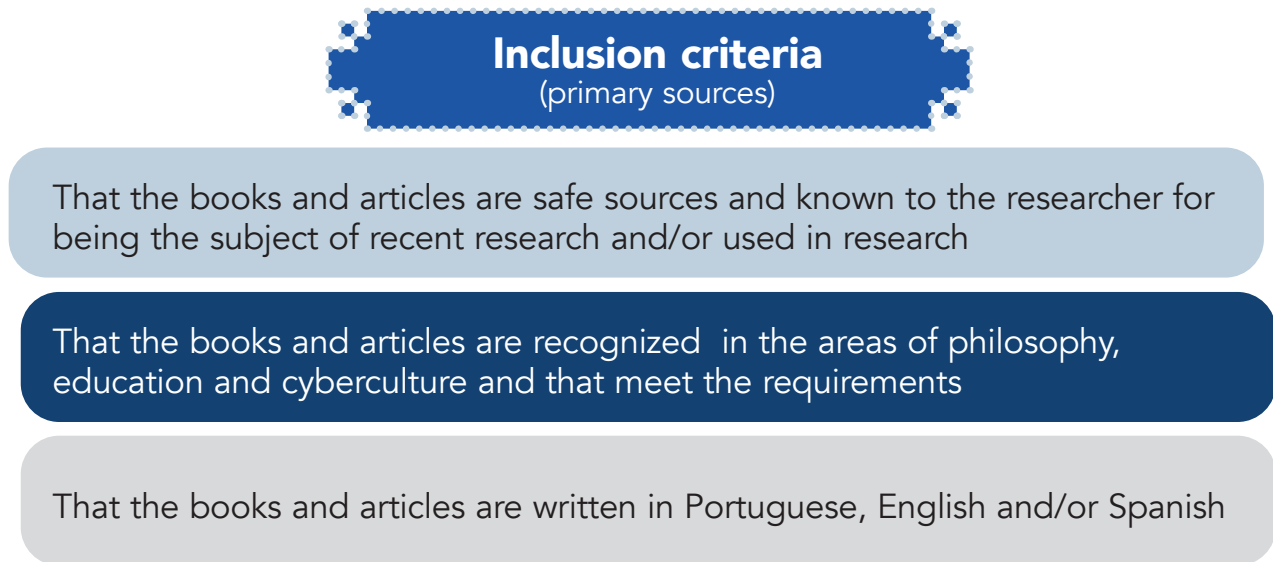
A complex set of relations that function as a norm [that] prescribes what should be correlated in a discursive practice, so that it refers to this or that object, so that it uses this or that statement, so that it uses that concept, so that they organize this or that strategy. (Foucault 2008, p. 86)

The option of conducting a study/research with a multireferential approach, integrated into the methodology of the conversation and the Foucauldian archeogenealogical methodology, expanded not only our vision of the difficulties of the research process, but also allowed us a dialogic opening that involved both the dialog with different orientations and areas of knowledge, enhancing the discussion and understanding of the topic studied, as well as the temporal and spatial expansion of the field of study, which enhanced, with the participants, the sensitive listening of voices and understanding the significant enunciations of various academic and cultural practices/experiences, through online communication resources.

The studies carried out with the bibliographic survey allowed to delimit the primary and secondary sources of the research. Documents were searched in databases of articles, theses and dissertations, in Portuguese, English, Spanish and French. We carry out systematic bibliographic research that “proposes a reconstruction of the conceptual and methodological path in the choice of bibliographic sources based on rigorous and explicit procedures so that the results are not incomplete, inefficient or, ultimately, lacking scientific validity” (Ramos et al., 2014, p. 19). Systematic bibliographic research (1) in the modality of primary sources, sought documents from renowned authors and researchers in the area of research; and (2) in the modality of secondary sources, sought theses, dissertations and articles on national and international research that are related to research.

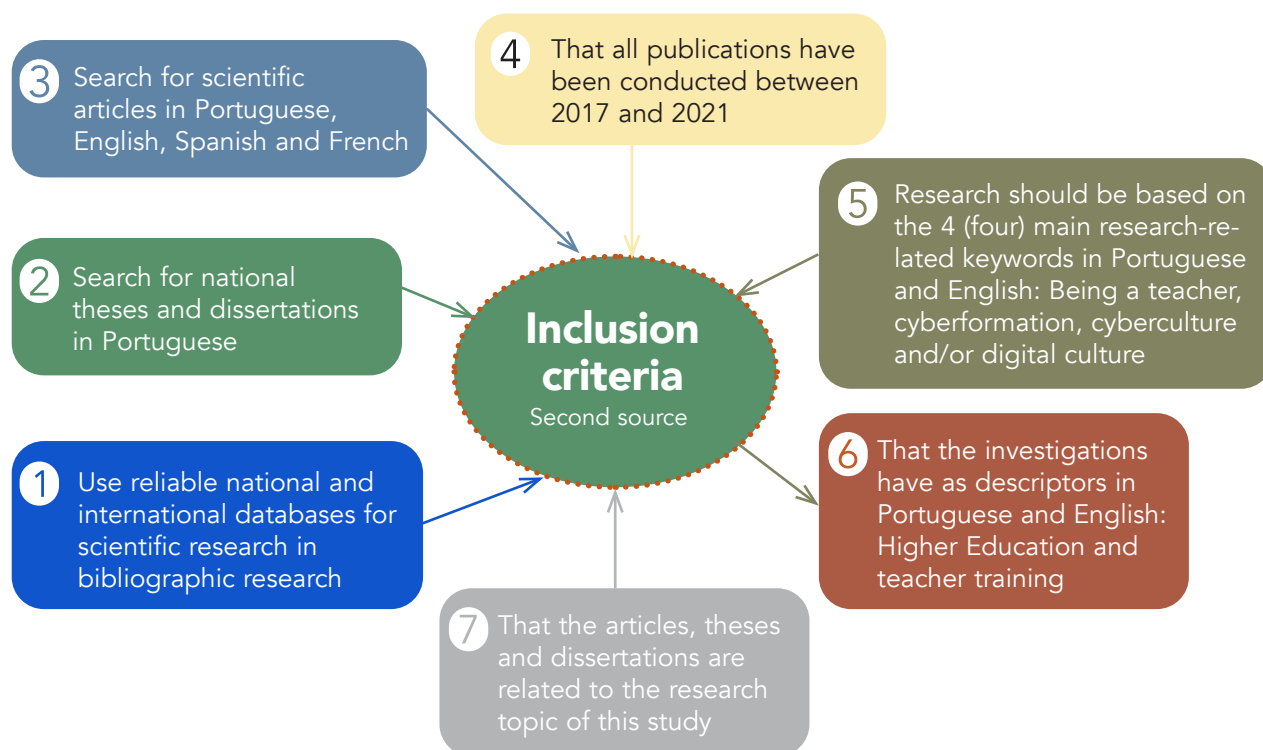
Systematic bibliographic research using primary sources met the following inclusion criteria, as shown in Figure 1.

Figure 1. *Criteria for inclusion of primary sources of systematic bibliographic research*



The result showed 3 (three) approaches from primary sources: the Philosophical-Scientific - Giorgio Agamben (2009), Jacques Ardoino (2005), Hannah Arendt (2016, 2019), Gilles Deleuze (1992), Paulo Freire (1996, 2019), Michel Foucault (1979, 2006, 2008), Byung-Chul Han (2017, 2023), Bel Hooks (2013), Pierre Lévy (1993, 1996, 1999), Denise Najmanovich (2001), Friedrich Wilhelm Nietzsche (1995, 2017), Shoshana Zuboff (2020); the Philosophical-Educational - Adriana Rocha Bruno (2021), Maria Cândida Moraes (2008), António Nóvoa (2021), Boaventura de Sousa Santos (2005a, 2020), Edméa Santos (2005b), Marco Silva (2020), Octavio Silvério de Souza Vieira Neto (2013); and Technological-communicational (André Lemos (2008), Cathy O'Neil (2020), Evgeny Morozov (2018), Lucia Santaella (2003, 2010).

Systematic bibliographic research in the form of secondary sources was carried out in the following databases: ANPED - National Association of Education Research, in GT16 - Education and Communication, GT17 - Philosophy of Education and GT18 - Teacher Training; BDTD-Brazilian Library of Theses and Dissertations; CTDC - Catalog of Theses and Dissertations of the Capes; and Periodic Portal Capes in the databases: Web of Science; Direct Science; Scielo (Electronic Scientific Library Online); ESCOPUS; Taylor and Francis online; and ERIC - Information Center of Educational Resources, resulting in a total of 59 (fifty-nine) documents, 08 (eight) theses and 06 (six) dissertations and 45 (forty-five) scientific articles (national and international) and meeting the following inclusion criteria, as shown in Figure 2:

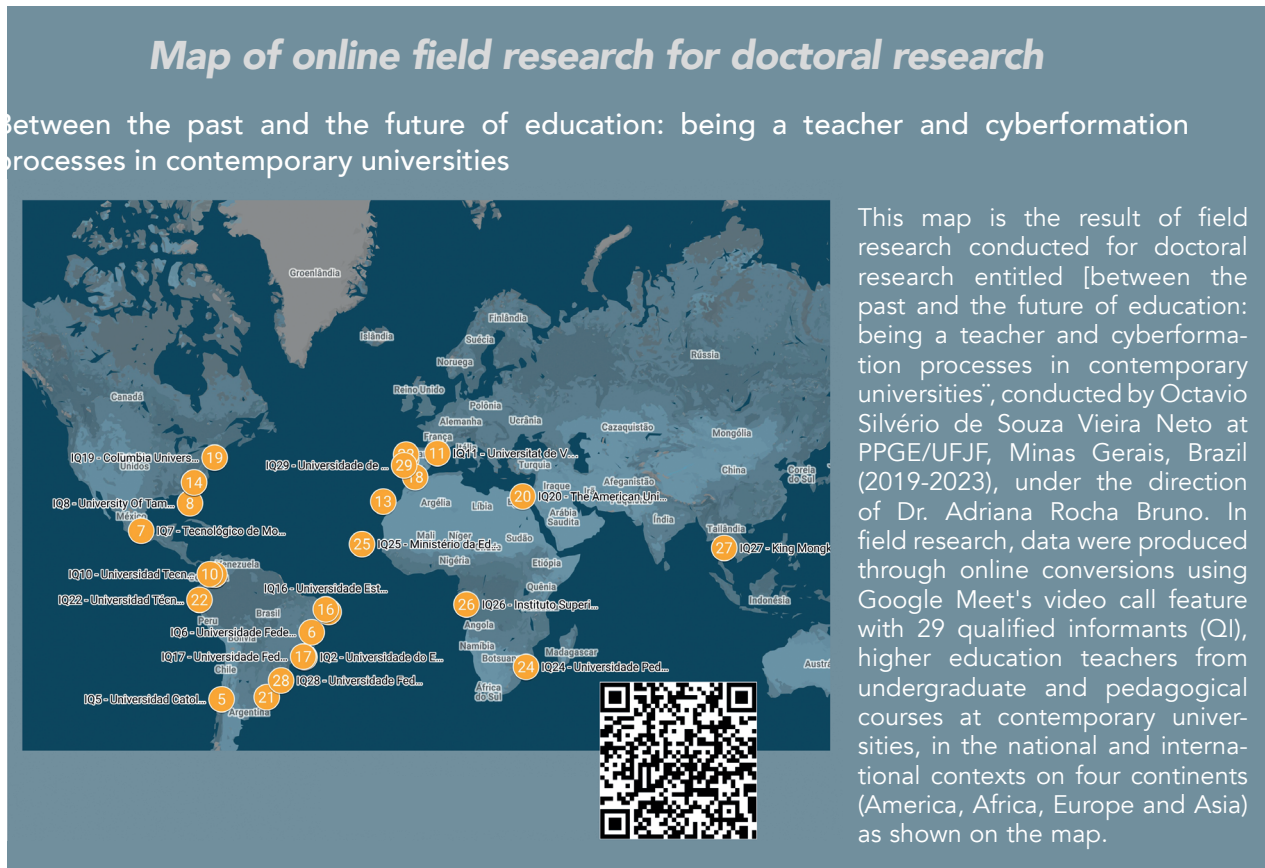
Figure 2. *Criteria for inclusion of secondary sources of systematic bibliographic research*

Of the 59 (fifty-nine) documents found, after a systematic analysis of the abstracts, 3 (three) approaches were obtained from secondary sources: teacher training - Rodrigues, A. (2020), Rosa, G. S. R. (2019); Ser Docente - Scartezini, R. A. (2017), Sordi, M. R. L. (2019); and cyberculture - Cabero-Almenara et al. (2019), Fernández, A. et al. (2019), Karatas, K. (2020), Sever, I. and Ersoy, A. (2019).

Therefore, with this consolidated reference base and the data produced in field research, we seek to interweave and stress the elements that understood the question of the Being a Teacher and the processes of cyberformation in contemporary universities, indicating clues that pointed out, even in the face of impasses, tensions and limits imposed by cyberculture, discursive teaching practices and

formation environments in contemporary universities. Developments can create processes of cyberformation and modes of subjectivation that emancipate teachers, formation them for a conscious, contemplative, active, autonomous and free life, in the cybercultural social sphere.

In Field Research we produced an analysis of discursive practices, through online conversations with 29 (twenty-nine) participants, whom we call Qualified Informants (QI). They are teachers of undergraduate courses, working in universities in countries belonging to 4 (four) continents (America, Africa, Europe and Asia), producing dialogs in Portuguese, English, Spanish and French, as seen in Figure 3.

Figure 3. *Field Research Map*

The selection of the subjects of the research was carried out following 3 (three) stages of indication: (a) Indicated Participants (IP) by Brazilian university professors; (b) IP by teachers of the first stage; (c) IP by teachers of the second stage, totaling 29 (twenty-nine) online conversations, being: Brazil (6), Colombia (4), Chile (1), Uruguay (1), Ecuador (1), Mexico (1), United States (4), Portugal (3), Spain (2), Africa (5), Asia (1). All met the following criteria: (a) be a teacher in undergraduate courses; (b) have innovative pedagogical practice (according to peers); (c) that responds to the principles of contemporary pedagogies and is contextualized with current formation needs in interface with cyberculture. The QI were contacted via telephone, WhatsApp and/or Messenger and also via email and received all the information regarding their participation in the investigation (Official Invitation and ICF - Free and Informed Consent Form). Online conversations with QI were guided by a thematic guide with 16 (sixteen)

trigger questions and conducted on Google Meet, generating complete recordings of each conversation.

The field produced clues and different meanings about the formation processes experienced by QI.

The analyzes were carried out through the emerging topics composed in the dialog between the data produced with the participants (QI), the theoretical referents and the uniqueness of the researcher. Multireferential analysis, as Martins (2004) says:

[...] a plural reading of such objects is explicitly proposed from different angles and according to different reference systems, which cannot be reduced to each other. Much more than a methodological position, it is an epistemological decision. (Ardoino 1995a, p. 7 in Martins 2004)

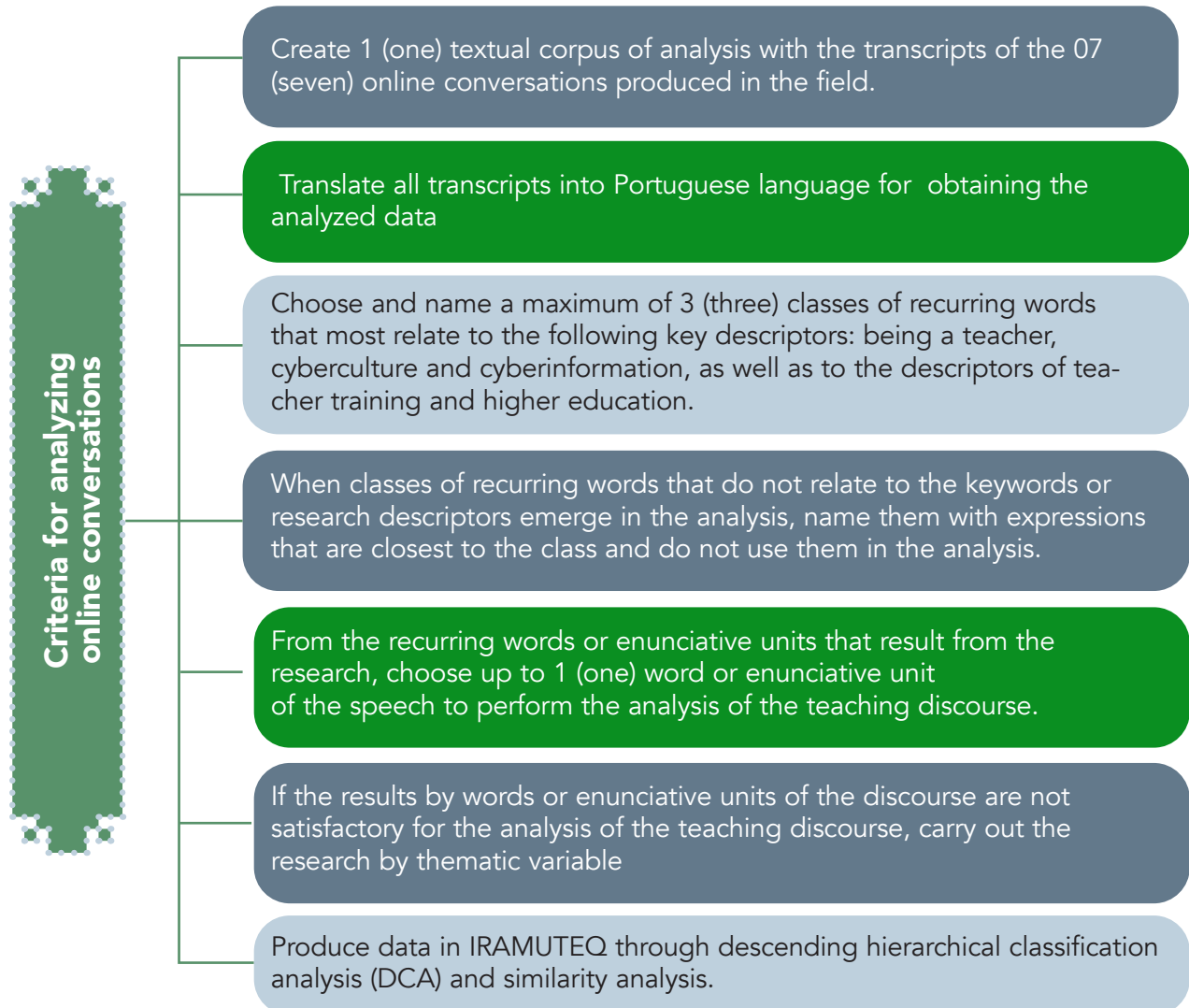
It thus offers elucidation movements, contact with the unsaid, of what is between the lines.

Thus, this article presents an analytical section of online conversations conducted with 7

(seven) QI, in which their systematic analysis was created in the textual analysis corpus of Being a Teacher with the support of the free qualitative analysis software IRAMUTEQ (Interface de R

pour les Analyses Multidimensionnelles de Textes et de Questionnaires). For the systematic analysis of online conversations, we base our analysis on the following criteria, as shown in Figure 4.

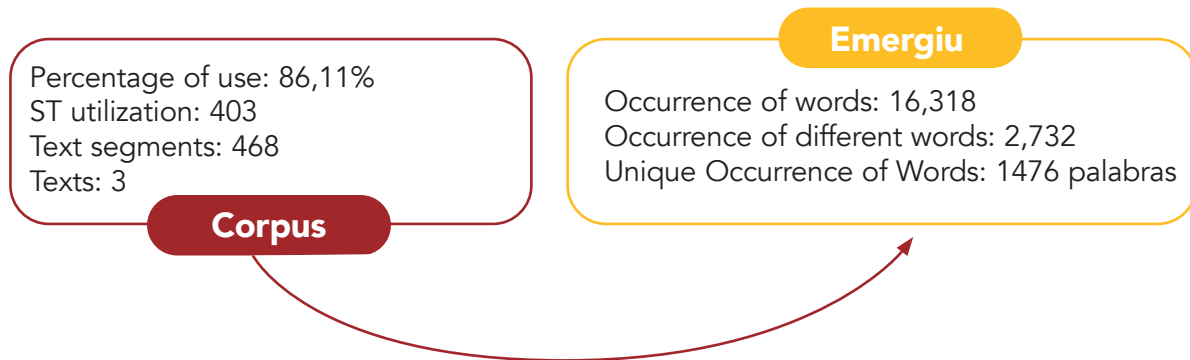
Figure 4. *Criteria for analyzing online conversations*



In this sample, we extracted from the systematic analysis of online conversations 01 (a) enunciative unit of the teaching discourse with greater co-occurrence in extracts of online conversations and we carried out the analysis of the teaching discourse,

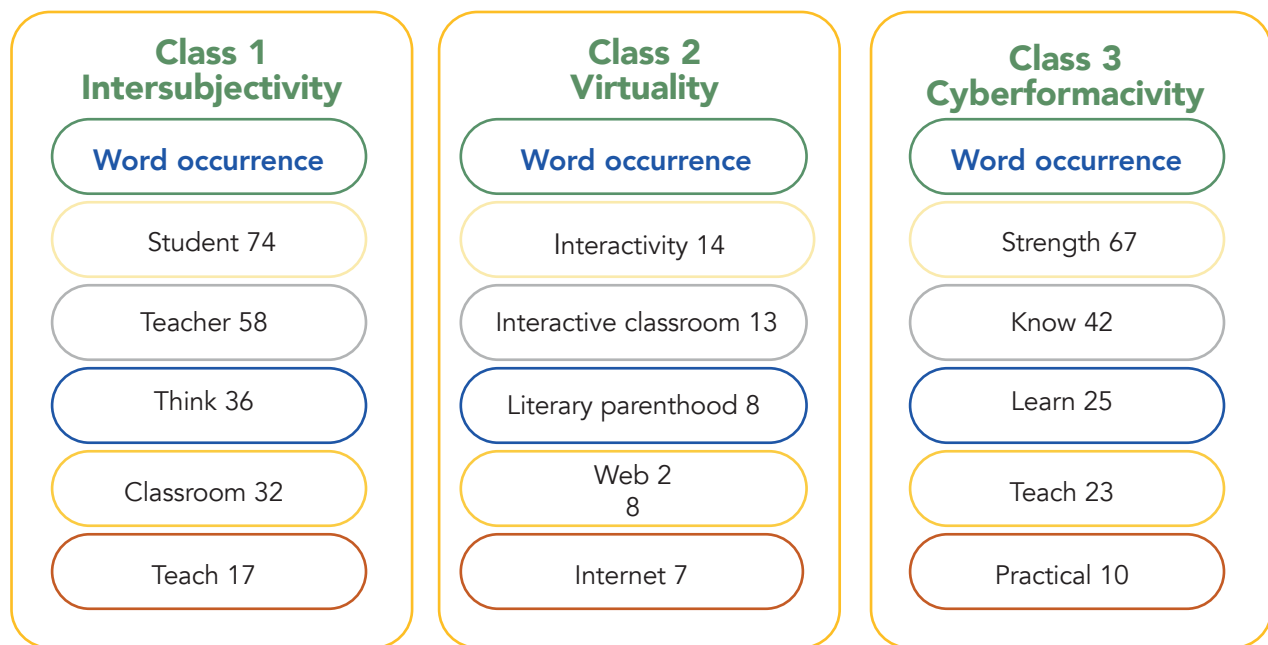
intertwining the statement of the QI with the theoretical framework of the research.

Initially, the statistical analysis carried out by IRAMUTEQ, composed of texts from 07 (three) QI, generated the following variables, as expressed in Figure 5.

Figure 5. *Command line and variables in the textual analysis corpus*

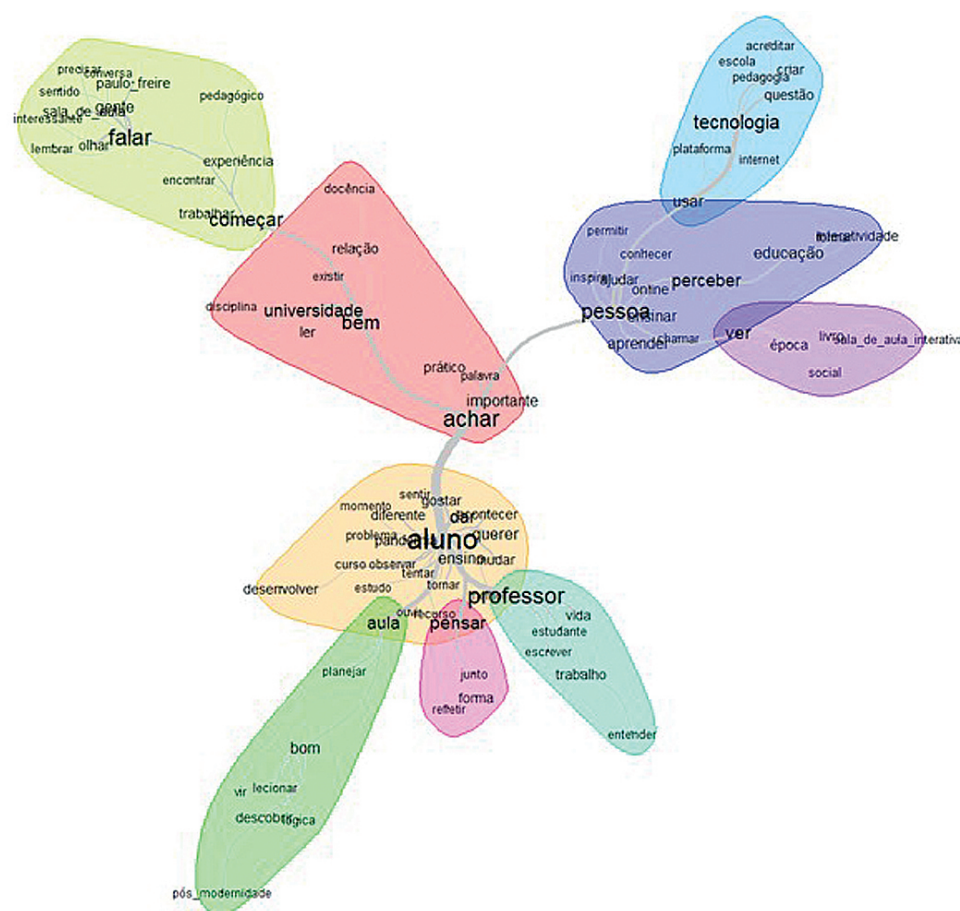
In the second stage of analysis, the Descending Hierarchical Classification (DHC) method categorized 3 (three) Categorical Units of Analysis (CUA) that, through the analysis of the different words contained in each CUA, resulted in CUA 1: Intersubjectivity;

CUA 2: Virtuality; CUA 3: Cyberformacivity. At CUA 1, the subject of this analytical section, we obtained 58 (fifty-eight) co-occurrences of the word “teacher”, as shown in Figure 6.

Figure 6. *Occurrence of words by classes found in the analysis of (DHC) and prevalence, in the CUA 1 of the word “professor” with 58 occurrences*

In the third stage we perform the similarity analysis with 3 (three) blocks of co-occurrences by

enunciative units of the teaching discourse, as shown in Figure 7.

Figure 7. *Analysis of Similarity and Co-occurrence between Words*

The similarity analysis produced three Categorical Units of Analysis (CUA): CUA 1 - Intersubjectivity (graph-orange halo); CUA 2 - Virtuality (graph-dark blue halo); and CUA 3 - Cyberformativity (group-pink halo). The flow of tree rooting present in Figure 7 shows that CUA 1 is the main class and that the branches of CUA 2 and 3 derive from it; and that the co-occurrence of words in CUA 1 has the root “student” with 74 (seventy-four) appearances, but it is followed by the word “teacher” with 58 (fifty-eight) appearances; being, for this analytical section, the enunciative unit of the teaching discourse “teacher” as a constitutive part of the discursive teaching formation, as will be presented in the results below.

3. Analysis and results

Producing an analytical section of the CUA 1 - Intersubjectivity, through the teaching of discursive

practices, we obtained as a result that the constitution of the Being a Teacher occurs both through remembrance and awareness of emotional language (Bruno, 2021) that is co-constructed through lived experiences, as well as through experiences in everyday university teaching that promotes new processes of cyberformation in contemporary universities. The memories, when remembered, make the subject want to repeat them, encouraging their Being a Teacher to become what it is, as stated in the speech of QI1 Bogotá:

QI1 Bogotá: Well, when I was a child, I think a lot of kids want to be teachers, it crossed my mind. [But] [...] in relation to the memory I have, I would say that I visualized this topic very well when I was in college, focusing specifically on university teaching. I’m here because I’m passionate, because that’s what I really like in life, [being a teacher], I think that’s what motivates me.

However, memories may also not indicate a desired path in childhood, but the experienced reality awakens alerts and consolidates other paths, through the provocation of consciousness and the action to follow through elections, as QI6 Salvador states:

QI6 Salvador: Not in childhood. Because my mother was an educator. Then I saw the suffering of being a teacher in public school. When I worked at night and came home late, my grandmother was the one who looked after us. So, I didn't have the desire, as a child, like many children, to be a teacher. I had other desires, I wanted to be an ophthalmologist, I wanted to be a doctor [...] Becoming a teacher and being a teacher was something that was built on this maternal guidance and then I made the decisions consciously. And if you asked me today, would you do anything else? I'd do it all over again. (Free translation)

This process composed of memories, experiences and caused by consciousness are the expression of the consolidation of the processes of emotional experiences that lead us to action, causing changes that constitute us as subjects, as Being a Teachers. Then:

[...] When a certain event occurs, the individual, consciously or unconsciously, assigns an assessment to it, i.e., this event may have a positive or negative value for that individual. At the same time, physiological changes occur in our body – involuntary: bodily; and voluntary: facial, verbal, behavioral expressions... – that, resulting from this state, lead to a predisposition to action [motivation]. (Bruno 2021, p. 48)

This way of knowing ourselves looking back, remembering, makes us understand that we do not walk alone, because our steps are endorsed by others, consolidated through our effective stories in a wide process of human formation and, consequently, of teacher formation, as we can perceive in the voice of QI16 Campina Grande:

QI16 Campina Grande: I don't see that the teacher is just a teacher, who graduated from an institution and that was it. No, he is the result of a whole life story, a whole culture, a whole family education, a whole life story. It is all that makes up this being and then becomes a teacher who goes

to university, etc. Then it is a set of knowledge, experiences [...].

Unlike modernity, which was based on the notion of a subject constituted by linearity, today we have the certainty that we are incarnate subjects (Najmanovich, 2001), in permanent transformation simply because we are alive, that we relate, that we constitute effective stories. Thus, we are beings of memories, experiences, encounters and stories that manage to constitute the Being a Teacher and, consequently, promote new modes of subjectivation and formative principles, as Hooks reminded us:

When I taught my first undergraduate class, I drew on the example of the inspired black women who taught at my elementary school, on Freire's work, and on feminist thinking about radical pedagogy. I had a passionate desire to teach in a different way than I had known since high school. The first paradigm that changed my pedagogy was the idea that the classroom should be a place of enthusiasm, never boredom. (Hooks, 2013, p. 16)

Another emerging aspect in the approaches is that the spaces and formation environments that drive the constitution of the Being a Teacher, where emotions can be more efficiently exposed, also promote the co-authorship of teachers and the consequent actions and processes of cyberformation carried out by them. In this sense, QI2 Rio de Janeiro states that:

QI2 Rio de Janeiro: [...] Pleasure [in the classroom] was not directed, so to speak, at teachers who are dedicated to giving beautiful classes, to delivering good speeches. So, pay attention to what I say: there are teachers who feel gods, give beautiful speeches, and students stay silent absorbing that lovely and very powerful speech. [...] Then I saw, I never felt, say, value in these kinds of classes where one is dazzled by the oratory of the teacher. For me the good class was not the good oratory of the teacher. For me a good class was one that provoked my authorship, my authorship with my colleagues, co-authorship, where we had a horizontal relationship with our colleagues and with the teachers.

The promotion of authorship and co-authorship of teachers (with other teachers or with students) is one of the basic principles for the constitution

of the Being a Teacher, in the middle of university teaching and conducive to the consolidation of what we are calling cyberformation understood as the potentialities of conscious and emancipatory subjectivation of the Being a Teacher before the formative and technological processes, in environments of formation and teaching of face-to-face and online.

The field of research pointed out the importance of recognizing memories, stories, experiences to understand how the Being a Teacher is constituted through co-authorships and promoting processes of sensitizing and emancipatory cyberformation, consolidating, through reflective and critical positions, even with the help of cybercultural technological resources, as stated by QI20 Cairo, QI8 Mexico City and QI7 Tampa:

QI20 Cairo: There was a time in my life when I promised myself that the most important thing I would do in my life would be to keep learning; and then, to always share what I had learned with others. Obviously, teaching is one way to do this. My blog is another way to interact and teach just by talking to people.

QI8 Mexico City: But I think being a teacher for me is a privilege. Because you can interact with different people and be an influence in their lives in some way.

QI7 Tampa: Yes, as I said, I was inspired by this experience of working with adults. I was very impressed with the idea of learning from each person's life experiences. And to see the reality, let's say, the reality of people in the precarious conditions that exist in my city. I think that has always made me think of learning as a process that can really lead to emancipation, and you have the critical tools to think about that critical pedagogy.

The analytical approach of the CUA 1-Intersubjectivity, presented above, made us realize how powerful are the enunciations of the QI to understand how the Being a Teacher is constituted and that by intertwining with the theoretical framework of study they present us with important interpretative possibilities. As we have already suggested, the research is about to be completed and, although some aspects of CUA 2-Virtuality and CUA 3-Cyberformativity appear in the analytical section

above, these will be the subject of new interpretative perspectives that we will present in future articles.

4. Discussion and conclusions

Only by recognizing its status as a Master and creating processes of cyberformation in higher education teaching, we can live in the cybercultural social sphere, overcoming the challenges imposed by the logic of positivity, by surveillance capitalism and control social relations that oppress subjects in cyberculture, which prevents them from "being more" (Freire, 2019) in an "authentic practice" (Ibidem, 2019) in Education. So:

The oppressed, in the various moments of their liberation, need to recognize themselves as men, in their ontological and historical vocation of Being More. Reflection and action are necessary, when it is not intended, wrongly, to dichotomize the content of man's historical way of being. [...] if the moment is already the moment of action, it will become true praxis if the knowledge resulting from it becomes the object of critical reflection. (Freire 2019, pp. 72-73)

Cyberformation processes are marked by memories and the desire to revive them. The place of spaces and environments are central to work the effects, place them in authorships and co-authorships and assume other contours with cyberformation, which is the innovative and disruptive formation process in times and spaces of cyberculture.

It is possible to perceive indelible socio-historical-cultural marks for the constitution of the Being a Teacher. We also know that other characteristics will be present in the enunciations of the teaching discourses, allowing to identify elements such as criticality, dialogicity, connectivity, interactivity and creativity, characteristics that emerge in contemporary university teaching.

For now, we seek to demonstrate how the things said by the QI create clues about the constitution of the Being a Teacher and what processes of cyberformation result from its praxis in the current world, particularly cybercultural.

We start from the premise that it is necessary that, in contemporary universities and teacher formation environments, discursive practices and teaching actions promote cyberformation processes

that awaken transformative, transgressive digital thoughts and practices, accompanied by a critical technological awareness and ethical, political and aesthetic notions that allow the subjects involved to free themselves and become autonomous to live the potential of cyberculture.

In order for us to have an irreversible transformation in university teaching, it is necessary to overcome the conditions of formation and subjectivation that emerged from banking education (Freire, 2019) and implemented, in times of cyberculture, by what we call techno-banking, by educational models that use digital technologies in an instrumental, uncritical way and not favoring the emancipatory formation of the subjects.

Certainly, we have to learn to “be more” (Freire, 2019), the result of cyberformation processes of an “authentic praxis” (Freire, 2019), embedded pedagogies (Hooks, 2013) and open teaching (Bruno, 2021) in formation environments and teaching practices in contemporary universities, which promote the autonomy, consciousness and emancipation of the Being a Teacher and of subjects for effective and contemplative life in cyberculture.

The research path we propose to follow may be long and arduous, but it will certainly invite reflection and reveal new possibilities for Being a Teacher and subject of new processes of cyberformation.

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Universal Design for Learning. A systematic review of its role in Teacher Education

Diseño Universal para el Aprendizaje. Una revisión sistemática de su papel en la formación docente

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Abstract

Universal Design for Learning (UDL) is a developing educational approach that aims to improve learning for all students without having to make significant modifications to the curriculum. This concept has been progressively incorporated into pedagogical debates and education regulations. Along this line, some publications have illustrated the efficacy of UDL in terms of access, participation, and commitment to learning processes, especially in the case of students with disabilities. To the best of our knowledge, this work provides the first systematic review of relevant academic literature that enhances our understanding of how UDL was integrated into teacher education processes. The sample consisted of a total of 88 documents retrieved from the WOS and SCOPUS databases and published between 2008 and 2022, all of which analyze the incorporation of Universal Design for Learning into initial and in-service teacher education processes. The results point to a dominant approach grounded on a problematic association of UDL with students with disabilities or learning difficulties. This narrow view restricts how teachers apply inclusive practices in classrooms, calling for a broader interpretation of UDL. The study contributes to fostering discussions about Universal Design for Learning (UDL) as a whole, including the dominant perspective projected in how it is understood and applied in teacher education and classrooms. It envisions new, more inclusive scenarios for the development of educational approaches that support all learners, fostering a truly inclusive learning environment.

Keywords: inclusion, diversity, inclusive education, teacher education, special education, universal design for learning.

Resumen

El Diseño Universal para el Aprendizaje (DUA) es un enfoque educativo en desarrollo que persigue mejorar el aprendizaje de todo el alumnado sin tener que recurrir a modificaciones significativas del currículo. Progresivamente, este concepto se ha incorporado a los debates pedagógicos y a la normativa educativa más actual. En esta línea, algunas publicaciones han ilustrado la eficacia del DUA en términos de acceso, participación y compromiso con los procesos de aprendizaje, especialmente en el caso del alumnado con discapacidad. Este trabajo presenta, para nuestro conocimiento, la primera revisión sistemática de la literatura que ayuda a comprender bajo qué enfoques se integra el DUA en los procesos de formación docente. La muestra contó con un total de 88 documentos recogidos en las bases de datos WOS y SCOPUS y publicados entre 2008 y 2022. Todos ellos analizan la incorporación del Diseño Universal para el Aprendizaje en los procesos de formación inicial y permanente del profesorado. Los resultados apuntan a un enfoque dominante basado en la vinculación del DUA con los estudiantes con discapacidad. Esta visión restringe la forma en que los profesores aplican prácticas inclusivas en las aulas, lo que exige una interpretación más amplia y comprensiva del DUA. El estudio contribuye a fomentar el debate sobre el Diseño Universal para el Aprendizaje (DUA) en su conjunto, incluida la perspectiva dominante proyectada en la forma de entenderlo y aplicarlo en la formación del profesorado y en las aulas. Además, prevé nuevos escenarios más inclusivos para el desarrollo de enfoques educativos que apoyen a todos los alumnos, fomentando un entorno de aprendizaje verdaderamente inclusivo.

Palabras clave: inclusión, diversidad, educación inclusiva, formación de docentes, educación especial, Diseño Universal para el Aprendizaje.

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1. Introduction

The United Nations (UN) first established the universal right to education in Article 26 of the Universal Declaration of Human Rights (1948). Social changes in later decades created spaces for reflecting on inequalities, highlighting education processes. This led to the emergence of new pedagogic waves and initiatives such as *Education for All* (UNESCO, 1990), *the Salamanca Statement* (UNESCO, 1994) and the *Delors Report* (Delors, 1996), which align closely with the principles of inclusive education. In this context of change, the Center of Applied Special Technology (CAST), formulated, in the 1990s, a concept that strengthened its presence in education: Universal Design for Learning (UDL). The term's origin comes from architect Ron Mace (1941-1998) and his team at the Center for Universal Design (CUD), who proposed a design approach for products, environments, and services that guarantee access to all, without adaptations (Canter et al., 2017; Connell et al., 1997; Griful-Freixenet et al., 2021a). With this approach as the basis, CAST members connected architecture and education, showing that Universal Design could be the foundation for equal, fair education (Rose, 1999). Thus, UDL was conceived as an innovative approach, originally focused on students with disabilities or difficulties, and now generalized to ensure learning access for all stu-

dents, regardless of disability or difficulty (Rodríguez Martín et al., 2020).

Technology also became essential in this initial context, presented as a key mechanism for reducing inequalities, thanks to its potential to make the learning processes more flexible and personalized (Rose, 1999, 2000, 2002). Over time, the concept evolved into a theoretical-practical approach focused on adapting the curriculum rather than individual students (Horn & Banerjee, 2009). In this sense, UDL prioritizes flexible curricula that adapt to the needs of a diverse student body, requiring rethinking of objectives, methods, assessments, and materials from a broader perspective (Cook et al., 2017; Meier & Rossi, 2020; Rao & Meo, 2016; Symeonidou & Mavrou, 2014).

UDL is founded on three core neuropsychological principles grounded in the idea that brain function relies on three different but interconnected neurological networks (recognition, strategy, and affective) that each contribute in the teaching-learning processes (García-Campos et al., 2020; Rose & Meyer, 2002). These principles translate into 9 guidelines and 31 considerations. These are the cornerstone of UDL, oriented towards facilitating their practical implementation in educational environments, which are becoming ever more diverse and heterogeneous (CAST, 2018b). The following table (Table 1) shows these principles and explains their objectives and pedagogic associations concerning their neuropsychological basis.

Table 1. Summary of the components and foundations of UDL

Principle	Objective	Pedagogic question	Neuropsychological basis
Principle 1: The ways of participating in learning processes are based on a wide range of possibilities that facilitate self-management and self-regulation and generate diverse spaces to awaken and capture the interest of students.	Provide multiple means of Engagement.	Why do you learn?	(Affective networks - Emotional intelligence). Associated with the limbic system, they allow the activated cognitive mechanisms to be analyzed and assigned an emotional meaning.
Principle 2: Content is presented through multiple channels that favour diverse avenues for its perception and understanding.	Provide multiple means of Representation	What do you learn?	(Recognition networks - Cognitive intelligence). Associated with the parieto-occipital region, they identify and manage sensory information that allows new information to be recorded, combining it with previous experience and knowledge.
Principle 3: Multiple possibilities must be provided to generate responses, communicate results, promote spaces for interaction and monitor learning processes.	Provide multiple means of Action and Expression.	How do you learn?	(Strategic networks - Executive intelligence). Associated with the prefrontal cortex, they allow actions to be planned, executed, and monitored based on the information captured by the recognition networks.

Adapted from CAST, 2018b

1.1 Expansion and implementation of UDL

UDL emerged from the CAST in the USA and grew under educational inclusion laws (IDEA¹, 1997; NCLB², 2001), which helped promote its foundations. With the publication UDL official guidelines, which outlined its principles and application indicators, UDL gained institutional support in the USA through laws like the Higher Education Opportunity Act (2008), Every Student Succeeds Act (ESSA, 2015), and the Strengthening Career and Technical Education Act (2018). Over time, UDL expanded internationally, with countries such as Canada (2020), New Zealand (2015) or Spain (2020), integrating it into their educational regulations. Concurrently, international organizations, such as UNESCO (2020), also supported its curricular implementation, thus contributing towards its dissemination and integration across different educational systems.

The growth of UDL ideas has also been supported by studies showing high levels of acceptance among both students and teachers (Alharbi & Newbury, 2021; Cumming & Rose, 2022; L. Scott et al., 2015). Along this line, some publications have illustrated the efficacy of UDL in terms of access, participation, and commitment to learning processes (Daley et al., 2020; Marino et al., 2014; Quintero et al., 2022), especially for students with disabilities (Ok et al., 2017).

In recent decades, approaches to education, particularly Inclusive Education, have evolved rapidly. However, it seems that UDL has not progressed as swiftly. In this sense, and despite the fact that more recent definitions emphasize the role of UDL as a paradigm that seeks to improve the learning of all students (Fernández Portero, 2020), the reality is that much of the literature focuses on students with various disabilities or learning difficulties (Armstrong, 2022; Bartz, 2020; Reyes et al., 2022; Van Munster et al., 2019; Wright et al., 2022).

Other studies underline the value of UDL as a mechanism for addressing diversity in classrooms, beyond disability, and integrating an intercultural component within its definition (Andrews & Fouche,

2022; Bartz & Kleina, 2021; Delk, 2019; Quintero et al., 2022). A more critical perspective has emerged, highlighting the importance of social, economic, and political contexts in educational processes. In this sense, some authors (Karisa, 2023; Mehta & Aguilera, 2020) point out that UDL, intrinsically, cannot and should not assume the responsibility for reversing structural inequalities embedded in neo-liberal systems. In the same manner, it is assumed that this framework of inequality is not constructed exclusively according to the concept of disability, but instead, other axes of oppression exist, such as racism or sexism, that demand a re-thinking of equality from an intersectional perspective (Hackman, 2008).

On the other hand, some research finds positive impacts of UDL on academic outcomes (Baumann & Melle, 2019; Rappolt-Schlichtmann et al., 2013; Wilson et al., 2011), while other studies question these benefits (King-Sears et al., 2015; Roski et al., 2021). Authors like Murphy (2021) even call into question the implementation of UDL, due to the lack of scientific evidence, pointing out that “because the effectiveness of this theory has not been proven, there are no grounds for UDL implementation plans to be framed as “evidence-based” decisions” (p. 7).

Therefore, there are many discrepancies in the manners in which to understand or implement UDL (Hollingshead et al., 2022; Lowrey et al., 2017) and due to this, authors such as Capp (2020) invite us to continue researching and delving into this educational approach, from a more critical and open perspective, to delve into its impact on students, classroom practices, and the organization and management of education centres, to better understand the real possibilities and contributions of this concept, and its potential for educational and social transformation.

UDL views student diversity as a natural part of educational reality (Griful-Freixenet et al., 2021a), but this is a challenge for teachers, who, aside from knowing the objectives and contents of the curriculum, are also responsible for guaranteeing access to them for all students under the prism of equality (Scott et al., 2017). In this sense, some studies indicate that teachers often feel unprepared to address such

¹ Individuals with Disabilities Education Act, 20 U.S.C. (2004).

² No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. (2002).

broad demands through UDL, highlighting teacher training as a valuable starting point to improve this situation (Capp, 2017; Fuchs, 2010; Vitelli, 2015).

The growing interest in UDL in the recent scientific literature, its epistemological complexity, and its progressive incorporation into educational curricula, have awakened the need to study the role of educators in this context, by assuming a direct link between educational theory and the implementation of inclusive practices (Sharma, 2018). It is therefore valuable to explore how UDL is articulated within teacher training, examining the perspectives and methods through which educators address UDL, how they interpret its principles, and how this translates into educational practice.

Recent literature underscores the critical role of teachers in transferring UDL knowledge to the classroom, with studies analyzing how UDL training enhances inclusive teaching practices (Courey et al., 2013; Spooner et al., 2007). Nevertheless, although different studies describe different perspectives for addressing UDL, few explicitly characterize these methods, particularly in teacher training. The present article proposes a study aimed at understanding how UDL is contextualized in teacher training by analyzing its representation in scientific literature.

2. Method

This study follows a systematic literature review model, as presented in prior educational research by authors like Sant (2019) and Menéndez-Álvarez-Hevia et al. (2022). First, a sample of scientific works was selected based on a set of predefined and justified parameters, which structured the search and application of inclusion/exclusion criteria. Once the corpus of study was finalized, an analysis was carried out, in which interpretative strategies of reading and analysis were applied. As in the review studies previously mentioned, the aim was to delve into the discursive relationship between the different ideas developed in the texts. The discussion focuses on ways UDL is articulated in studies on teacher training, while also examining the evolution of the UDL concept in schools, teacher training in UDL, and its potential connection to teaching practices.

The search was conducted considering the two databases containing the greatest number of high-impact journals and publications, Web of

Science (WOS) and SCOPUS. In this way, a large spectrum of scientific production associated with the central subject of the present study was sought. The search procedure was divided into 3 phases, which are detailed below:

Phase 1: Initial screening based on inclusion and eligibility criteria and obtaining the first sample (Identification)

The first phase of the search used the terms “Universal Design for Learning” and “Universal Design Learning”. The search terms were delimited to their presence in the title, abstract, and keywords. Additional terms were excluded to allow an initial, broad view of UDL’s conceptual impact in the literature and to yield a manageable number of publications for analysis. This broad approach aimed to reduce the risk of overlooking relevant studies. Aside from these terms, the type of document was established as a parallel inclusion criteria. For this first phase of the study, journal articles and conference papers were selected, excluding book chapters due to accessibility constraints. On the other hand, the date range was set to 2008-2022. With the latter, the aim was to limit the number of results, given that in 2008, the CAST published the first UDL guidelines and implementation guide, which helped in providing global visibility to the concept.

After the application of the corresponding operators, the first search resulted in a total of 1133 documents (SCOPUS = 556; WOS = 577), from which the selection of the final sample was performed.

Phase 2: Selection and construction of the initial sample (Screening).

To facilitate the organization and management of the information, the results were systematized through the use of Rayyan Software, which eases the detection and elimination of duplicate records, the categorization of files, and the process of selection.

The elimination of the duplicates resulted in a total of 780 publications. To outline the results, and to obtain a more reduced and manageable sample, the Conference Papers were eliminated, to focus the search on scientific articles, as more rigorous scientific literature, for a total of 567 results. Afterwards, to more precisely adjust the sample to the area

of study, the Rayyan files were filtered according to the following keywords associated with teacher training: Teacher training, Preservice, Pre-service, Professional Development, Teacher Education, Candidate, Candidates. The introduction of these criteria resulted in a sample of 97 results, which were selected for further examination and analysis.

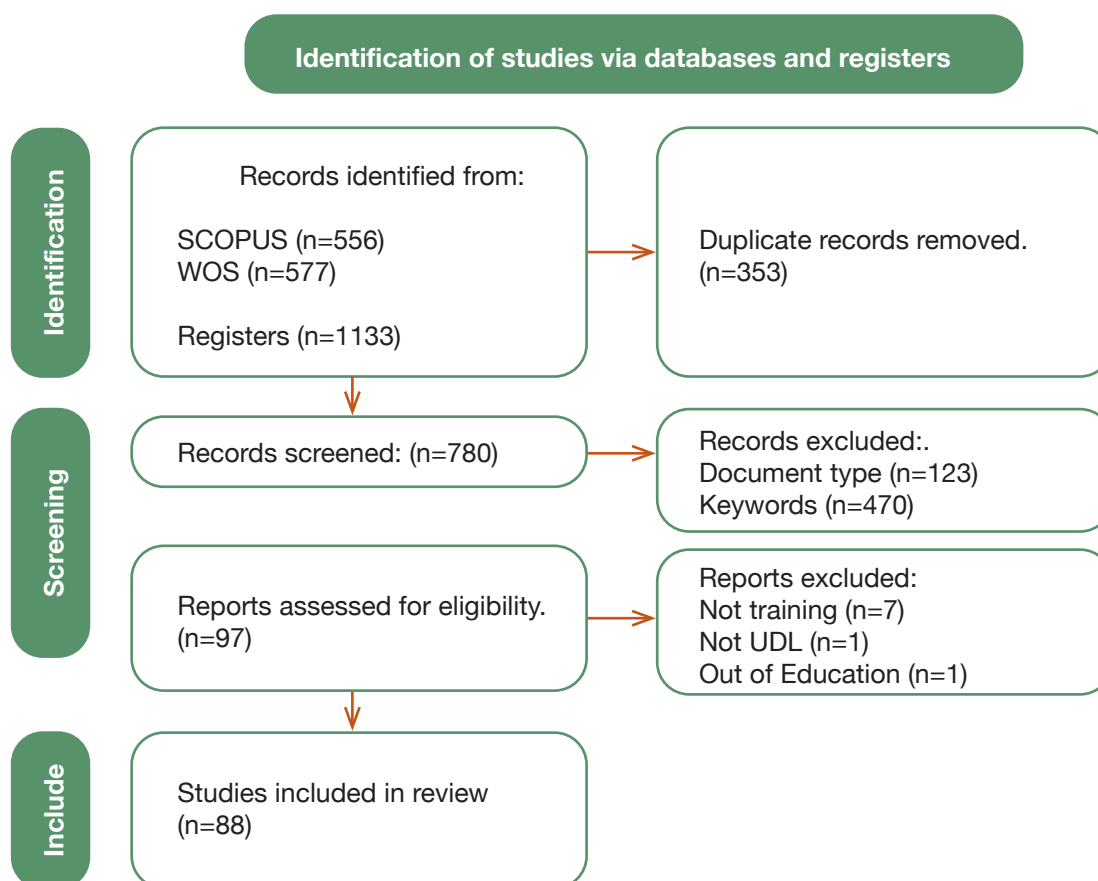
Phase 3: (Included) Final sample (Included)

Lastly, during the reading process, 9 publications were detected which were deemed not appropriate for their inclusion due to diverse motives. In some cases, the research was centred on the role of UDL, but did not allude to teacher training (N=7);

on the contrary, others highlighted the teacher training process without integrating UDL in the article (N=1). Lastly, one of them was framed outside of the limits of the area of education (N=1). Thus, from an international perspective, a final sample of 88 articles was obtained, which addressed the integration of UDL in the processes of teacher training between 2008 and 2022. The information was extracted through the use of the Excel tool, which facilitated its categorization based on the research questions, as well as the review and analysis of the content.

Below, the flow diagram (PRISMA) is shown, which includes all the previously explained phases, as well as the decisions that were taken successively until the final sample was obtained.

Figure 1. Flowchart of the review process



3.1 Results and Discussion

The main objective of the present study is to analyze how UDL is integrated into teacher training processes. Its progressive incorporation into the legislative frameworks and educational curricula demands the presence of teachers who are trained and prepared to guarantee its efficient implementation. Thus, it is indispensable to understand the mechanisms through which UDL is articulated in teacher training processes, both to clarify and systematize the advances made until today, pathways that bridge the gap between theory and practice.

3.2 Current state of UDL in the study of teacher training processes

Studies examining the role of UDL in teacher training processes have increased exponentially since 2019, peaking between 2021 and 2022. In fact, 40% of the selected articles were published during these two years, underscoring a recent surge in interest toward understanding and assessing the impact of UDL in teacher training and exploring methods for its integration.

In terms of geographic distribution, the USA leads in UDL research, accounting for nearly half of the studies. In recent years, UDL has expanded beyond the USA, particularly to Canada and Spain (Benet-Gil et al., 2019; Bradford et al., 2021; Diaz-Vega et al., 2020; Moghaddam et al., 2020), as well as Belgium, Brazil, and South Africa (Griful-Freixenet et al., 2021b; Hayward et al., 2022; Ragpot, 2011; Zerbato & Mendes, 2021). This phenomenon, which progresses along with the recent addition of UDL to institutional documents and education guidelines (UNESCO, 2020; LOMLOE, 2020; ESSA, 2015), could greatly justify the growth in scientific production in this area.

When centring on research objectives, it seems that the main axis of literature that associates teacher training with the Universal Design for Learning is constituted through a fundamentally practical approach. In this way, we find the predominance of quantitative and positivist empirical studies (30), followed by those more qualitative and interpretative (21). To a lesser degree, we find studies that used mixed research methods (11). Of these, most of the studies sought to improve the practice of teaching,

or when applicable, suggested changes in the teaching plans to reach this objective, through studies that investigated the effects of the application of a training program in which UDL was one of the main contents (Ciampa, 2017; Craig et al., 2022b; L. Scott et al., 2022), or the effects of the application of a training program in which UDL was the paradigm that guided the training proposal (Basham et al., 2010; Gutiérrez-Saldivia et al., 2020; Navarro et al., 2016; Trust & Pektas, 2018). Lastly, we find a lower interest in addressing the subject matter from a theoretical perspective (26) (Bradford et al., 2021; Fornauf et al., 2021; Messinger-Willman & Marino, 2010), a phenomenon that contravenes the importance of theory to guarantee successful education practices, especially when dealing with Inclusive Education (Sharma, 2018). It must also be highlighted, in this respect, that no prior systematic reviews were found that examined the role of UDL within the context of teacher training.

Lastly, the analysis revealed a tendency to focus on UDL in the training of teachers who work with students with disabilities or learning difficulties. In this sense, there was a significant number of articles related to the training of Special Education teachers (Basham et al., 2010; Bondie, 2015; Courey et al., 2013; Scott et al., 2015, 2022). In cases where training fell on General Education teachers, there was a significant sample of publications that explicitly alluded to the intervention with disabled students or those with learning difficulties (Hayward et al., 2022; Hutchison et al., 2022; Lee & Picanco, 2013; Mady, 2018; Navarro et al., 2016). Some studies addressed both profiles at the same time, though most were primarily focused on interventions for students with a disability or learning difficulties (Barrio & Hollingshead, 2017; Lee & Griffin, 2021; Misquitta & Joshi, 2022).

3.2 Approaches of UDL in the literature that addressed teacher training

Generally, much of the literature supports that UDL was developed under principles established for Inclusive Education (Canter et al., 2017; Cook et al., 2017; Rao & Meo, 2016). This systematic review, however, reveals divergent perspectives on UDL's interpretation. Thus, the results from the review

show three different approaches to conceptualizing UDL within teacher training processes.

3.2.1 Clinical approach

This approach builds on the initial UDL principles (D. Rose, 1999). Within teacher training, UDL is conceived as an efficient tool for addressing diversity in education centres, and ensuring equal learning opportunities, primarily defined in terms of *disability/ability*. UDL interventions in this framework typically start with a medical diagnosis, focusing primarily on students with disabilities or learning difficulties. Consequently, there is a tendency toward studying Special Education teacher training, both initial (Basham et al., 2010; Bondie, 2015; Courey et al., 2013; Haley-Mize & Walker, 2014) and permanent (Agostini & Renders, 2021), or both at the same time (Courey et al., 2013; Scott et al., 2015, 2022; Zerbato & Mendes, 2021), consolidating this perspective further. The clinical approach is manifested using a double approach: one of them, which will be denominated *explicit model*, evidently prioritizes the implementation of UDL with students who are disabled or who have learning difficulties, insisting on their diagnosis, and in that the benefits have a direct impact on students with a specific need (Elder Hinshaw & Sakalli Gumus, 2013; Lee, 2018; McKenzie et al., 2023). The *implicit model*, on its part, highlights the value of diversity and the positive impact of UDL on the entire student body, although it continues to point to more vulnerable students in terms of ability (Frey et al., 2012; Hayward et al., 2022; Lee & Picanco, 2013; Unluol Unal et al., 2022).

This creates a certain discordance with the inclusive approach, on which UDL is based, resulting in a gap between the principles postulated in theory and their practical implementation.

In terms of research, the clinical model fundamentally responds to quantitative and positivist research studies (Courey et al., 2013; Craig et al., 2022b, 2022a; Hromalik et al., 2021; Lanterman & Applequist, 2018; Westine et al., 2019). The objective consists of obtaining data that is objective, quantifiable, and generalizable to the entire population, without delving into their causes (Alharahsheh & Pius, 2020; Ramos, 2015). Even in the mixed studies, a certain tendency towards the quantification of the

results was observed (Barrio & Hollingshead, 2017; Corbin Frazier & Eick, 2015; Lee & Griffin, 2021).

3.2.2 Diversity approach/social approach

Another approach under which UDL is presented, although to a lesser degree, is that we refer to as the plural model or diversity model. Here, UDL is viewed as an appropriate approach to addressing the demands of an inherently diverse student body (Moghaddam et al., 2020). Diversity is conceived as a positive phenomenon (Benet-Gil et al., 2019), from an optimist perspective, without deeply exploring its potential implications in terms of social and educational vulnerability (Bradford et al., 2021). This model proposes a broader perspective on diversity, expanding the focus beyond disability (Gentile & Oswald, 2021), and recognizing that diversity is explained by multiple factors, among which we find the sociocultural component, which greatly stands out (Bartz & Kleina, 2021; Delk, 2019). In this sense, the paradigm is directly related to the Inclusive Education approach, promoted by Booth and Ainscow (2015), which highlights the importance of guaranteeing the presence, participation, and progress of all students, by removing barriers to learning. Additionally, teacher training is extended to all teachers, beyond the specialists, regardless of the educational level at which the training is directed.

In this case, empirical studies show a balance between quantitative and qualitative perspectives, with interpretative studies being slightly more prevalent (Bartz & Kleina, 2021; Glas et al., 2023; Moghaddam et al., 2020). Likewise, a proportional increase was observed in theoretical and reflective studies, concerning the clinical model (Attwood, 2022; Flood & Banks, 2021; Reinhardt et al., 2021; Vininsky & Saxe, 2016), in which they have a lesser impact.

3.2.3 Critical approach

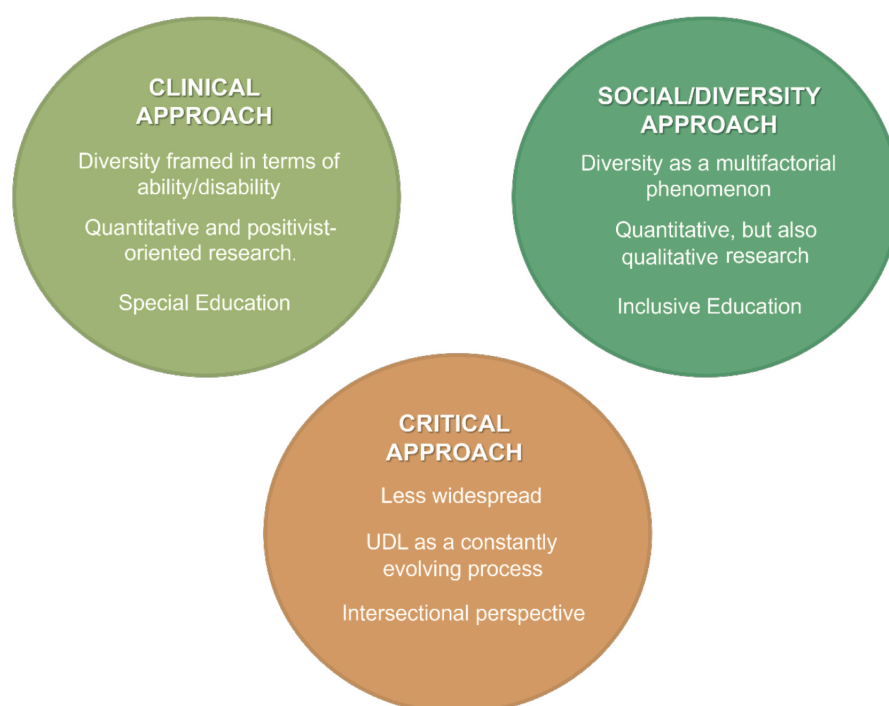
The critical approach of UDL in teacher training processes comes from a fundamental premise: disability, understood from its most widespread approach, is not the only risk factor for socio-educational exclusion. With this respect, the post-structuralist view provided by *Critical Disability Studies* provides a framework of reference to understand UDL

from a broader perspective, while promoting teacher training aimed at transforming and building a more equitable education system (Fornauf & Mascio, 2021). For this, two main issues are proposed. The first implies rethinking the guidelines and criteria under which the concept of ability/disability is delimited, as well as analyzing the tensions that emerge across this spectrum (Goodley, 2016; Sanmiquel-Molinero, 2020). The second requires adopting an intersectional perspective on diversity, recognizing that multiple factors come together in shaping identity and educational participation (Annamma et al., 2013; Hackman, 2008; Liasidou, 2014). This idea was summarized by Alim et al. (2017) when pointing out that exclusion mechanisms such as racism and ableism must be understood together, “otherwise, each separate system of oppression will take each other’s place to accomplish the same result of marginalizing particular children” (p. 8). In this sense, teachers must be trained on competencies that will allow them to identify the mechanisms of structural inequality in the educational system, and the multiple channels of oppression that extend beyond disability, including behaviorism, ableism, gender identity or racism.

On the other hand, the critical approach of UDL in the training of teachers presents the paradigm as a process rather than a fixed state. This perspective implies that UDL should be subject to continuous reform and change. In this sense, UDL should not be viewed as an absolute or unchallengeable truth, on the contrary. The objective of UDL under a critical approach seeks to question its epistemological principles and their relationship with hegemonic norms of the education system that are found under the protection of systems of oppression. As Fornau et al. (2021) note, this approach continuously reconstructs the concept by questioning the role of the *expert*, and examining to what extent this role reflects a structurally unjust social system that may perpetuate these dynamics within an educational context. In this line, we must ask if schools are truly responding to the diversity, and if the resources destined towards UDL are adequate for incorporating UDL effectively and for breaking away from the prevailing mechanisms of exclusion and discrimination.

All approaches and their main characteristics are summarized in the following figure to synthesize and visually present the information.

Figure 2. *Emerging approaches*



UDL emerging approaches

4. Implications of the approaches to teacher training

The results show that there are many ways to understand and incorporate UDL principles in teacher training. There is an open discourse in which various interpretations of the concept converge (Rao et al., 2019), highlighting the challenges of the experts when systematizing its conceptualization (Hollingshead et al., 2022; Lowrey et al., 2017).

In any case, a clinical approach predominates, viewing UDL primarily as a tool for addressing diversity in terms of disability and learning difficulties. In this sense, empirical and positivist studies are prominent, focusing on the effectiveness of integrating UDL in teacher training processes, especially for those tasked with meeting the needs of students with disabilities. This intention of generalizing the results comes face to face with the nature of the education context, a complex and diverse reality with a multitude of individual particularities that cannot always be studied as a whole. Likewise, the dominance of the clinical model delimits the educational scenario within a healthcare sphere that is at risk of driving UDL away from its pedagogic aim: to ensure universal access to the curriculum, and ultimately, to leverage learning as a means of social advancement.

It is important to consider that the predominance of one discourse over another depends on dominant power mechanisms, which strongly influence how UDL is incorporated into teacher training programs and, consequently, its direct implementation in the classroom. Nonetheless, it is important to highlight that the variety of discourses fosters new opportunities for debate, new horizons of improvement, and new ways to reflect on the application of the paradigm. This opens doors to the construction of new perspectives that can help complement and enrich prevailing assumptions within the current educational context.

5. Conclusion

This systematic review allowed us to describe the evolution of the UDL concept within teacher training processes. It also allowed us to determine the current state of research, and to discover what models or approaches facilitate its understanding when speaking about teacher training.

The literature describes UDL as a model addressed in teacher training from diverse perspectives. Among these, the clinical approach predominates, emphasizing UDL's role with students who have specific needs, primarily related to disabilities. An alternative approach has emerged that considers UDL an ideal framework to tend to diversity, understood as a positive (Benet-Gil et al., 2019) and multifactorial (Bartz & Kleina, 2021) phenomenon, which strongly emphasizes on contextual factors, hence the social approach. Lastly, a more critical perspective has arisen, which seeks to repeatedly revise its principles, and utilize UDL not as the sole tool, but as a valuable one, when dealing with, in an intersectional manner, the system of structural oppression that results in mechanisms of educational exclusion and vulnerability (Fornauf et al., 2021; Fornau & Mascio, 2021).

Rather than favoring a specific approach to understanding UDL, the article aims to foreground for the first time the broad variety of ways that UDL can be designed to be introduced to teachers and to acknowledge how such choices inevitably follow teachers into classrooms. The work contributes towards promoting the debate on UDL in general, and on the hegemonic view that is projected in the manners in which to understand and implement it, in both teacher training and the classrooms, conceiving new scenarios for the construction of new more inclusive educational proposals.

As a limitation of the study, even though the systematic review process was performed with a detailed and rigorous procedure, the results and the discussion were primarily interpretive. This may introduce an ideological component that could lead to a biased view of the context. Another limitation is that only 50% of the articles included in the sample correspond to publications over the last 6 years. However, it should be noted that the aim of the review was not only to capture the most recent contributions but also to study the evolution of approaches to UDL in teacher education. Thus, *Clinical* and *Diversity* approaches have been present from the earliest publications to the most recent ones, showing that there has been little overall change in perspective. On the other hand, the results enabled us to define three discourses that can be used as a starting point for understanding how UDL is understood in the processes of teacher training.

and the implications this may have in its practical implementation. However, the proposal does not delve into the relationships or overlaps that may be found between the approaches, which may result in the emergence of other complementary perspectives. Future research should explore the relationships between the different approaches to identify potential synergies or tensions that could enrich the understanding of UDL.

Teacher education has a direct impact on teacher practice. Understanding the approaches under which UDL is constructed allows us to identify and narrow down its implementation paths and redesign training processes to ensure that UDL is applied according to the educational context. This will facilitate the fostering of inclusive practices that address the needs of all learners and promote equitable learning environments. Ultimately, this research can serve as a starting point for the analysis of these approaches beyond teacher education. Thus, the door is open to future research to see if these same findings can be transferred to other settings, such as primary and secondary education or non-formal contexts.

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Restorative circles in Secondary Education: a systematic review

Los círculos restaurativos en la educación secundaria: una revisión sistemática

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Abstract

Restorative circles are practices that make it possible to manage conflicts by involving and promoting the active participation of all the actors involved. Through words and dialogue, members come together to reflect on the conflict and its consequences, in order to recover the victims, reconcile the parties and promote coexistence. Despite the conception of circles as good conflict resolution strategies in educational institutions, the benefits in secondary education are unknown. The objectives of the systematic review were: (1) to identify and analyse the studies that present the implementation of restorative circles in secondary schools, (2) to know their benefits and (3) to propose elements of improvement for their study. The methodology was based on the PRISMA recommendations, using the WOS, Scopus, ERIC and Dialnet plus databases. Fifteen research studies were identified. The results show benefits for pupils such as the creation of safe spaces, the fostering of positive relationships and the development of communication and emotional skills. Benefits were found for teachers, educational institutions and the community. It is concluded that restorative circles bring benefits to all members involved and underlines the need for further research and longitudinal studies to deepen the understanding of their impacts in educational settings.

Keywords: conflict resolution, intergroup relations, educational systems, secondary education, educational professionals, conflict research.

Resumen

Los círculos restaurativos son prácticas que posibilitan gestionar los conflictos, implicando y promoviendo la participación activa de todos los agentes involucrados. Mediante la palabra y el diálogo, los miembros se reúnen para reflexionar acerca del conflicto y de las consecuencias que se derivan, con el fin de recuperar a las víctimas, reconciliar a las partes y favorecer la convivencia. A pesar de concebir los círculos como buenas estrategias de resolución del conflicto en las instituciones educativas, se desconoce cuáles son los beneficios en la educación secundaria. Los objetivos de la revisión sistemática fueron: (1) identificar y analizar los estudios que exponen la implementación de los círculos restaurativos en centros educativos de secundaria, (2) conocer sus beneficios y (3) proponer elementos de mejora para su estudio. La metodología se basó en las recomendaciones PRISMA, utilizando las bases de datos WOS, Scopus, ERIC y Dialnet plus. Se identificaron quince investigaciones. Los resultados evidencian beneficios para los alumnos como la creación de espacios seguros, el fomento de relaciones positivas y el desarrollo de habilidades comunicativas y emocionales. Se encontraron beneficios en el profesorado, las instituciones educativas y la comunidad. Se concluye que los círculos restaurativos aportan beneficios a todos los miembros implicados y se subraya la necesidad de realizar investigaciones adicionales y estudios longitudinales para profundizar en la comprensión de sus impactos en los entornos educativos.

Palabras clave: solución de conflictos, relaciones entre grupos, sistema educativo, enseñanza secundaria, profesionales de la educación, investigación sobre los conflictos.

1. Introduction

Restorative practices developed in the United States and rooted in ancient indigenous societies start with restorative justice (Alberti & Boqué, 2015). A typology of justice that proposes a different way of promoting social discipline, avoiding the punitive model and exclusion and involving all participating agents to promote reconciliation with the community, the recovery of victims and the assumption of responsibility of the aggressor (Coleman, 2023).

Parker and Bickmore (2021a) argue that restorative practices have theoretical foundations based on Freire's dialogic action and Rosenberg's (2015) nonviolent communication. Smith et al. (2018) and Winn (2013) complement their arguments and say that this type of practices is a way to promote learning, facilitate prevention and promote a management of conflicts from responsibility, community and active listening with the ultimate aim of promoting coexistence.

The incorporation of restorative practices in schools is relatively recent and uneven across countries (Daly, 2000; Wood & Suzuki, 2016). In 1977, the International Institute of Restorative Practices (IIRP) was created; however, it was not until 1999 that its training was expanded. It was from this date that this body began to develop a framework of understanding to expand the model both practically and theoretically (Watchel, 2013).

Currently, restorative practices are applied in different contexts: social services, counseling, youth, work centers, faith communities and in education (Rea-Rubiano, 2023).

Different types of practices are identified, although restorative circles are the most visible formal activities in academic literature (Lodi et al., 2021). Circles, also known as word circles, dialog circles or proactive circles, is a practice that provides people with the opportunity to speak and listen to each other in a climate of security, equality and respect (Watchel, 2013).

According to Barter (cited in Dzur, 2017), restorative circles are a way of talking about conflicts, where people gather, both those who were part of it and those who were affected indirectly. Their will is to reflect on the conflict, the consequences that arise and the influence of behavior on management and resolution (Penton & McNair, 2021).

One of the requirements of the circles is to start from the group and work on principles and values such as trust, commitment, group relevance, equality and responsibility, from a collaborative construction of knowledge (Hulvershorn & Mulholland, 2018).

Watchel (2013) indicates that there are two different ways to use the circle: proactive and reactive. The proactive strategy aims to develop relationships and generate community; and the second is understood as a response to the management of misconduct, problems or conflicts for reconstruction.

Regardless of their use, restorative circles are based on five foundations (Zehr, 2015): (1) correcting mistakes, (2) involving people who have a legitimate interest in the situation; (3) using processes in an inclusive and collaborative manner; (4) focusing on the harms and consequent needs of victims, offenders and communities; and (5) addressing the consequences resulting from the harms caused in the conflict (Chiramba & Harris, 2020).

The scarcity of review studies that address restorative circles in secondary education and the novelty in their study (Lodi et al., 2021; Weber & Vereenoghe, 2020) raise the need for this work aimed at knowing the benefits of those who participate in these practices, focusing on secondary education.

Therefore, the objectives of this work are: (1) to identify and analyze the studies that explain the implementation of restorative circles in secondary schools; (2) to know the benefits they bring to the members involved; and (3) to propose elements of improvement for the future study of the circles in these centers.

2. Methodology

This systematic review shows, in a synthetic and updated way, the different investigations in relation to the implementation of the restorative circles in secondary education centers. A systematic review of the bibliography was carried out following the PRISMA [Preferred Reporting Items for Systematic Reviews and Meta-Analyses] statement (Page et al., 2022; Rethlefsen et al., 2021). The PRISMA statement, which is made by guidelines, consists of 27 elements and a flowchart. Studies such as Urrútia and Bonfill (2010), establish a table with seven sections to distribute the 27 elements to be considered, provi-

ding a detailed explanation of relevant aspects related to the methodology and the systematic review procedure. In addition, these authors consider taking into account four conceptual aspects for conducting a systematic review: (a) the iterative nature of the process of developing a systematic review, (b) the conduct and publication of a research study are distinct concepts, (c) the assessment of the risk of bias at the level of the studies or of the results, and (d) the importance of biases related to publication. At present, it is considered the most optimal procedure to perform systematic, descriptive reviews and

meta-analysis (Vidal-Martí & Ruiz, 2024). Its purpose is to gather the available scientific evidence through an exercise of systematization of information, providing quality and making the research process visible in a precise, clear and transparent way (Reyes, 2023; Sánchez-Serrano et al., 2022).

The databases used for the search were Web of Science (WOS), Scopus, ERIC and Dialnet plus. The search strategy was the combination of keywords and Boolean terms, following the same procedure in all the databases consulted (see table 1).

Table 1. *Search Results*

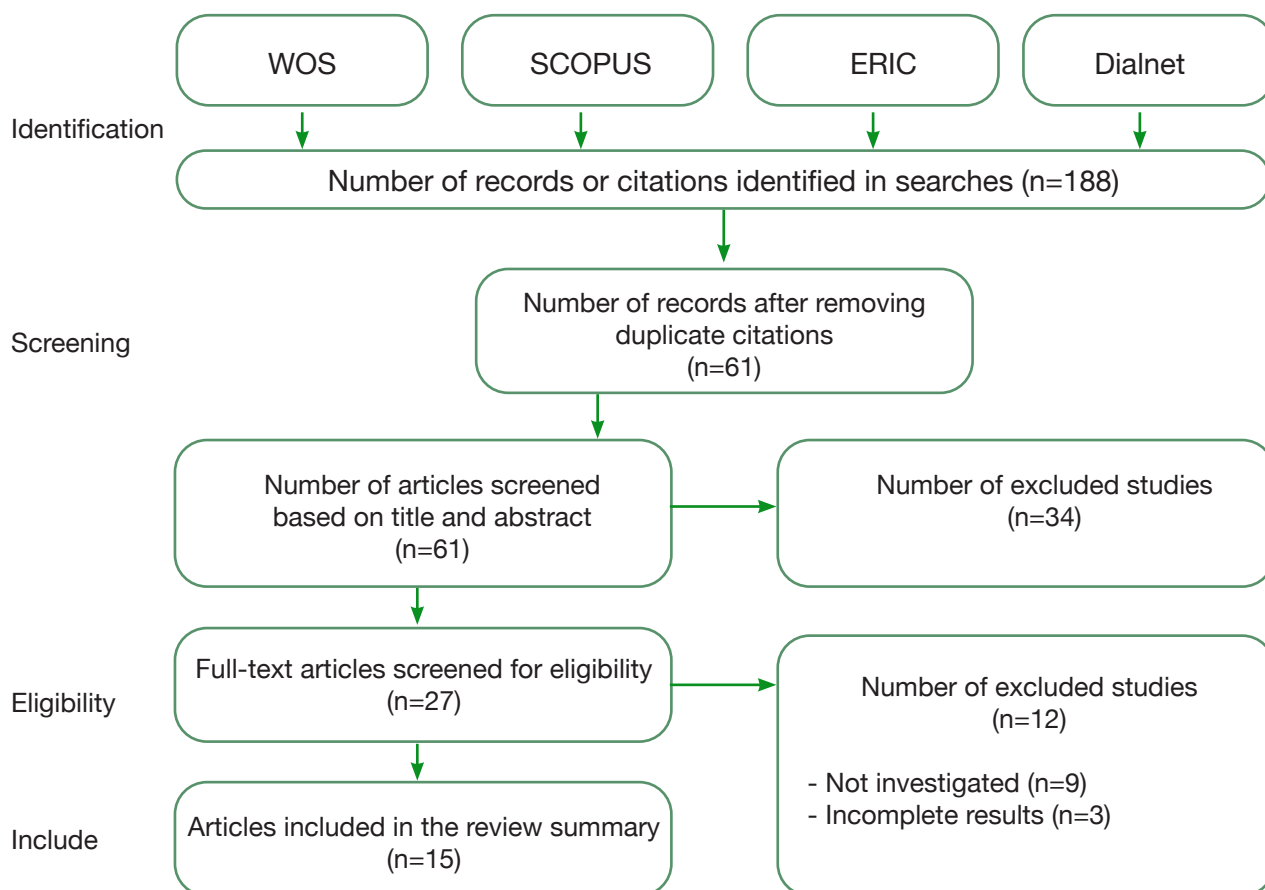
	WOS	SCOPUS	ERIC	Dialnet	
Circles AND restorative justice AND school AND adolescents	5	2	3	3	
Circles AND restorative approach AND justice AND high school	2	3	9	1	
Circles AND restorative AND justice AND high school	5	3	14	0	
Circles AND benefits AND restorative justice	6	17	2	2	
Circles AND benefits AND restorative justice AND adolescents	2	2	0	0	
Circles AND restorative approach AND educational AND adolescents	2	0	2	0	
Restorative justice AND circles AND High school	3	3	14	1	
Proactive circles AND restorative justice AND high school	0	0	4	0	
Circles AND secondary school AND conflict resolution	2	1	13	2	
Restorative AND circles AND school AND secondary	5	4	19	4	
Circles AND Restorative AND secondary school	3	4	19	2	
Total	35	39	99	15	188

There were three inclusion criteria: (1) scientific articles describing the implementation of restorative circles in high schools, (2) published from 2000 to December 2022, and (3) published in English or Spanish. The four exclusions: (1) books, minutes, news articles and letters to editors; (2) articles that dealt with restorative circles and practices in contexts other than high schools; (3) in a language other than English or Spanish; and (4) not having access to the full publication.

In the initial search, 188 results were obtained from the databases. As established in the protocol, two screenings were carried out to select the revised documents. The first was to eliminate duplicate documents and all those that were not the subject of

research. 127 documents were excluded. The second screening consisted of a first reading of the titles and abstracts of the 61 selected documents. Thirty-four documents were rejected because they did not meet the inclusion criteria and did not meet the objectives of the study. In case of ambiguity, it was decided to include the publication in the following screening. The 27 documents screened were read in full. Twelve documents were excluded: (1) studies that were not the subject of the research or (2) the results were incomplete.

The Flowchart outlines the search and selection strategy to determine the eligibility of the documents included in the review (see Figure 1).

Figure 1. *Bibliographic search strategy according to PRISMA*

3. Results

3.1. Description of selected studies

Of the 15 studies analyzed, the oldest dates from 2014 and the most recent is from 2022. The USA studied the phenomenon the most in ten documents, Canada in two, Spain in two and South Africa in one (see table 2).

If the objectives are analyzed, 11 documents present experiences where its implementation is analyzed and in four, although the experience is explained, there is the will to make visible that circles, along with restorative practices, help to mitigate social inequalities. Three studies (Farinde-Wu et al., 2022; Schumacher, 2014; Skzypek et al., 2020) focus on inequalities centered on girls of color and one (Kervick, 2019) on young people with disabilities and of color.

With regard to data collection, 15 documents use interviews for this purpose. Only three of the 15 documents provided an explicit number of participants (Farinde-Wu et al., 2022; Reyneke, 2020; Wang & Lee, 2019); the remaining 12 did not. All the studies analyzed are carried out in urban environments and, although not explicitly detailed in the documents, all focus on socially disadvantaged territories or with a population with a high level of social vulnerability due to economic and social issues.

3.2. Findings from the reviewed studies

The studies provide insight into the benefits of restorative circles. To present the information organized, the data were grouped based on four themes. Specifically, the topics are the benefits of restorative circles in relation to the agents involved: (1) students, (2) teachers, (3) educational institution and (4) community.

Table 2. *Description of studies included in the review*

Authorship	Objectives	Main results	Implications
Schumacher (2014)	(1) To describe a study of 12 weekly conversation circles, organized under a program of restorative practices in an urban high school with 60 adolescent girls for two years.	(1) The results showed that conversation circles provided a safe space for adolescent girls to help each other. (2) They allowed to improve listening skills, empathy, anger control and greater self-efficacy.	(1) Conversation circles enable the development of socio-emotional and relational literacy skills.
High (2017)	(1) Analyze a cost-effective plan of implementation of restorative practices that focuses on the collaboration of volunteers and teachers to introduce a proactive and key practice, being one of the practices in the classroom circles.	(1) Restorative circles are an effective means of transforming school communities, promoting and honoring the dignity of students.	--
Smith et al. (2018)	(1) Describe how Health Sciences High and Middle College proactively use restorative practices to build relationships of trust.	(1) Different conditions are identified for building trust relationships. (2) They help to promote relationships of trust between peers, between adults and between adults and students. (3) Relationships of trust are conducive to a good learning environment.	--
Alberti and Zabala (2018)	(1) To publicize the deployment of the global restorative approach made to the Salvador Seguí Institute in Barcelona during the 2017-2018 academic year	(1) A significant decrease in cohabitation interventions. (2) Facilitating elements of the deployment of the approach were identified, where the management team and the members of the Tutorial Action Plan were involved. (3) The necessary evaluation and specification of an expert follow-up was established.	(1) Conflict is inherent to human nature and an approach based on different restorative practices humanizes and improves relationships, communications and breaks myths.
Silverman and Mee (2018)	(1) Explore how to model the restorative practice of community circles in future teachers of young adolescents.	(1) Future teachers were involved in their learning process in seminars where restorative circles were implemented.	(1) The powerful effect of restorative practices among future teachers and on the connection with young adolescents.
Kervick et al. (2019)	(1) Know if the implementation of restorative practices such as circles helps mitigate educational inequalities of young people with disabilities and of color.	(1) The results show that the implementation of such practices helps to mitigate inequalities. (2) They offer practical tools and strategies so that teachers can implement restorative circles in students who are at the first level of educational attention to diversity according to the DUA (inclusion, accessibility).	(1) Punitive discipline models should be moved away from schools because they continue to marginalize students with disabilities and students of color.
Wang and Lee (2019)	(1) Examine how educators in four urban schools (two primary, one high and high) used receptive circles.	(1) Many of the educators reported that receptive circles can have a positive impact on students' attitudes and behaviors.	(1) The need for training and support to help teachers gain confidence and master the use of receptive circles.
Skrzypek et al. (2020)	(1) Explore the experiences of restorative circles with urban, low-income, predominantly black high school students, paying attention to the diversity of their experiences by grade level, race, and gender.	(1) Boys expressed that circles supported their problem-solving skills in a non-violent manner more than girls. (2) Black girls expressed less effectiveness of circles to help them solve problems without violence and learn from their behavior. (3) The qualitative results highlighted the benefits of circles in promoting communication, expressing thoughts and feelings, and adopting perspectives to take advantage of learning opportunities.	(1) The importance of approaching restorative practices from an intersectional perspective and integrating young people's perspectives into programming.

Authorship	Objectives	Main results	Implications
Marcucci (2021)	(1) Analyze why restorative justice practice circles can be transformative mechanisms for students and high schools.	(1) The formalized rules governing restorative circles change the interaction patterns of schools with a predominantly black population in the US. (2) The interaction patterns that are created in the circles generate group solidarity and individual emotional energy.	(1) The benefits provided by restorative circles have implications for both students and institutions
Parker and Bickmore (2021a)	(1) It provides a nuanced understanding of how teachers implement their professional learning in peace circles. (2) Know how the perspectives and identities of students are assumed through dialogic pedagogy.	(1) The implementation of dialogic pedagogical processes is a challenge for teachers. (2) Students express that they feel more included and, in particular, those who feel more marginalized say so. (3) Students are more likely to actively participate in ways that lead to greater social and academic success.	(1) More research is needed on how to improve the implementation of restorative circles.
Parker and Bickmore (2021b)	(1) To present an experience where the circles were implemented in an intermediate health curricular unit	(1) The teacher's pedagogical choices conveyed values and facilitated critical dialog. (2) The social and cultural capital of the students impacted on how certain topics were discussed.	--
Prutzman et al. (2022)	(1) Contribute to fill a gap in research, presenting a case study, which explains a transformation of a middle and urban school through restorative practices.	(1) The results show that the implementation of a program facilitated the commitment to receive a dignified and respectful treatment between students and between students and teachers. (2) Restorative practices helped change the perspective and practice of the entire school community: from punitive to restorative.	(1) More research is needed for setbacks like COVID.
Reyneke (2022)	(1) Provide guidance to improve resilience and prevent challenging behaviors in the classroom.	(1) Teachers could improve their teaching strategies linked to the principles of belonging, mastery, independence and generosity. (2) Teachers have the most difficulty developing mastery	(1) The prevention of disciplinary problems in the classroom from restorative practices should be investigated.
Farinde-Wu et al. (2022)	(1) To better understand the phenomenon of school surveillance and the expulsion of black girls from school. (2) To investigate whether restorative circles can be a measure to minimize fights, which are the result of a situation of hypercriminalization and discrimination.	(1) A different type of school discipline applies to black girls than other students. (2) Improvements in behavior and fewer expulsions are identified when restorative practices are applied. (3) Improved understanding in late students.	(1) Restorative practices provide a different way to address school discipline in black girls.
Mas-Expósito et al. (2022a)	(1) Expose and value an experience of word circles	(1) Word circles facilitate the knowledge of the other. (2) They allow the work of socio-emotional competences and values.	(1) It is necessary to advance in the knowledge of the word circles and their application in the school context.

3.2.1 Benefits to students

The benefit of circles to students is studied in the 15 studies reviewed. Eleven different types of benefits are identified that were addressed by diffe-

rent authors and, in turn, three more benefits are added, only evaluated in a single study.

Table 3 presents the benefits presented by different studies to facilitate their exposure.

Table 3. *Benefits of circles to students based on authorship*

Benefits for students	Authorship
Create spaces where participants feel safe	Alberti and Zabala (2021) High (2017) Mas-Expósito et al. (2022a) Silverman and Mee (2018)
Enable healthy peer relationships	Marcucci (2021) Parker and Bickmore (2021a) Reyneke (2020) Schumacher (2014) Silverman and Mee (2018) Skrzypek et al. (2020)
Encourage dialog between peers and teachers	Kervick et al. (2019) Parker and Bickmore (2021a) Mas-Expósito et al. (2022a) Wang (2019)
Increase the level of trust among participants	Kervick et al. (2019) Prutzman et al. (2022) Silverman and Mee (2018) Smith (2018)
Develop communication skills	Alberti and Zabala (2021) High (2017) Marcucci (2021) Parker and Bickmore (2021a) Parker and Bickmore (2021b) Prutzman et al. (2022)
Develop emotional skills	Farinde-Wu et al. (2022) Marcucci (2021) Mas-Expósito et al. (2022a) Silverman and Mee (2018)
Develop social skills	Mas-Expósito et al. (2022a) Silverman and Mee (2018)
Learn other ways to participate	Alberti and Zabala (2021) Mas-Expósito et al. (2022a) Parker and Bickmore (2021a)
Facilitate conflict resolution	Mas-Expósito et al. (2022a) Smith et al. (2018)
Promote reflection	High (2017) Kervick et al. (2019)
Improve peer knowledge	Alberti and Zabala (2021) Schumacher (2014)

A first benefit is that the circles allow creating spaces for students to be in a safe place. Five studies (Alberti & Zabala, 2021; High, 2017; Mas-Expósito et al., 2022a; Reyneke, 2020; Silverman & Mee, 2018) highlight this benefit, where the restorative circle is emphasized as a tool of safe space, hence favoring protection.

A second benefit identified is that the circles make it possible to generate spaces of healthy relationship between the participants, i.e., between the students. This benefit was expressed in six

papers (Marcucci, 2021; Parker & Bickmore, 2021a; Reyneke, 2020; Schumacher, 2014; Silverman & Mee, 2018; Skrzypek et al., 2020).

Silverman and Mee (2008) and Reyneke (2020) agree that circles make it possible to create a safe space and help build social relationships. Specifically, the two studies establish that the first benefit helps to promote the second.

A third benefit is that circles encourage dialog among equals. Three studies (Kervick et al., 2019; Parker and Bickmore, 2021a, 2021b) state that circles

enable this benefit; and two more (Mas-Expósito et al., 2022a; Wang, 2019) mention that this promotion is not only between equals but is extended to students and teachers. Specifically, Mas-Expósito et al. (2022a) establish that the circle enables group cohesion among students and improves the classroom climate.

Another benefit observed in four of the fifteen documents is that the circles enable students to increase the degree of trust towards others (Kervick et al., 2019; Prutzman et al., 2022; Silverman and Mee, 2018; Smith, 2018). Four perspectives are identified in relation to this fourth benefit.

A first is the proposal by Kervick et al. (2019) and Silverman and Mee (2018) that circles help increase the degree of trust among classmates. However, differences are identified as to who is impacted by this increased degree of trust. Kervick et al. (2019) affirm that trust is increased both towards peers and also in teachers. Silverman and Mee (2018) explain that the degree of confidence increases, because students have a greater perception of security and tranquility. Prutzman et al. (2022) associate trust as a tool of empowerment and, consequently, emphasize that the circle provides greater self-confidence, favors an awareness of one's own abilities and raises the level of individual empowerment. Smith (2018) broadens the scope of the beneficiary and includes the entire community, considering the relationships between equals, with teachers and with the community in general.

A fifth benefit is the development of communication skills. It is identified in six documents (Alberti & Zabala, 2021; High, 2017; Marcucci, 2021; Parker & Bickmore, 2021a, 2021b; Prutzman et al., 2022) and relates to the third benefit: the promotion of dialog among equals. The six studies establish that participation in the circles helps students develop communicative skills.

Three out of six studies (High, 2017; Parker & Bickmore, 2021a; Prutzman et al., 2022) together with Schumater (2014) state that active listening is one of the competences. High (2017) and Schumater (2014) add the acquisition of a new competence: empathy.

Developing emotional skills is a sixth benefit. Four studies (Farinde-Wu et al., 2022; Marcucci, 2021; Mas-Expósito et al., 2022a; Silverman & Mee, 2018) establish that circles make it possible to identify emotions and develop competencies for their management.

Schumater (2014) specifies that circles become a space where students can express emotions and facilitate the emotional management of anger. Another researcher (Marcucci, 2021) complements this benefit and states that the circles help students to strengthen their self-efficacy, training them to face and take on new personal and academic challenges.

A seventh benefit, related to skills development, is social competence. Three studies (Marcucci, 2021; Mas-Expósito et al., 2022a; Silverman & Mee, 2018) establish that circles make it possible to carry out social and relational skills.

Related to this benefit, an eighth is presented. Circles enable the development of other ways of participating. Specifically, three studies (Alberti & Zabala, 2021; Mas-Expósito et al., 2022a; Parker & Bickmore, 2021a) emphasize that circles allow students to be active agents of their participatory learning process. First, there is a higher level of participation and, progressively, students are more receptive and collaborative with peers (Alberti & Zabala, 2021).

A ninth benefit is facilitating conflict resolution. The circles allow students to acquire tools for the management and resolution of everyday conflicts. Specifically, two studies (Mas-Expósito et al., 2022a; Smith, 2018) highlight the acquisition of these competences.

Circles promote reflection. Two studies (High, 2017; Kervick et al., 2019) establish that one of the benefits of circles is the promotion of reflective ability. High (2017) states that circles facilitate self-reflection and reflection; and Kervick et al. (2019), from a slightly different perspective, state that circles help students identify different ways to analyze the same situation.

A final benefit mentioned by more than one study is the improvement of peer knowledge. Specifically, Alberti and Zabala (2021) and Schumacher (2014) state that the circles allow students to know each other, favoring greater communication and interaction.

Once the 11 benefits identified have been presented, three more are presented that were only described by a single study. Kervick et al. (2019) state that restorative circles enable two benefits: the promotion of responsibility and understanding of the situation.

3.2.2 *Benefits to teachers*

Four different types of benefits are identified when implementing restorative circles. These benefits were identified in three studies (Silverman & Mee, 2018; Smith et al., 2018; Reynecke, 2020) of the fifteen reviewed.

One type of benefit is the promotion of fluid communication between adults (Smith et al., 2018). According to Smith et al. (2018), circles lead to greater interaction among teachers, favoring a more optimal climate among teachers.

In turn, Silverman and Mee (2018) add two more types of benefits, which are interrelated: (1) create spaces, where teachers feel safe through the circle, and therefore (2) focus more on instruction than classroom management.

Reynecke (2020) points out the arguments of Silverman and Mee (2018) and adds that the circles allow teachers to manage the uncontrollable behavior of students, which is explained by the emotional discomfort and pain that some students have due to their social and/or racial condition.

3.2.3 *Benefits to the educational institution*

This benefit is understood as the set of positive and helpful aspects that the educational center, which serves adolescents and young people, can have during and after implementing the restorative circles.

In the review, seven distinct benefits were identified. A first is that it allows to build communities and reinforces the feeling of belonging. Five studies (Kervick et al., 2019; Mas-Expósito et al., 2022a; Parker & Bickmore, 2021a; Prutzman et al., 2022; Reynecke, 2020) confirmed that the circles allow the different members to create spaces of trust, which favor a greater bond between the members and, therefore, allow the construction of an educational environment, where the members feel linked and with a greater feeling of belonging to the institution.

A second type is climate improvement. Marcucci (2021) and Farinde-Wu et al. (2022) state that the circles help to make the environment among the members of the institution more conducive and facilitate learning and emotional and social relationships among the members.

A third benefit is the work of values. The circles make it possible to work on basic values for

citizen coexistence such as respect, mutual help and tolerance. Four documents (High, 2017; Mas-Expósito et al., 2022a; Schumacher, 2014; Wang, 2019) have identified the work of values as a benefit for the institution with the ultimate aim of improving its climate and coexistence.

Kervick et al. (2019) and Farinde-Wu et al. (2022) establish a fourth benefit: empowering people to prevent and manage conflict. This benefit means that the circles are conceived as a training tool for the prevention and management of conflicts, either in the classroom environment itself or in the institutional framework (space of rest, entrances and exits ...) and between the different agents (students-students, students-teachers, teachers-teachers ...).

A fifth benefit is repairing damage. Three studies (Farinde-Wu et al., 2022; Kervick et al., 2019; Marcucci, 2021) establish that restorative circles help heal relationships that have caused damage. Therefore, and based on the principles of restorative practices, the circles are also a restorative and healing space.

Mas-Expósito (2022a) establish that the circles allow to satisfy the needs of the institutions, since they allow to create spaces of collaboration between agents that facilitate both the identification and the planning for the resolution of the needs.

A seventh benefit is the one presented by Prutzman et al. (2022), which is related to the previous benefit, the circles involve all members in an active way; therefore, they facilitate the mobilization of each and every one of them.

3.2.4 *Benefits to the community*

Two benefits to the community are identified. A first was described by Kervick et al. (2019) where they determine that the circles help to foster the reintegration and inclusion of students in the community. A second one was presented by Farinde-Wu et al. (2022), stating that circles contribute to decrease truancy.

4. Discussion and conclusions

A first objective of this work was to identify and analyze the studies that present the implementation of restorative circles in high schools. Fifteen documents were identified that have in common the will to improve the good group climate in education.

nal institutions and provide students with skills for their development as students and citizens.

Their analysis showed that the circles were implemented in centers with situations of high educational complexity due to the social, cultural and economic vulnerability of the students and their environment. This leads us to think that this practice is optimal for conflict management in complex situations (Farinde-Wu et al., 2022; Marcucci, 2021; Skrzypek et al., 2020).

A second element to highlight from the results obtained is that the circles, as one of the restorative practices, is established as a conflict resolution strategy, which avoids a traditional model such as punitive, based on punishment, in order to provide a different way of addressing the conflict and its management. Its purpose is to give students cognitive and relational skills, based on communication and understanding with each other (Farinde-Wu et al., 2022; High, 2017; Kervick et al., 2019; Marcucci, 2021; Mas-Expósito et al., 2022a; Parker & Bickmore, 2021b; Prutzman et al., 2022; Silverman & Mee, 2018; Smith et al., 2018). In turn, it enables the learning of personal and social skills such as empathy, assertiveness, active listening and the promotion of values such as respect, difference, good work without harming or assaulting the other person.

This practice, distinct from dealing with conflicts, aims to improve the institutional climate to create community and build deeper relationships among its members, from a security and protection framework (Marcucci, 2021; Silverman & Mee, 2018; Smith et al., 2018). Hence, to use the restorative circle in a proactive way to develop relationships and generate spaces of coexistence, pleasant, safe and respect (Mas-Expósito et al., 2022b).

A third element to highlight is the novelty of the object of study. The oldest document found dates from 2014 and this means that the investigations have little historical trajectory. In turn, if it is added that the review focuses on analyzing the implementation, the information obtained is limited to a territorial and cultural context, of heterogeneous and unequal character. The experiences in the United States are the most present implementations in the review and therefore the contextual framework and differences between countries make it difficult to transfer and compare experiences.

A second objective of this work was to know the benefits of the circles in the members involved. The results show that students are the ones who get the most benefits. Although the information obtained is not unanimous, all the studies reviewed identify some kind of benefit to the students, who are actively involved.

Two of the 11 benefits, identified by different authors, were analyzed in six studies. This means that there is no consensus on either typology or authorship. Therefore, although the review makes it possible to categorize the benefits, the information obtained is not agreed by the reviewed studies or by the researchers.

When analyzing benefits, three broad categories are identified. A first where the importance of creating a climate of security and support is emphasized so that the members involved feel comfortable and safe. A second focused on the acquisition of skills and a third linked to the promotion of participation and values such as responsibility, respect and involving the people of the conflict in its resolution and management.

This means that the benefits of restorative circles in students respond to their purposes and, therefore, reinforce and amplify their purposes as alternative conflict management practices, based on dialog and in search of reconciliation and reparation of harm among participating members (Carson & Bussler, 2013; Dyson et al., 2019; Winn, 2013). Students behave in the classroom in the same way as in the different contexts where they develop (Ferreira-Koehler et al., 2021). So, by providing a safe space where students learn how to manage a conflict differently, the knowledge gained can be transferred into their daily lives and foster cultural change in conflict management in the community.

In summary, the review shows that restorative circles have a direct impact on the students involved by promoting the learning of skills for personal development, inclusive processes and reflection strategies around conflict, the behaviors that are derived, their consequences and how to promote optimal management (Penton & McNair, 2021).

One of the issues to be highlighted is the benefits identified in the teaching staff. Although it can be assumed that the students' results affect the educational institution itself and the teachers, the review allows to identify the own results of this

group. Their analysis favors establishing the same common thread: well-being. A well-being that is associated with an improvement of the climate in the classroom, promoting communication, creating a safe space and an improvement in the management of disruptive behaviors. These three benefits enable a fourth: being able to focus efforts on education rather than on behavior management. Well-being, identified as a nexus of interrelation of benefits, can become a factor that contributes to reducing violence and aggression in the educational institutions (Andino, 2018).

At the institutional level, the results emphasize the benefits to the educational community. This means that circles also have a positive impact on the context, regardless of whether they are used proactively as a reagent. Therefore, these results confirm that the implementation of restorative circles in secondary schools has a systemic impact on the different members and contexts, both individually and in groups and from a more micro context (the classroom) to a larger one (community).

In conclusion, this article shows that the implementation of restorative circles brings benefits to both students, teachers, secondary educational institutions and the social context where it is developed.

The implementation of this restorative practice helps to consolidate a model that facilitates coexistence and avoids punitive philosophy and social control. Therefore, the promotion of an inclusive practice that takes into account the uniqueness of people and understands that relationships can be a source of learning when conflict management is healthy and responsible.

The results confirm that there is a knowledge gap due to the novelty of the object of study and the territorial inequality of its application. Therefore, it is necessary to propose future actions to study the restorative circles and promote their knowledge. Three main lines of research are set out below.

Conceptual. The research focused on implemented experiences and where the theoretical foundation has gaps in both conceptual and methodological levels. It is for this reason that it will be necessary in the future to define the foundations of the restorative circles, considering the different approaches that define the restorative model, and consequently these practices (Más-Expósito et al., 2022a).

One difficulty in studying the phenomenon is its complexity (Mas-Expósito et al., 2022b). The reinforcement of the conceptual study can be a line of study, but it is also necessary to investigate and study the phenomenon considering the different methodological designs, in which more information is included in relation to the environment, the participants, the organizational and educational culture of the institution.

A third line, related to the previous one, is the design of longitudinal studies where the benefits and the possible impact that restorative circles bring to the members involved in the medium and long term can be analyzed.

The systematic review presented is not without its limitations. Three were identified. A first is the complexity of the phenomenon. The study is complex both because of the number of variables involved and because of the indefiniteness of restorative practices. A second is the small number of documents identified. This limitation does not make it possible to generalize the results. And a third is that it opted to review published studies in English and Spanish. The selection of documents in these languages may have meant that other studies in other languages are no longer being analyzed.

In short, the review makes it possible to know the status of the topic to continue studying the benefits of the implementation of restorative circles in high school.

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Normas editoriales (*Publication guidelines*)



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Publication Guidelines of «Alteridad»

1. General information

«Alteridad» is a bilingual scientific journal of the Salesian Polytechnic University of Ecuador (UPS), published since January 2006 uninterruptedly, on a semi-annual basis (January-July).

It is an arbitrated scientific journal, with peer-review system under the double-blind review, following the publication standards of the American Psychological Association (APA). This system ensures authors an objective, impartial and transparent review process, making it easier for authors to be included in reference international databases, repositories, and indexes.

«Alteridad» is indexed in the Web of Science's Emerging Sources Citation Index (ESCI), at the Scientific Electronic Library Online (SciELO), in the REDALYC Scientific Information System, in the directory and selective catalog of the Regional Online Information System for Scientific Journals of Latin America, the Caribbean, Spain and Portugal (Latindex), in the Directory of Open Access Journals (DOAJ), in the European Reference Index for the Humanities and Social Sciences (ERIHPLUS), on the Dialnet Portal. It is evaluated in the Information Matrix for Journal Analysis (MIAR), the Integrated Classification of Scientific Journals (CIRC), and the Qualis review system for CAPES journals. In addition, it is in repositories, libraries and specialized catalogs around the world.

The journal is published in two versions: electronic (e-ISSN: 1390-8642) and printed (ISSN: 1390-325X) in Spanish and English; each manuscript is identified with a Digital Object Identifier System (DOI). All articles published in «Alteridad» have the Creative Commons Attribution-Non-Commercial-Share Equal license (RoMEO blue journal).

2. Scope and policies

2.1 Topics

«Alteridad» is a journal specialized in Education and its transdisciplinary topics such as Didactics, School Management, Educational Technology, Social Pedagogy, among others, all related to the main topic.

2.2 Contributions

All manuscripts must be original, and must not have been published in any other journal or must not be in the arbitration or publication process in another journal. Empirical research results are published in Spanish, Portuguese or English, and studies and state-of-the-art are also allowed:

- a) **Research:** 5000 to 7500 words, including title, abstracts, descriptors, tables, and references. Assessment will be made of research results, methodological rigor, the relevance of the subject, the quality of scientific discussion, the variety, timeliness, and richness of bibliographic references (preferably publications indexed in JCR and Scopus). At least 35 references must be included.

(b) Studies and literature reviews

- **Studies:** 5000 to 7500 words of text, including tables and references. The debate, the relevance of the topic, the originality of the contributions and the bibliographical references (preferably of publications indexed in JCR and Scopus) will be especially valued. Expected 35 references minimum.
- **Literature reviews:** 6000 to 8500 words of text, including tables and references. An exhaustive review of the state of the art of a current

research topic will be considered, with justified and selective references of approximately 70 works (preferably from publications indexed in JCR and Scopus).

2.3 Sections

The journal has a semi-annual periodicity (20 articles per year), published in January and July and has two sections of five articles each by number; the first referring to a **Monographic** topic prepared in advance and with thematic topic and the second, a section of **Miscellaneous**, composed of varied contributions related with educational topics.

3. Editorial process

3.1 Submission of manuscripts

Manuscripts must be submitted only and exclusively through the Open Journal System (OJS), in which all authors must register in advance, although only one will be responsible for the correspondence. No author may submit or review two manuscripts simultaneously, estimating a time of four consecutive numbers (2 years). An article may have a maximum of 3 authors, although if justified depending on the study, there may be up to 5.

«Alteridad» informs by email the reception of the manuscript submitted by the authors. The information related to the acceptance or rejection of the manuscript is sent by email and the platform; and in the case of acceptance, the author is also informed of the editing process.

The Guidelines for the Authors are on the website of the journal, in the Guidelines section, as well as the template for writing the paper (LaTeX/Overleaf or Word), the cover page and cover letter, the review protocol, the pre-submission list, the evaluation forms by the external reviewers and a guide for submitting the article through OJS. Before the submission, it is strongly recommended that the manuscript be checked with the Pre-Check Protocol. Two files should be sent simultaneously:

- a) **Cover page and cover letter** (use the official model), which must include:

- **Cover page** (Title, Abstract and key words provided in the Manuscript).
- **Full name of each of the authors**, organized in priority order; followed by the professional category, institution, email of each author and ORCID number. It is mandatory to indicate if the authors have a PhD academic degree (include Dr. before the name).
- A **Cover letter** will also be included indicating that the manuscript is an original contribution, has not been sent or evaluated in another journal, with the signature of the authors, and acceptance (if applicable) of formal changes to the manuscript compliant with the rules and partial transfer of rights to the publisher.

- b) Fully anonymized **manuscript**, in accordance with the rules referred to in section 4.

3.2 Review process

Upon having received the document and in a maximum period of 30 days, the correspondence author shall receive a notification, indicating whether the manuscript is considered or dismissed for the arbitration process by the scientific reviewers. In case that the article has formal problems or does not address the educational subject or has a high similarity percentage to another document(s), the editorial board shall reject the paper without the option to send it back. Conversely, if it has superficial problems, it will be returned to the author for corrections before starting the evaluation process. The submission date of the article will be considered based on the final submission when the article is presented with the corrections.

The articles will be scientifically evaluated by an average of three experts of the topic. Reports will indicate the following recommendations: Accept the Submission, Publishable with Modifications, Sent the manuscript back for its Review, Not Publishable. The acceptance or rejection of the manuscript for its publication will be decided from the analysis of external reports. In the case of dissenting results, it shall be forwarded to a new opinion, which shall be final. The protocol used by reviewers is public (researches; studies and state-of-the-art).

In general, once the external scientific reviews are taken into view, the criteria justifying the deci-

sion on the acceptance/rejection of the manuscript by the Editorial board are:

- Current and novelty.
- Relevance and significance: advancement of scientific knowledge.
- Originality.
- Reliability and scientific validity: proven methodological quality.
- Organization (logical coherence and formal presentation).
- External support and public/private funding.
- Co-authoring and internationalization degree of the proposal and the team.
- Presentation: good writing.

The timeline for the scientific evaluation of manuscripts after the previous estimation procedures by the Editorial Board is up to 100 days. As for the manuscripts sent for Calls for papers, their scientific review dates begin once the call finishes. Manuscripts that are positively evaluated and require modifications must be sent with the changes within the next 15 days.

3.3 Editing and publishing of the manuscript

The edition and layout processes of the accepted articles is performed by the Technical Board of the journal along with the Abya-Yala Editorial. «Alteridad» reserves the right to make style corrections and editorial changes if necessary to improve the manuscript. A proof of printing in PDF format will be sent to the authors for correcting typography and spelling, and its review and comments must be sent within three days. The Editorial provides authors a free professional translation of the final version of the manuscript into English (or Spanish, according to the original version), guaranteeing its international consultation and dissemination. Articles will be published on the journal's platform in both versions (Spanish and English) and in the following formats: PDF, HTML, EPUB and XML-Jats.

4. Structure of the manuscripts

The manuscripts shall be submitted in typeface Arial 10, simple spacing, fully justified and without

tabs or white space between paragraphs. Only large blocks (title, authors, abstracts, key words, credits, and captions) will be separated with white space. The page must be two centimeters in all its margins. Manuscripts must be submitted in Microsoft Word document (.doc or .docx), (https://alteridad.ups.edu.ec/pdf/alteridad/Microsoft_Word_Template.docx) o LaTeX/ Overleaf (.tex) (<https://www.overleaf.com/latex/templates/revista-alteridad-ecuador/svjcbgm-crrv>), requiring the file to be anonymized in File Properties to avoid the information related to the identification of the author/s.

4.1 Cover page

Title (Spanish and English): Concise but informative, in Spanish in the first line and in English in the second, consisting of as many significant terms as possible. The title is not only the responsibility of the authors, hence changes can be proposed by the Editorial Board. A maximum of 80 characters with space are accepted.

Abstract (Spanish and English): It must be concise and must follow this order: justification, objectives, methodology used (approach and scope), more relevant results, discussion, and main conclusions. It must be written impersonally "The present work analyzes...". In the case of the Abstract (in the other language), the use of automatic translators will not be accepted. It will be between 220/230 words.

Key words (Spanish and English): 6 keywords must be presented for each language, and must be directly related to the topic of the manuscript. The use of the keywords presented in UNESCO's Thesaurus is recommended (<http://bit.ly/2kIgn8I>). New terms would be accepted only in exceptional cases if they present a standardized scientific nature.

4.2 IMRDC Structure

For those works involving empirical research, the manuscripts will strictly respect the IMRDC structure, with the headings of Economic Supports and Notes being optional. Literature Studies and Reviews may be more flexible under their headings, especially in Methodology, Results and Discussion. In all types of works, bibliographic references are mandatory.

1. **Introduction:** It should include the theoretical foundations and purpose of the study, using bibliographic citations, as well as the review of the most significant literature of the topic at the national and international level. The use of high-impact references (JCR and Scopus) will be positively valued.
2. **Methodology:** The approach and methodology used must be written in a way that the reader can easily understand the development of the research. It should contain the explanation on the approach (quantitative, qualitative or mixed) and the scope (exploratory, descriptive, correlational or explanatory). When appropriate, it shall describe the sample and the sampling form, and it must refer to the type of statistical analysis applied. If it is an original methodology, it is necessary to set out the reasons that have led to its use and describe the possible limitations.
3. **Results:** Efforts will be made to highlight the most relevant results and observations of the investigation, describing, without making judgments, the material and methods used for the analysis. The results will be presented in figures and/or tables according to the journal's standards (See section 4.4). They will appear in a logical sequence in the text, tables or figures, avoiding data redundancy.
4. **Discussion and conclusions:** It will summarize the most important findings, relating the observations with interesting studies, pointing to contributions and limitations, without resulting in data already commented in other sections. In addition, this section should include deductions and lines for future research.

4.3 Economic support and notes

Economic support (optional): Council Science Editors recommends that authors specify the source of funding for the research. Works on the endorsement of competitive national and international projects will be considered a priority. In any case, for the scientific assessment of the manuscript, it must be anonymized with XXXX only for its initial evaluation, in order not to identify authors and research teams, which must be set out in the Cover Letter and subsequently in the final manuscript.

Notes: if necessary, notes will be at the end of the article (before references). They should be used to clarify terms or make marginal annotations. Note numbers are placed in superscript, both in the text and in the final note. Notes collecting simple bibliographic citations (without comments) are not allowed, as these should be in the references. If it contains a cite, the reference must also be found in the Bibliography section.

4.4 Bibliography

Bibliographical citations should be reviewed in the form of references to the text. Bibliography that is not cited should not be included in the text. Its number must be sufficient and necessary to contextualize the theoretical framework, methodology used and research results in an international research space: minimum 35 for empirical research manuscripts, and around 70 for literature studies and reviews.

They will be presented alphabetically by the author's first last name (adding the second one only in case the first one is very commonly used). The quote should be extracted from the original documents, preferably journals and to a lesser extent books. Given the significance of citation indexes and impact factor calculations, the use of references from indexed publications in JCR and/or Scopus and the correct citation following APA 7 norms is valued (<http://bit.ly/35FNGvN>).

It is mandatory that references with DOI (Digital Object Identifier System) be written in the References (can be obtained on <https://search.crossref.org/>). All journals and books without DOI must contain a link (in its online version, if applicable, and in a shorten version using Bitly: <https://bitly.com/>), and the websites must include the consultation date using the format provided.

Journal articles must be presented in English, with the exception of those in Spanish and English, in which case they will be presented in both languages using square brackets.

Norms for the references

a) Periodic publications

- **Journal article (one author):** Ochoa, A. (2019). The type of participation promoted in schools

is a constraint factor for inclusive education. [El tipo de participación que promueve la escuela, una limitante para la inclusión]. *Alteridad*, 14(2), 184-194. <https://doi.org/10.17163/alt.v14n2.2019.03>

- **Manuscript from a journal (until twenty authors):** Guarderas, P., Larrea, M., Cuví, J., Vega, C., Reyes, C., Bichara, T., Ramírez, G., Paula, Ch., Pesantez, L., Íñiguez, A., Ullauri, K., Aguirre, A., Almeida, M., & Arteaga, E. (2018). Sexual harassment in Ecuadorian universities: content validation for instrument development. [Acoso sexual en las universidades ecuatorianas: validez de contenido de un instrumento de medición]. *Alteridad*, 13(2), 214-226. <https://doi.org/10.17163/alt.v13n2.2018.05>
- **Manuscript from a journal (without DOI):** López, L., & Ramírez-García, A. (2014). Medidas disciplinarias en los centros educativos: ¿Suficientes contra el acoso escolar? *Perfiles Educativos*, 36(145), 32-50. <https://bit.ly/37Xd5mw>

b) Books and chapters of books

- **Complete books:** Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Abya-Yala.
- **Chapter of books:** Padilla-Verdugo, J. (2014). La Historia de la Educación desde los enfoques del conocimiento. In E. Loyola (Ed.), *Ciencia, Tecnología y Sociedad (CTS). Miradas desde la Educación Superior en Ecuador* (pp. 107-128). Abya-Yala. <https://bit.ly/3etRnZH>

c) PhD or Master dissertations

- Llorent, M. (2019). *Las políticas educativas TIC en el plano autonómico: el caso de Andalucía* [Tesis doctoral, Universidad de Sevilla]. Depósito de Investigación Universidad de Sevilla. <https://bit.ly/3YRTRr5>

Guidelines for Headings, Tables and Figures

The headings of the article shall be numbered in Arabic, without full case of capital letters, no underscores, no bold ones. The numbering must be at most three levels: 1. / 1.1. / 1.1.1. A carriage return

will be established at the end of each numbered heading.

Tables and figures must be presented in the text in Word or LaTeX located in the place selected by the authors. They shall be used only when necessary and suitable, and must be up to 6 between tables and figures (more only under extraordinary cases if justified). Both must be listed in Arabic and titled with the description of their content. If the source of the table or figure corresponds to another author, the authors must incorporate the source consulted below the table [for example, Source: Romero-Rodríguez (2016, p. 32)].

Tables must be elaborated in document, thus tables cut and pasted from other documents that cannot be edited in the diagramming process will not be accepted. The figures, in addition to being incorporated in the document, must be sent as supplementary material when submitting to «Alteridad» OJS, with a quality greater than 600 dpi, in TIFF, JPEG or PNG files.

In the case of LaTeX/Overleaf, figures must be loaded in the template in original PDF format in order to maintain its quality, since conversion from other formats can lower the quality of the figure. In the case of Word, in addition to being incorporated in the document, figures must be sent as complementary material when submitting the file on the OJS of «Alteridad», having a quality higher than 600 dpi in TIFF, JPEG or PNG.

5. Fees and APC

«Alteridad» is an Open Access journal, included in the Directory of Open Access Journals (DOAJ) that offers all its production online for the scientific community. There are not fees throughout the editorial process for the publishing articles, including scientific review, layout and translation thereof. There is no publication fee, no Article Processing Charge (APC) associated with this publication, neither for authors nor for readers. The journal is also licensed by Creative-Commons Attribution-Non-Commercial-Share Equal (RoMEO blue journal), which allows free access, download and archive of published articles. All expenses and financing of «Alteridad» derive from the contributions made by the Salesian Polytechnic University.

6. Ethical responsibilities

Each author shall submit a responsible statement of authorship and originality, as well as their ethical responsibilities.

- **Originality:** The works must be original and should not be evaluated simultaneously in another publication; hence, the authors are responsible to comply with this standard. The opinions expressed in the published articles are the responsibility of the author/s «Alteridad» as CrossRef®'s international partner, uses the CrossCheck® and iThenticate® anti-plagiarism tool to ensure the originality of the manuscripts.
- **Authorship:** The list of signatory authors should include only those who have contributed intellectually to the development of the work. Collaborating in data collection is not sufficient criteria of authorship. «Alteridad» rejects any responsibility for possible conflicts arising from the authorship of the manuscripts published.
- **Use of Artificial Intelligence:** In case artificial intelligence is used at any stage of the research presented in the article, authors have to clearly highlight it in the cover letter/cover-letter associated with the article, indicating the specific section(s) where artificial intelligence has been used. The purpose of this indication is to inform readers about the sections where this technology has been used, providing more transparency and understanding about its application in the research presented.

The journal Alteridad recognizes the importance of maintaining high ethical standards in scientific research, particularly in the use of artificial intelligence (AI).

It is at the discretion of the editorial team, the acceptance of the publication that has used artificial intelligence.

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7. Promotion and dissemination of the published article

The authors commit to disseminate their published article as well as to the whole journal using the link of the website of «Alteridad» (<https://alteridad.ups.edu.ec/index.php/alteridad/>). In addition, they are encouraged to share their published article in academic networks (Academia.edu, ResearchGate, Mendeley, Kudos, ...), social networks (Twitter, Facebook, LinkedIn, ...), also publishing the DOI in these), institutional repositories, Google Scholar, ORCID, web or personal blog, among others. Authors are also encouraged to share the published article through email lists, research groups, and personal contacts.

«Alteridad» has a Metric Measurement System (PlumX) that allows verifying the compliance with this commitment. The impact of previous works will be considered for submitting future articles in «Alteridad».

Normas de publicación en «Alteridad»

1. Información general

«Alteridad» es una publicación científica bilingüe de la Universidad Politécnica Salesiana de Ecuador (UPS), editada desde enero de 2006 de forma ininterrumpida, con periodicidad fija semestral (enero-julio).

Es una revista científica arbitrada, que utiliza el sistema de evaluación externa por expertos (*peer-review*), bajo metodología de pares ciegos (*double-blind review*), conforme a las normas de publicación de la *American Psychological Association* (APA). El cumplimiento de este sistema permite garantizar a los autores un proceso de revisión objetivo, imparcial y transparente, lo que facilita a la publicación su inclusión en bases de datos, repositorios e indexaciones internacionales de referencia.

«Alteridad» se encuentra indexada en el *Emerging Sources Citation Index* (ESCI) de *Web of Science*, en la *Scientific Electronic Library Online* (SciELO), en el Sistema de Información Científica REDALYC, en el directorio y catálogo selectivo del Sistema Regional de Información en Línea para Revistas Científicas de América Latina, el Caribe, España y Portugal (Latindex), en el *Directory of Open Access Journals* (DOAJ), en el *European Reference Index for the Humanities and Social Sciences* (ERIHPLUS), en el Portal Dialnet; está evaluada en la Matriz de Información para el Análisis de Revistas (MIAR), en la Clasificación Integrada de Revistas Científicas (CIRC), y en el sistema Qualis de revisión de revistas de CAPES. Además, se encuentra en repositorios, bibliotecas y catálogos especializados de todo el mundo.

La revista se edita en doble versión: electrónica (e-ISSN: 1390-8642) e impresa (ISSN: 1390-325X) en español e inglés; siendo identificado cada trabajo con un *Digital Object Identifier System* (DOI). Todos los artículos publicados en «Alteridad» tienen licencia Creative Commons Reconocimiento-No-Comercial-Compartir igual (RoMEO blue journal).

2. Alcance y política

2.1 Temática

«Alteridad» es una revista especializada en Educación y sus líneas transdisciplinarias como Didáctica, Gestión de Centros Escolares, Educomunicación, tecnología educativa, Pedagogía Social, entre otras; y todas aquellas disciplinas conexas interdisciplinariamente con la línea temática central.

2.2 Aportaciones

Todos los trabajos deben ser originales, no haber sido publicados en ningún medio ni estar en proceso de arbitraje o publicación. Se editan preferentemente resultados de investigación empírica, redactados en español, portugués o inglés, siendo también admisibles estudios y selectas revisiones de la literatura (*state-of-the-art*):

- a) **Investigaciones:** 5000 a 7500 palabras de texto, incluyendo título, resúmenes, descriptores, tablas y referencias. Se valorarán especialmente los resultados de la investigación, el rigor metodológico, la relevancia de la temática, la calidad de la discusión científica, la variedad, actualidad y riqueza de las referencias bibliográficas (preferiblemente de publicaciones indexadas en JCR y Scopus). Se esperan mínimo 35 referencias.
- b) **Estudios y revisiones de la literatura**
 - **Estudios:** 5000 a 7500 palabras de texto, incluidas tablas y referencias. Se valorará especialmente el debate generado, la relevancia de la temática, la originalidad de las aportaciones y riqueza de las referencias bibliográficas (preferiblemente de publicaciones indexadas en JCR y Scopus). Se esperan mínimo 35 referencias.

- **Revisiones de la literatura:** 6000 a 8500 palabras de texto, incluidas tablas y referencias. Se valorará la revisión exhaustiva del estado de la cuestión de un tema de investigación actual con referencias justificadas y selectivas de alrededor de 70 obras (preferiblemente de publicaciones indexadas en JCR y Scopus).

2.3 Secciones

La revista tiene periodicidad semestral (20 artículos por año), publicada en los meses de enero y julio y cuenta por número con dos secciones de cinco artículos cada una, la primera referida a un tema **Monográfico** preparado con antelación y con editores temáticos y la segunda, una sección de **Misceláneas**, compuesta por aportaciones variadas que traten temas educativos de forma prioritaria.

3. Proceso editorial

3.1 Envío de manuscritos

Los manuscritos deben ser enviados única y exclusivamente a través del *Open Journal System* (OJS), en el cual todos los autores deben darse de alta previamente, si bien uno solo de ellos será el responsable de correspondencia. Ningún autor podrá enviar o tener en revisión dos manuscritos de forma simultánea, estimándose una carencia de cuatro números consecutivos (2 años). Un artículo podrá tener como máximo 3 autores, aunque si se justifica en función del tamaño del estudio, podrán ser hasta 5.

«Alteridad» acusa recepción de los trabajos enviados por los autores e informa por email y mediante la plataforma del proceso de aceptación o rechazo; y en el caso de aceptación, del proceso de edición.

En el Portal oficial de la revista, en la sección Normativas, están las Normas para Autores, las plantillas para la redacción de los manuscritos (LaTeX/Overleaf o Word), la Portada y Carta de presentación, el Protocolo de chequeo previo al envío, los formularios de evaluación por parte de los revisores externos y una guía para el envío del artículo a través de OJS. Antes de su envío se recomienda encarecidamente que se compruebe el manuscrito con el Protocolo de chequeo previo. Deben remitirse simultáneamente dos archivos:

- a) **Portada y Carta de presentación** (usar el modelo oficial), en la que aparecerán:
 - **Portada** (Título, Resumen y Descriptores previstos en el Manuscrito).
 - **Nombre y apellidos completos** de cada uno de los autores, organizados por orden de prelación; seguido por la categoría profesional, centro de trabajo, correo electrónico de cada autor y número de ORCID. Es obligatorio indicar si se posee el grado académico de doctor (incluir Dr./Dra. antes del nombre).
 - Se incluirá además una **declaración** (Cover letter) de que el manuscrito se trata de una aportación original, no enviada ni en proceso de evaluación en otra revista, confirmación de las autorías firmantes, aceptación (si procede) de cambios formales en el manuscrito conforme a las normas y cesión parcial de derechos a la editorial.
 - **Manuscrito** totalmente anonimizado, conforme a las normas referidas en el epígrafe 4.

3.2 Proceso de revisión

En un plazo máximo de 30 días, a partir de la recepción del documento, el autor de correspondencia recibirá una notificación, indicando preliminarmente si se estima o desestima para el arbitraje por los revisores científicos. En el caso de que el artículo presente deficiencias formales, no trate el tema educativo o tenga un elevado porcentaje de similitud con otro(s) documento(s), el Consejo editorial desestimaré el trabajo sin opción de vuelta. Por el contrario, si presenta carencias superficiales de forma, se devolverá al autor para su corrección antes de comenzar del proceso de evaluación. La fecha de recepción del artículo no computará hasta la recepción correcta del mismo.

Los artículos serán evaluados científicamente por una media de tres expertos en el tema. Los informes indicarán las siguientes recomendaciones: Aceptar el envío, Publicable con modificaciones, Reenviar para revisión, No publicable. A partir del análisis de los informes externos, se decidirá la aceptación o rechazo de los artículos para su publicación. En el caso de resultados discrepantes se remitirá a un nuevo dictamen, el cual será definitivo. El protocolo utilizado por los revisores es público (Investigaciones; Estudios y revisiones de la literatura).

En general, una vez vistas las revisiones científicas externas, los criterios que justifican la decisión sobre la aceptación/rechazo de los trabajos por parte del Consejo Editor son los siguientes:

- Actualidad y novedad.
- Relevancia y significación: avance del conocimiento científico.
- Originalidad.
- Fiabilidad y validez científica: calidad metodológica contrastada.
- Organización (coherencia lógica y presentación formal).
- Apoyos externos y financiación pública/privada.
- Coautorías y grado de internacionalización de la propuesta y del equipo.
- Presentación: buena redacción.

El plazo de evaluación científica de manuscritos, superados los trámites previos de estimación por el Consejo Editor, es de 100 días como máximo; los remitidos para *Calls for papers*, sus fechas de revisión científica se inician al cierre de los mismos. Los trabajos que sean evaluados positivamente y requieran modificaciones, deberán ser reenviados con los cambios, dentro de los siguientes 15 días.

3.3 Edición y publicación del manuscrito

El proceso de corrección de estilo y maquetación de los artículos Accepted on:s es realizado por el Consejo Técnico de la Revista en coordinación con la Editorial Abya-Yala. «Alteridad» se reserva el derecho de hacer corrección de estilo y cambios editoriales que considere necesarios para mejorar el trabajo. A los autores de artículos se enviará una prueba de imprenta en formato PDF para su corrección únicamente de tipografía y ortografía, mismo que deberán reenviar en un máximo de tres días. La Editorial realizará, gratuitamente para los autores, la traducción profesional de la versión final del manuscrito al idioma inglés (o español, según la versión original), lo que garantizará su consulta y difusión internacional. Los artículos serán publicados en la plataforma de la revista en sus dos versiones idiomáticas (español e inglés) y en los siguientes formatos: PDF, HTML, EPUB y XML-Jats.

4. Estructura de los manuscritos

Los trabajos se presentarán en tipo de letra Arial 10, interlineado simple, justificado completo y sin tabuladores ni espacios en blanco entre párrafos. Solo se separarán con un espacio en blanco los grandes bloques (título, autores, resúmenes, descriptores, créditos y epígrafes). La página debe tener dos centímetros en todos sus márgenes. Los trabajos deben presentarse en formato de Microsoft Word (.doc o .docx) ([https://alteridad.ups.edu.ec/pdf/alteridad/Plantilla Microsoft Word.docx](https://alteridad.ups.edu.ec/pdf/alteridad/Plantilla%20Microsoft%20Word.docx)) o LaTeX/ Overleaf (.tex) (<https://www.overleaf.com/latex/templates/revista-alteridad-ecuador/svvjcbgmcrv>), siendo necesario que el archivo esté anonimizado en Propiedades de Archivo, de forma que no aparezca la identificación de autor/es.

4.1 Portada

Título (español) / Title (inglés): Conciso pero informativo, en castellano en primera línea y en inglés en segunda, conformado por el mayor número de términos significativos posibles. El título no solo es responsabilidad de los autores, pudiéndose proponer cambios por parte del Consejo Editorial. Se aceptan como máximo 80 caracteres con espacio.

Resumen (español) / Abstract (inglés): Se describirán de forma concisa y en este orden: justificación del tema, objetivos, metodología empleada (enfoque y alcance), resultados más relevantes, discusión y principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”. En el caso del *Abstract* no se admitirá el empleo de traductores automáticos. Tendrá como extensión entre 220/230 palabras.

Descriptores (español) / Keywords (inglés): Se deben exponer 6 descriptores por cada versión idiomática relacionados directamente con el tema del trabajo. Será valorado positivamente el uso de las palabras claves expuestas en el Thesaurus de la UNESCO (<http://bit.ly/2kIgn8I>). Solo en casos excepcionales se aceptarán términos nuevos, siempre que tengan un carácter científico estandarizado.

4.2 Estructura IMRDC

Para aquellos trabajos que se traten de Investigaciones de carácter empírico, los manuscritos

tos respetarán rigurosamente la estructura IMRDC, siendo opcionales los epígrafes de Apoyos y Notas. Los trabajos que se traten de Estudios y revisiones de la literatura podrán ser más flexibles en sus epígrafes, especialmente en Metodología, Resultados y Discusión. En todas las tipologías de trabajos son obligatorias las Referencias bibliográficas.

- 1 **Introducción:** Debe incluir los fundamentos teóricos y el propósito del estudio, utilizando citas bibliográficas, así como la revisión de la literatura o los trabajos relacionados más significativos del tema a nivel nacional e internacional. Se valorará positivamente el uso de referencias de alto impacto (JCR y Scopus).
- 2 **Metodología:** El enfoque, alcance y diseño metodológico deben ser redactados de forma que el lector pueda comprender con facilidad el desarrollo de la investigación. En su caso, describirá la muestra y la forma de muestreo, así como se hará referencia al tipo de análisis estadístico aplicado. Si se trata de una metodología original, es necesario exponer las razones que han conducido a su empleo y describir sus posibles limitaciones.
3. **Resultados:** Se procurará resaltar los resultados y las observaciones más relevantes de la investigación, describiéndose, sin hacer juicios de valor, el material y métodos empleados para el análisis. Los resultados se expondrán en figuras o/y tablas según las normas de la revista (Ver epígrafe 4.4). Aparecerán en una secuencia lógica en el texto, las tablas o figuras imprescindibles, evitando la redundancia de datos.
4. **Discusión y conclusiones:** Resumirá los hallazgos más importantes, relacionando las propias observaciones con estudios de interés, señalando aportaciones y limitaciones, sin redundar datos ya comentados en otros apartados. Asimismo, el apartado de discusión y conclusiones debe incluir las deducciones y líneas para futuras investigaciones.

4.3 Apoyos y Notas

Apoyos (opcionales): El *Council Science Editors* recomienda a los autor/es especificar la fuente de financiación de la investigación. Se considerarán prioritarios los trabajos con aval de proyectos

competitivos nacionales e internacionales. En todo caso, para la valoración científica del manuscrito, este debe ir anonimizado con XXXX solo para su evaluación inicial, a fin de no identificar autores y equipos de investigación, que deben ser explicitados en la Carta de Presentación y posteriormente en el manuscrito final.

Las notas: En caso necesario, irán al final del artículo (antes de las referencias). Deben ser utilizadas para aclarar términos, hacer anotaciones marginales o indicar el posible uso de herramientas de Inteligencia Artificial. Los números de notas se colocan en superíndice, tanto en el texto como en la nota final. No se permiten notas que recojan citas bibliográficas simples (sin comentarios), pues éstas deben ir en las referencias. En caso de contener alguna cita, su referencia deberá encontrarse también en la sección de Referencias bibliográficas.

4.4 Referencias bibliográficas

Las citas bibliográficas deben reseñarse en forma de referencias al texto. No debe incluirse bibliografía no citada en el texto. Su número ha de ser suficiente y necesario para contextualizar el marco teórico, la metodología usada y los resultados de investigación en un espacio de investigación internacional: mínimo 35 para los manuscritos de investigaciones de carácter empírico, y alrededor de 70 para los estudios y revisiones de literatura.

Se presentarán alfabéticamente por el primer apellido del autor (agregando el segundo solo en caso de que el primero sea de uso muy común). Las citas deberán extraerse de los documentos originales preferentemente revistas y en menor medida libros. Dada la trascendencia para los índices de citas y los cálculos de los factores de impacto, se valorarán positivamente el uso de referencias provenientes de publicaciones indexadas en JCR y/o Scopus y la correcta citación conforme a la Norma APA 7 (<http://bit.ly/35FNGvN>).

Es prescriptivo que todas las citas que cuenten con DOI (Digital Object Identifier System) estén reflejadas en las Referencias (pueden obtenerse en <https://search.crossref.org/>). Todas las revistas y libros que no tengan DOI deben aparecer con su link (en su versión on-line, en caso de que la tengan, acortada, mediante Bitly: <https://bitly.com/>), y de los sitios web además la fecha de consulta en el formato indicado.

Normas para las referencias

a) Publicaciones periódicas

- **Artículo de revista (un autor):** Ochoa, A. (2019). The type of participation promoted in schools is a constraint factor for inclusive education. *Alteridad*, 14(2), 184-194. <https://doi.org/10.17163/alt.v14n2.2019.03>
- **Artículo de revista (hasta veinte autores):** Guarderas, P., Larrea, M., Cuví, J., Vega, C., Reyes, C., Bichara, T., Ramírez, G., Paula, Ch., Pesantez, L., Ñíguez, A., Ullauri, K., Aguirre, A., Almeida, M., & Arteaga, E. (2018). Acoso sexual en las universidades ecuatorianas: validez de contenido de un instrumento de medición. *Alteridad*, 13(2), 214-226. <https://doi.org/10.17163/alt.v13n2.2018.05>
- **Artículo de revista (sin DOI):** López, L., & Ramírez-García, A. (2014). Medidas disciplinarias en los centros educativos: ¿Suficientes contra el acoso escolar? *Perfiles Educativos*, 36(145), 32-50. <https://bit.ly/37Xd5mw>

b) Libros y capítulos de libro

- **Libros completos:** Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Abya-Yala.
- **Capítulos de libro:** Padilla-Verdugo, J. (2014). La Historia de la Educación desde los enfoques del conocimiento. In E. Loyola (Ed.), *Ciencia, Tecnología y Sociedad (CTS). Miradas desde la Educación Superior en Ecuador* (pp. 107-128). Abya-Yala. <https://bit.ly/3etRnZH>

c) Tesis doctorales y de maestría

- Llorent, M. (2019). *Las políticas educativas TIC en el plano autonómico: el caso de Andalucía* [Tesis doctoral, Universidad de Sevilla]. Depósito de Investigación Universidad de Sevilla. <https://bit.ly/3YRTRr5>

d) Medios electrónicos

- Aunión, J. (2011, marzo 12). La pérdida de autoridad es un problema de toda la sociedad, no es específico del aula. *El País*. <https://bit.ly/2NIM9Dp>

Normas para epígrafes, tablas y figuras

Los epígrafes del cuerpo del artículo se numerarán en arábigo. Irán sin caja completa de mayúsculas, ni subrayados, ni negritas. La numeración ha

de ser como máximo de tres niveles: 1. / 1.1. / 1.1.1. Al final de cada epígrafe numerado se establecerá un retorno de carro.

Las tablas y figuras deben presentarse incorporadas en el texto en Word o LaTeX ubicadas en el sitio en el que los autores consideren que deben estar. Se emplearán únicamente cuando sean necesarias e idóneas, debiendo limitarse su uso por cuestiones de espacios a seis entre tablas y figuras (salvo casos excepcionalmente justificados). Ambas deben ser enumeradas en arábigo y tituladas con la descripción de su contenido. Si la fuente de la tabla o figura no fuera de elaboración propia, los autores deberán incorporar al pie de la tabla o la figura la fuente de la que se extrae [por ejemplo, Source: Romero-Rodríguez (2016, p. 32)].

Las tablas deben estar elaboradas en el propio documento por lo que no se aceptarán tablas cortadas y pegadas de otros documentos que no puedan ser editados en el proceso de diagramación.

Para mantener la calidad de las figuras, en el caso de LaTeX/Overleaf, deben ser cargadas en la plantilla en formato original PDF, puesto que la conversión desde otros formatos puede disminuir la calidad de la figura. En el caso de Word, además de ser incorporadas en el documento, deberán ser enviadas como material complementario al momento del envío en el OJS de «Alteridad», debiendo tener una calidad superior a 600 dpi, en archivos de tipo TIFF, JPEG o PNG.

5. Tasas y APC

«Alteridad» es una revista *Open Access*, incluida en el *Directory of Open Access Journals* (DOAJ) que oferta toda su producción de forma íntegra online en abierto para toda la comunidad científica. Asimismo, no establece ninguna tasa económica durante todo el proceso editorial para la publicación de los artículos, incluyendo la revisión científica, la maquetación y la traducción de los mismos. No existe ningún *publication fee*, ni *Article Processing Charge* (APC) vinculados con esta publicación, ni para autores ni para lectores. Asimismo, la revista tiene licencia *Creative-Commons Reconocimiento-No-Comercial-Compartir* igual (RoMEO blue journal), lo que permite libre acceso, descarga y archivo de los artículos publicados. Todos los gastos, insumos y financiamiento de «Alteridad»

proviene de los aportes realizados por la Universidad Politécnica Salesiana.

6. Responsabilidades éticas

Cada autor/es presentará una declaración responsable de autoría y originalidad, así como sus responsabilidades éticas contraídas.

- **Originalidad:** Los trabajos deben ser originales y no deben estar siendo evaluados simultáneamente en otra publicación, siendo responsabilidad de los autores el cumplimiento de esta norma. Las opiniones expresadas en los artículos publicados son responsabilidad del autor/es. «Alteridad», como socio internacional de CrossRef®, emplea la herramienta antiplagio CrossCheck® y iThenticate® para garantizar la originalidad de los manuscritos.
- **Autoría:** En la lista de autores firmantes deben figurar únicamente aquellas personas que han contribuido intelectualmente al desarrollo del trabajo. Haber colaborado en la recolección de datos no es, por sí mismo, criterio suficiente de autoría. «Alteridad» declina cualquier responsabilidad sobre posibles conflictos derivados de la autoría de los trabajos que se publiquen.
- **Uso de Inteligencia Artificial:** En caso de que se utilice inteligencia artificial en cualquier etapa de la investigación presentada en el artículo, se requerirá a los/as autores/as destacarlo claramente en la carta de presentación/coverletter asociado al artículo, manifestando la sección o secciones específicas donde se ha hecho uso de la inteligencia artificial. Esta indicación tiene como objetivo informar a los lectores sobre las secciones en las que se ha empleado esta tecnología, proporcionando una mayor transparencia y comprensión sobre su aplicación en la investigación presentada.

La revista Alteridad reconoce la importancia de mantener altos estándares éticos en la investigación científica, particularmente en el empleo de inteligencia artificial (IA).

Queda a discreción del equipo editorial, la aceptación de la publicación que haya utilizado inteligencia artificial.

- **Transmisión de los derechos de autor:** se incluirá en la carta de presentación la cesión de derechos del trabajo para su publicación en «Alteridad». La Universidad Politécnica Salesiana (la editorial) conserva los derechos patrimoniales (copyright) de los artículos publicados; favorece y permite la reutilización de las mismas bajo la licencia de uso indicada en *ut supra*.

7. Promoción y difusión del artículo publicado

Los autores se comprometen a darle la máxima difusión a su artículo publicado, así como a toda la revista, utilizando el link a la página web de «Alteridad» (<https://alteridad.ups.edu.ec/index.php/alteridad/>). Además, se les exhorta a compartir y archivar su artículo publicado en las redes académicas (Academia.edu, ResearchGate, Mendeley, Kudos, ...), sociales (Twitter, Facebook, LinkedIn, ...), publicándolo en estos también el DOI, repositorios institucionales, Google Scholar, ORCID, web o blog personal, entre otras. Asimismo, se anima a los autores a compartir el artículo publicado a través de listas de correo electrónico, grupos de investigación y contactos personales.

«Alteridad» cuenta con sistemas de medición de métricas alternativas (PlumX) que permiten verificar el cumplimiento de este compromiso. Para la postulación de futuros artículos de autores de «Alteridad», se tendrá presente el impacto de los trabajos anteriores.