



Inclusive training of elementary teachers in three Chilean regions

Formación inclusiva del profesorado de primaria en tres regiones chilenas

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Abstract

The initial training of elementary teacher in Chile has been a topic that has been under discussion for many years, however, it has not been adjusted to the requirements of the latest legislation implemented to address an inclusive education (inclusion law Decree No. 83 and updates to Decree No. 170), as well as not being adjusted to the needs and requirements of those who are at the forefront in each classroom with their students. This article aims to analyze and identify the training needs for inclusion of graduate teachers between 2008 and 2018. A questionnaire prepared ad hoc, with a descriptive design ($n = 118$) was applied to teachers. The results indicate the theoretical and methodological training needs, with a predominance in the methodological aspects that allow teachers to work with various strategic designs that promote self-learning or collaborative work, implement curricular adaptations required by decree 83, generate individual educational plans, that allow to focus learning on the person, know the importance of virtual spaces to promote inclusive education and highlight the importance of human resources (psycho-pedagogue, psychologist, differential educator or others), to facilitate work with students with SEN. Therefore, this research will allow training institutions to adapt their training to these needs and generate initial and ongoing training projects for teachers in Chile.

Keywords: Education and training, teacher training, special education, primary teacher training, advanced training, basic training.

Resumen

La formación inicial del docente de Educación General Básica (EGB) en Chile ha sido un tema que viene en discusión hace muchos años, sin embargo, no se ha ajustado a los requerimientos de las últimas legislaciones implementadas para abordar una educación inclusiva (Ley de inclusión, Decreto N°83 y actualizaciones del Decreto N° 170), así como tampoco se ha ajustado a las necesidades y requerimientos de quienes están al frente en cada aula junto a sus estudiantes. Este artículo pretende analizar e identificar las necesidades formativas en inclusión de los docentes egresados entre 2008 y 2018. Se aplicó un cuestionario elaborado ad hoc, con un diseño descriptivo ($n=118$) al profesorado. Los resultados señalan las necesidades formativas teóricas y metodológicas, con una predominancia en los aspectos metodológicos que permitan a los docentes trabajar con diversos diseños estratégicos que promuevan el auto-aprendizaje o trabajo colaborativo, implementar adaptaciones curriculares requeridas por el Decreto 83, generar planes educativos individuales, que permitan centrar el aprendizaje en la persona, conocer la importancia de los espacios virtuales para promover la educación inclusiva y resaltar la importancia de los recursos humanos (psicopedagoga, psicólogo, educadora diferencial u otros), para facilitar el trabajo con estudiantes con Necesidades Educativas Especiales (NEE). Por lo tanto, esta investigación permitirá que las instituciones formadoras adecúen su formación a estas necesidades y generen proyectos de formación inicial y continua los docentes en Chile.

Descriptores: Enseñanza y formación, formación de docente, educación especial, formación de docentes de primaria, perfeccionamiento, formación básica.

1. Introduction

The objective of this article is to know the training needs of Elementary graduate teachers in the context of the inclusion law in Chile. In addition, it intends to analyze the differences in the following variables: Gender, type of needs, training received, city of labor performance and age; to this end, an online questionnaire has been created.

In recent years, Chile has sought initial training aimed at a comprehensive development of students, through a number of legal provisions and initiatives such as the initial training standards, the "INICIA" test and the Teaching Career Law.

The initial training will be evaluated based on the teachers' responses to the questionnaire that was created with two dimensions: Theoretical and methodological.

The basic standard in teacher quality training in Chile arises from the CPEIP (Center for Advanced Experimentation and Pedagogical Research), which establishes minimum guidelines for all Chilean universities and/or CFP (Centers for Vocational Training). These principles are established to address the law on quality and equity in education, which dates back to 2011.

According to Ruffinelli (2013) and San Martín (2014), "INICIA" test (2008) evaluates three competences: Pedagogical knowledge, knowledge of discipline and didactic and pedagogical reflection, with the aim of analyzing whether the initial training has an effect on the performance of the students in some measurements, such as in the SIMCE (System of Measurement of the Education Quality).

Martinic et al. (2014) show the low coherence between the initial training of Elementary teachers and the practice of their professional development. The Organization for Economic Cooperation and Development-OECD (2013) notes that the effectiveness of the teacher is one of the important variables for a phenomenon that is multicausal, since it manages to determine that there is a consistent but moderate effect of

the teacher effect and the performance of students. For its part, Arnaiz (2005) adds that:

What is really important is that teachers change their thoughts and attitudes into new approaches of solidarity, tolerance and new educational practices that bring with them a new way of dealing with the plurality and multiculturalism of students. (p. 17)

In view of the above, Lee and Shute (2010) and Martínez (2016) demonstrate that the moderate effect of the teacher on census tests, such as SIMCE, has greater significance in mathematics and it is less consistent in language.

Ainscow (1991), Echeita (2013), Florian (2010), Infante (2010) and López et al. (2014) note that there are aspects to be developed in the initial or continuing training of teachers, such as the need to work on concepts such as integration and inclusion, identify and assess the characteristics of the inclusive model and models of attention to diversity in principles, characteristics and focus of attention.

In regards to the methodological aspects and in order to respond to the needs of students and/or diverse and inclusive classroom, it should be initiated by recognizing and identifying different learning styles (Carbonero et al., 2010; Bahamón et al., 2012) or individual differences (Pegalajar & Colmenero, 2017; Vadillo, 2014), learning potential (Moreno & López de Maturana, 2015; Tébar, 2010), participation for inclusion (Calvo et al., 2016), collaborative and interdisciplinary learning (Durán & Climent, 2017; García-Valcárcel et al., 2014; Jiménez, 2014; Marín et al., 2014; Muñoz et al., 2014; Vargas et al., 2017).

In short, if we prove that initial or continuing teacher training is a difficulty and can end up becoming a barrier to an education that meets inclusion, it is relevant to mention that barriers to education should be analyzed, since they do not allow giving a real and accurate response to students with special educational needs (SEN), whether from the methodological or theoretical aspect.



Therefore, ensuring quality in education means to provide the necessary support to eliminate any discrimination and the approach to diversity. This in turn requires distinguishing barriers or access according to their type and condition (Echeita, 2013).

The Inclusion Act (No. 20.845) refers to barriers or supports to all supports provided to students by an educator who, for some reason, has a SEN, and in some cases prevent the achievement of the learning objectives. Therefore, initial training is essential to improve teachers' tools and thus to address these barriers in achieving genuine inclusion.

Cisternas and Lobos (2019) identify in their research the situations that hinder attention to diversity:

All new teachers argue that they were inserted into schools where regulations and institutional definitions impose barriers to the practices they would like to develop. Three obstacles stand out: a) competition between students and their classification and ranking according to the performance, b) there is pressure to achieve curricular coverage, although the cost is lack of deepening, and c) the tendency to standardize teaching and/or evaluation strategies. (p. 46)

Arnaiz (2005), Granada et al. (2013), Meckes and Hurtado (2014) and Ruffinelli (2013) argue that training for diversity care is essential, as 92% of Pedagogical students say that regular education teachers do not have the necessary training to attend students with SEN.

When analyzing the curricular programs of some universities of Elementary teachers in Chile, it is observed that there are few subjects focused on the attention to diversity, inclusion and/or SEN. Sotomayor et al. (2011) conducted exploratory research on the initial training of Elementary teachers in Chile, although it is part of the discipline of language and communication, and the findings mention the importance

of knowing the content in learning difficulties or SEN.

Carter (2015) recommends the "keep pace with the curriculum" (p. 24), noting that some formation factors of high-quality initial education are due to training or lack of it in SEN and disabilities.

Likewise, continuing education programs of teachers need to be reviewed. Conde and Martín (2016) point out that the teacher has two fundamental moments during his/her working life: The first one focused on teaching, this one occurs when the teacher is a beginner; and the second one of the expert professor, who concentrates his/her task on learning. In both cases there is the need of training.

In relation to other quality indicators in initial teacher training, Ruffinelli (2013) said that the admission to the professional career, PSU (University Selection Test) whether it is a university or a CFP does not generate significant differences in its results if the teacher has had continuous or permanent training. However, a greater effect on the results is observed according to the socioeconomic level of the student, i.e. the higher the level of precariousness of the students the greater the effect of the teacher.

Hence, knowing that one of the determining factors for good educational quality is initial and ongoing training for teachers, it is necessary to ask what should be done to improve it? How can teachers have the right tools for students to achieve the levels required by the plans and programs of the Ministry of Education?

2. Method

This research aims to analyze and identify whether the training of teachers of the Elementary Education career from public or private institutions in three regions of Chile (Valparaíso, Santiago and Concepción) in the last ten years allows to respond to the legal provisions provided by the Ministry of Education.



2.1. Design

A cross-sectional, non-experimental descriptive design was used with information collection through questionnaires. The aim is to identify the theoretical and methodological needs of teachers in Chile to address the legal provisions of the Ministry of Education in the classroom in the context of the Inclusion Law. This exploratory method is used to “be familiar with relatively unknown phenomena” (Sampieri et al., 2010, p. 79), and then contrast it with a real situation and try to improve it.

2.2. Participants

The study population was made up of teachers who graduated in the last ten years (2008-2018), obtaining a final sample of 118 teachers. The selection was made by non-probabilistic causal sampling since a sample was directly extracted for accessibility or availability to participate in the sample (Latorre et al., 2003).

From the sample obtained, 77.2% were women and 22.8% were men, 41.6% lived in Santiago (Metropolitan region and the capital of the country), 28.7% in Valparaíso and 29.7% in Concepción (Biobío region). 56.8% were teachers under 34 years old, 30.5% were teachers between 35 and 50, and 12.7% were teachers over 50 years old. 69.5% only had university studies and 30.5% had postgraduate studies. Finally, 60.2% worked with students with transitory SEN, 5.1% worked with students with permanent SEN, and 34.7% worked with students with temporary and permanent SEN.

2.3. Instrument

A self-made Likert scale was used as an instrument for the study in order to identify the needs of Elementary teachers in their initial training with regard to theoretical and methodological elements in the context of the inclusion law. The answers range from 1 to 4, 1 being “does

not know” and 4 “knows a lot” in regards to the theoretical dimension, and in relation to the methodological dimension answers also range from 1 to 4, being 1 “little knowledge” and 4 “a lot of knowledge”.

The following criteria were used for designing the items: relevance, as each item sought to assess the knowledge level of theoretical and methodological aspects of teachers; clarity, as each item was presented in a language easy to be understood by the respondents; accuracy, since each item evaluated the construct. The instrument was composed of 33 items in two dimensions: The first related to the theoretical knowledge and the second to the methodological knowledge of teachers in the context of inclusive education. Once the scale was constructed, content validation was carried out by seven experts from the university training area of the Elementary Education career of public or private universities. Once the theoretical validation was carried out, the instrument was developed in two variables, one of nine items corresponding to the theoretical dimension and another of 24 items corresponding to the methodological dimension. The level of agreement calculated using Aiken’s V was 0.84 for the theoretical dimension and 0.90 for the methodological dimension, which are acceptable values exceeding the threshold established which is 0.75 (Charter, 2003; Penfield & Giacobbi, 2004). For the validation of the dimensionality scale, an EFA (Exploratory Factor Analysis) was applied. Bartlett’s sphericity test and KMO (Kaiser-Meyer-Olkin) index reached adequate levels, indicating the relevance of the EFA. Given these results, a major component extract was performed, using Kaiser’s criteria. The factorial structure of the results agreed with the theoretical structure of the instrument (all the items contributed to factorial charges greater than 0.4 in the corresponding theoretical dimension), reaching a variance of 55.9% in the first dimension and 64.8% in the second dimension. It should be noted that in the Social Sciences values of extracted variance higher than 50% are



considered good (Delgado, 2014), which allows to conclude that there is a high correlation level between items and dimensions. Therefore, it was possible to extract two main dimensions: Theoretical and methodological.

The final version of the questionnaire was developed online to facilitate its application. This was done using the Google Drive form, which was provided with sociodemographic data. Informed consent and questions of the two dimensions mentioned can be reviewed at: <https://bit.ly/3oPOkQr>

2.4. Variables

This research considered five sociodemographic variables for the instrument analysis: Gender, educational level, residence (region), age and SENs.

2.5. Procedure

It was implemented and lasted from August to September 2018.

To process the results obtained and to make the statistical analysis, SPSS software version 25 was used, and a descriptive analysis was carried out, where the frequency distribution for the two dimensions of the questionnaire was analyzed. The frequency distribution for each of the dimensions was also analyzed, and different hypothesis were contrasted in order to com-

pare sociodemographic groups (two or more independent groups). In each case, parametric contrast (t and ANOVA test) or non-parametric (Mann-Whitney U and Kruskal-Wallis H) were applied depending on the fulfillment of the previous assumptions of normality and homocedasticity.

3. Results

3.1. Knowledge of elementary teachers in theoretical and methodological aspects

It is noted in Table 1 that most of the teachers in the study refer that they have a high knowledge of the theoretical aspects of the legal provisions in the context of the Chilean inclusion law.

The mean obtained in the theoretical dimension was 2.9 over a maximum of 4, with a standard deviation of 0.67 points, which allows to affirm that teachers have a high knowledge in the theoretical dimension with a moderate dispersion, and in terms of the methodological dimension the data show that there is less knowledge of the teachers than the one they require to deal with the legal provisions. The average obtained from teachers is 2.73 points and a standard deviation of 0.74 points, which allows to observe that the knowledge of methodological aspects is significantly lower than that of the theoretical dimension, with a greater dispersion.

Table 1. Theoretical and methodological dimension statistics

Dimension	N	Mean	P ₂₅	Mdn.	P ₇₅	Sx	As.	Curt.
Theoretical	118	2.94	2.44	3.00	3.47	0.68	-0.343	-0.525
Methodological	118	2,73	2.25	2.75	3.37	0.74	-0.279	-0.635

Own elaboration.

It is noted that a significant number of teachers referred to have a high knowledge level of the theoretical dimension in terms of inclusive education. However, the greatest weakness

is seen in the first item with 33.9% of teachers who claimed not knowing some authors in the inclusion topic.



On the other hand, their high theoretical knowledge is observed in questions 2, 3 and 9 with 28.8 %, 36.4 % and 62.7 % respectively, as can be seen in Table 2. In this regard, it is surprising that most of teachers refer a clear distinction between integration and inclusion, concepts that have long coexisted in the Chilean education (Casassus, 2002; López et al., 2014; Soto, 2004).

In the methodological dimension, it is observed in Table 2 that the questions presenting the main difficulties are item 15 with 72.1% of the sample that indicates “little knowledge” or closer to “little” and that relates to aspects of virtual spaces that favor inclusive education; question 3 is also highlighted, in which 38.2% of the sample stated that they have “little knowledge” or closer to it in terms of working with different learning styles; item 5, where 38.2% identified the complexity levels of a content, adapting to the learning potential in inclusive education; item 8, where 45.8% realize that they are closer to having “little knowledge” to design a class that considers self-learning or collaborative work to address inclusive education in their classroom; and item 14, where 51.7% of the sample indi-

cated to be closer to “little knowledge” in relation to the curricular adaptation or to make an individual educational plan that allows to support students with SEN.

In this dimension, a sub-dimension of methodological aspects in the context of the inclusion law in Chile, associated with evaluative aspects, is analyzed separately. In this sub-dimension three questions appear with a percentage that is more associated with having “little knowledge” or close to it in the university formation, especially in evaluation aspects associated with inclusive education.

Item 21 shows that 53.4% did not have a training that would allow them to keep track of each of their students’ achievements. In item 22, 39.9% of teachers stated that they did not receive any tools in their formation to manage various evaluation strategies to measure the expected learning of their students; and in item 23, 39.4% of the professors stated that they do not recognize the feedback methodology as a way of adjusting, proposing and agreeing on improvements to the learning of the students.

Table 2. Descriptive analysis by frequency of the theoretical and methodological dimension

Ítem	1 (%)	2 (%)	3 (%)	4 (%)	Media	Sx
T1	33.9	27.1	27.1	11.9	2.16	1.03
T2	5.9	26.3	26.3	28.8	2.90	0.88
T3	5.9	24.6	33.1	36.4	3.00	0.92
T4	7.6	28.8	34.7	28.8	2.84	0.93
T5	10.2	18.6	37.3	33.9	2.94	0.96
T6	5.1	19.5	39.0	36.4	3.06	0.87
T7	11.9	16.1	39.0	33.1	2.93	0.98
T8	2.5	16.1	43.2	38.1	3.16	0.78
T9	2.5	11.0	23.7	62.7	3.46	0.79
M1	14.4	11.9	39.0	34.7	2.94	1.02
M2	4.2	25.4	37.3	33.1	2.99	0.87



Ítem	1 (%)	2 (%)	3 (%)	4 (%)	Media	Sx
M3	6.8	31.4	37.3	24.6	2.72	0.95
M4	9.3	24.6	38.1	28.0	2.84	0.93
M5	6.8	31.4	37.3	24.6	2.79	0.89
M6	5.1	20.3	40.7	33.9	3.03	0.86
M7	5.9	28.0	45.8	20.3	2.80	0.82
M8	11.9	33.9	31.4	22.9	2.65	0.96
M9	9.3	25.4	39.8	25.4	2.81	0.92
M10	15.3	34.7	30.5	19.5	2.54	0.97
M11	9.3	30.5	39.0	21.2	2.72	0.90
M12	11.0	26.3	41.5	21.2	2.72	0.92
M13	22.0	28.0	39.0	11.0	2.38	0.95
M14	17.8	33.9	29.7	18.6	2.49	0.99
M15	33.1	39.0	14.4	13.6	2.08	1.00
M16	9.3	28.0	43.2	19.5	2.72	0.88
M17	5.1	25.4	40.7	28.8	2.93	0.86
M18	8.5	22.0	41.5	28.0	2.88	0.91
M19	5.1	19.5	39.0	36.4	3.06	0.87
M20	12.7	22.9	28.8	35.6	2.87	1.04
ME21	11.9	41.5	33.1	13.6	2.48	0.87
ME22	9.3	31.4	39.8	19.5	2.69	0.89
ME23	8.5	31.4	33.1	27.1	2.78	0.94
ME24	11.9	25.4	40.7	22.0	2.72	0.93

Own elaboration.

3.2. Differences by groups according to sociodemographic variables

Analyzing gender differences in the dimensions using T Student parametric test for independent groups, it was observed that in the theoretical

dimension, although the mean score of men is slightly lower than that of women, there are no significant differences. However, there are significant differences in gender in the methodological dimension. Specifically, women achieve higher scores than men (Table 3).



Table 3. T Student of gender in the theoretical and methodological dimension

Gender	Theoretical dimension		Methodological dimension	
	Mean (Sx)	t (p.)	Mean (Sx)	t (p.)
Male	2,44 (0.65)	-1.15 (.25)	2,44 (0.66)	-1.15 (.015)
Female	2.59 (0.62)		2.83 (0.75)	

Own elaboration.

According to the educational level (university or master), when comparing the scores in the dimensions and applying the T Student parametric test for independent variables, it was observed that although the difference in means is slightly

favorable to teachers with a master's degree, there are no significant differences at the population level. With regard to the methodological dimension, it could be seen that there are no significant differences, as shown in Table 4.

Table 4. T Student educational level in the theoretical and methodological dimension

Educational level	Theoretical dimension		Methodological dimension	
	Mean (Sx)	t (p.)	Mean (Sx)	t (p.)
University	2.48 (0.64)	-1.89 (.62)	2.80 (0.78)	1.48 (.14)
Master	2.71 (0.57)		2.58 (0.65)	

Own elaboration.

As for differences in the dimensions according to the region, the one-way ANOVA test is applied to contrast them. It is observed that there are no significant differences in the

knowledge the sample has with regard to the place of residence (Valparaíso, Santiago or Concepción) of Elementary teachers for both dimensions (Table 5).

Table 5. ANOVA Residency of the theoretical dimension

City	Theoretical dimension		Methodological dimension	
	Mean (Sx)	F (p.)	Mean (Sx)	F (p.)
Valparaíso	2.70 (0.57)	3.05 (.51)	2.85 (0.71)	1.84 (.16)
Santiago	2.38 (0.63)		2.81 (0.69)	
Concepción	2.63 (0.64)		2.56 (0.81)	

Own elaboration.

With regard to age, applying the one-way ANOVA test showed that there are significant differences in participants' knowledge in the methodological dimension and not in the theoretical dimension. In particular, when applying the post-hoc test (Scheffé procedure) it is observed that the first two stages, i.e., teachers between 0-34 and between 35-49 years, have significant

differences in the methodological knowledge in the context of the inclusion law in Chile, which is favorable to 0-34-year-old teachers. When applying the same ANOVA for a sample, it could be observed that there is no difference in teachers in terms of the type of SEN they work with, both for the theoretical and methodological dimension (Table 6)



Table 6. ANOVA age and SEN of participants in the theoretical and methodological dimension

Edad	Theoretical dimension		Methodological dimension	
	Mean (Sx)	F (p.)	Mean (Sx)	F (p.)
0-34 years old	2.52 (0.62)	0.42 (.66)	2.89 (0.69)	4.77 (.010)
35-49 years old	2.58 (0.68)		2.43 (0.81)	
≥50 years old	2.68 (0.51)		2.75 (0.65)	
SEN				
Transients	2.47 (0.63)	1.90 (.15)	2.75 (0.75)	0.23 (.80)
Permanent	2.70 (0.93)		2.54 (0.66)	
Transitory an permanent	2.70 (0.56)		2.74 (0.76)	

Own elaboration.

4. Discussion

It is important to discuss the difference obtained in the methodological dimension according to the age variable, where higher scores are observed in the 0-34-year-old teacher group compared to the 35-49-year-old teacher; it could be assumed that younger teachers have a more positive attitude towards inclusion. Although the results among teachers over the age of 50 are not conclusive, it should be noted that the sample size of this section was small, only 15 people. Other research (Forlin & Chambers, 2011; González-Gil et al., 2016) has shown that less experienced, novice teachers have a more positive attitude to students with some type of SEN.

In the methodological dimension, it is possible to observe that there are more weaknesses in the initial formation to work with different strategic designs of a class that promote self-learning or collaborative work, a topic that has been essential for inclusive education (García-Valcárcel et al., 2014; Jiménez, 2014; Marín et al., 2014; Muñoz et al., 2014; Ortiz & Gastelú, 2016; Vargas et al., 2017; Puighellivol et al., 2019).

Teachers declare that they have not obtained information of inclusive education in their initial formation and/or continuous preparation in the promotion of collaborative networks, which is a studied and demonstrated aspect that has a high impact on inclusive education (Puighellivol et al., 2019; Ainscow et al.,

2004; García-Valcárcel et al., 2014; Madrazo et al., 2018; Nel et al., 2014; Vargas et al., 2017).

The lack of initial or continuing training has hindered the ability to implement curricular adaptations required by Decree 83 or to generate individual educational plans, which allow to focus the learning process on the person as a measure (habitual or extreme) to support students with SEN. González-Gil et al. (2019) agree that the main barrier is the lack of training, since the one they receive is theoretical and is not consistent with the teaching practice.

When discussing the importance of inclusive education, it is important to know virtual spaces that promote it. Sotomayor et al. (2011) and mainly (Puigdelithol et al. (2019) point out that digitization in education is an opportunity for education and especially for students with SEN, as “digital tools can help the educational environment in different fields, and specifically can respond by guaranteeing diversity” (p. 667).

In short, teachers believe they did not learn the importance of human resources (psychopedagogy, psychologist, differential educator or others) in their training as facilitating agents in working with students with SEN. In this regard, Torres-Santomé (2019) pointed to the importance of working with the support of others — teachers and specialists — for a better intervention of every school reality. Puigdelithol et al. (2019) refer to the benefits of a specialist's eyes, since this allows a more comprehensive



diagnosis and the possible needs that the student might have in his or her learning.

5. Conclusions

The study data show that future teachers acquire, throughout the initial training, a complete and updated training that favors the inclusion and development of changes and proposals at the legislative level, at least in the theoretical aspects. However, from a methodological point of view, two significant differences observed in the analysis of the results must be highlighted; one is gender, which is produced in the knowledge of elementary teachers, where women have more domain of methodological knowledge than men. In this regard, other previous studies and research (Alonso et al., 2012; Chiner, 2011; Rebolledo et al., 2011) have indicated that women have a more positive attitude toward inclusion, which means they implement more strategies for students to achieve their learning objectives.

In contrast to these results, González-Gil et al. (2016) indicate that there are no gender differences in educational practices, noting only differences in inclusive policies which seem to be better integrated by men, but the results allow to propose a review of the programs in the initial training to be adapted to the requirements/demands/needs of the teachers to respond to the needs of the school context.

Another conclusive point is the lack of articulation between the institutions and the requirements of pedagogical practice, at least from a methodological point of view, since educational institutions must be constantly improving their quality to ensure the vocational training of their students. In this sense, the results obtained in this work agree with those indicated by Carter (2015), which refer to the need to address the individuality of students with SEN, as noted in the introduction, and which gives an account of the so-called “keep pace with the curriculum” (p. 24).

In short, among the contributions of this work, it is possible to consider the importance of

the initial and continuing education of teachers, which is a responsibility that must be assumed by the educational centers and the State, as well as by the educational communities when generating their training programs (Cisternas & Lobos, 2019; Contreras & Villalobos, 2010; Lozano, 2016).

6. Limitations and prospective

This article presents generalization as a limitation, since although the study is based on the three most populated regions of Chile, it is possible that there are training experiences in less populated regions of the country and that were not considered in the research. Nor is it possible to generalize the results obtained in this research to other Latin American countries, given the diversity of teaching training in the region.

Finally, at the prospective level, this study opens new lines of research associated with the teaching practice, the role of tutors and the importance of training future teachers as well as preparing them. It can be complemented by a qualitative study that allows to contrast the opinion of the trainers, beyond the perception of those who are in exercise and the revision of the curricular programs in order to improve education and achieve an inclusive education for all.

References

- Ainscow, M. (1991). Effective schools for all: An alternative approach to special needs in education. *Cambridge Journal of Education*, 21(3), 293-308.
<https://doi.org/10.1080/0305764910210304>
- Ainscow, M., Booth, T., & Dyson, A. (2004). Understanding and developing inclusive practices in schools: A collaborative action research network. *International Journal of Inclusive Education*, 8(2), 125-139.
<https://doi.org/10.1080/1360311032000158015>
- Alonso, R., Hernández, A., & Hanamboure, R. (2012). Logros y desafíos para un currículo inclusivo. *Pedagogía Universitaria*, 17(3), 61-75.



- Arnáiz, P. (2005). *Atención a la diversidad. Programa curricular*. Editorial Universidad Estatal a Distancia.
- Bahamón-Muñetón, M.J., Vianchá-Pinzón, M.A., Alarcón-Alarcón, L.L., & Bohórquez-Olaya, C.I. (2012). Estilos y estrategias de aprendizaje: Una revisión empírica y conceptual de los últimos diez años. *Pensamiento psicológico*, 10(1), 129-144. <https://bit.ly/2RcCv85>
- Calvo, M.I., Verdugo, M.Á., & Amor, A.M. (2016). La participación familiar es un requisito imprescindible para una escuela inclusiva. *Revista Latinoamericana de Educación Inclusiva*, 10(1), 99-113. <https://bit.ly/35qBW2H>
- Carbonero, M.Á., Martín-Antón, L.J., Román, J.M., & Reoyo, N. (2010). Efecto de un programa de entrenamiento al profesorado en la motivación, clima de aula y estrategias de aprendizaje de su alumnado. *Revista Iberoamericana de Psicología y Salud*, 1(2), 117-138. <https://bit.ly/33jQJWW>
- Carter, A. (2015). *Carter review of Initial Teacher Training (ITT)* Inglaterra. <https://bit.ly/2ZrUZWA>
- Casassus, J. (2002). Cambios paradigmáticos en educación. *Revista Brasileira de Educação*, 20, 48-59. <https://bit.ly/3kcYGHL>
- Charter, R.A. (2003). A breakdown of reliability coefficients by test type and reliability method, and the clinical implications of low reliability. *The Journal of General Psychology*, 130(3), 290-304. <https://doi.org/10.1080/00221300309601160>
- Chiner, E. (2011). *Las percepciones y actitudes del profesorado hacia la inclusión del alumnado con necesidades educativas especiales como indicadores del uso de prácticas educativas inclusivas en el aula* (Tesis Doctoral). Universidad de Alicante. <https://bit.ly/3lZsJ61>
- Cisternas, L., & Lobos, A. (2019). Profesores noveles de enseñanza básica: Dilemas, estrategias y obstáculos para abordar los desafíos de una educación inclusiva. *Revista Latinoamericana de Educación Inclusiva*, 13(1), 37-53. <http://dx.doi.org/10.4067/S0718-73782019000100037>
- Conde-Jiménez, J., & Martín-Gutiérrez, Á. (2016). Potencialidades y necesidades de mejora en la formación de profesores noveles universitarios. *Revista Electrónica de Investigación Educativa*, 18(1), 140-152. <https://bit.ly/3ifq2fD>
- Contreras, G., & Villalobos, A. (2010). La formación de profesores en Chile: Una mirada a la profesionalización docente. *Educación y Educadores*, 13(3), 397-417. <https://bit.ly/3ipAhOw>
- Delgado, C. (2014). *Viajando a Ítaca por mares cuantitativos*. Amarú.
- Durán, D., & Climent, G. (2017). La formación del profesorado para la educación inclusiva: Un proceso de desarrollo profesional y de mejora de los centros para atender la diversidad. *Revista Latinoamericana de Educación Inclusiva*, 5(2), 153-170. <https://bit.ly/33p4kQi>
- Echeita, G. (2013). Inclusión y exclusión educativa: De nuevo 'Voz y Quebranto'. *REICE. Revista Electrónica Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 11(2), 99-122. <https://bit.ly/2ZpHXbW>
- Florian, L. (2010). Special education in the era of inclusion: The end of special education or a new beginning? *The Psychology of Education Review*, 34(2), 22-29. <https://bit.ly/2DUK0xq>
- Forlin, C., & Chambers, D. (2011). Teacher preparation for inclusive education: Increasing knowledge but raising concerns. *Asia-Pacific Journal of Teacher Education*, 39(1), 17-32. <https://doi.org/10.1080/1359866X.2010.540850>
- García-Valcárcel, A., Basilotta, V., & López, C. (2014). Las TIC en el aprendizaje colaborativo en el aula de Primaria y Secundaria. *Comunicar*, 21(42), 65-74. <https://bit.ly/32hXaxB>
- González-Gil, F., Martín-Pastor, E., Poy, R., & Jenaro, C. (2016). Percepciones del profesorado sobre la inclusión: Estudio preliminar. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 19(3), 11-24. <https://doi.org/10618/reifop.19.3.219321>
- González-Gil, F., Martín-Pastor, E., & Poy, R. (2019). Educación inclusiva: Barreras y facilitadores para su desarrollo. Análisis de la percepción del profesorado. *Revista Currículum y formación del profesorado*, 23(1), 243-263. <https://doi.org/10.30827/profesorado.v23i1.9153>
- Granada Azcárraga, M., Pomés Correa, M.P., & Sanhueza Henríquez, S. (2013). Actitud de



- los profesores hacia la inclusión educativa. *Papeles de Trabajo*, 25, 51-59. <https://bit.ly/3bOOIJw>
- Infante, M. (2010). Desafíos a la formación docente: Inclusión educativa. *Estudios Pedagógicos (Valdivia)*, 36(1), 287-297. <https://bit.ly/3ijmzN2>
- Jiménez, A. (2014). La didáctica multigrado y las aulas rurales: Perspectivas y datos para su análisis. *Innovación educativa*, 24, 119-131. <https://doi.org/10.15304/ie.24.1994>
- Latorre, A., Rincón, D., & Arnal, J. (2003). *Bases metodológicas de la investigación educativa*. Hurtado.
- Lee, J., & Shute, V. (2010). Personal and Social-Contextual Factors in K-12 Academic Performance: An Integrative Perspective on Student Learning. *Educational Psychologist*, 45(3), 185-202. <https://doi.org/10.1080/00461520.2010.493471>
- López, V., Julio, C., Pérez, M., Morales, M., & Rojas, C. (2014). Barreras culturales para la inclusión: Políticas y prácticas de integración en Chile. *Revista de Educación*, 363, 256-281. <https://doi.org/10.4438/1988-592X-RE-2012-363-180>
- Lozano, A. (2016). Las trayectorias formativas de los formadores de docentes en México. *Actualidades Investigativas en Educación*, 16(1), 136-161. <https://doi.org/10.15517/aie.v16i1.22671>
- Madrazo, A., Juarros, I., & Loroño, M. (2018). Funcionamiento democrático y ABP: Factores determinantes para la inclusión y el rendimiento del alumnado. *Revista Electrónica de Investigación Educativa*, 20(2), 103-112.
- Marín V., Negre, F., & Pérez, A. (2014). Construction of the foundations of the PLE and PLN for collaborative learning. *Comunicar: Revista Científica de Comunicación y Educación*, 21(42), 35-43. <https://doi.org/10.3916/C42-2014-03>
- Martínez, F. (2016). *La evaluación de docentes de educación básica*. INEE. <https://bit.ly/2RfsuXF>
- Martinic, S., Moreno, R., Müller, M., Pimentel, F., & Rittershaussen, S. (2014). Análisis comparativo del componente de práctica en el currículo de formación profesional de médicos y profesores en la Pontificia Universidad Católica de Chile. *Estudios pedagógicos*, 40(1), 179-196. <https://bit.ly/32hrJni>
- Meckes, L., & Hurtado, C. (2014). Los nuevos profesores en Chile: ¿Quién los contrata, qué aprenden y cuán efectivos son? *Notas de Educación*, 16. <https://bit.ly/3k5hXuv>
- Moreno, A., & López de Maturana, L. (2015). Ambientes educativos escolares: Una investigación sobre la propensión a aprender en jardines infantiles chilenos. *Estudios pedagógicos (Valdivia)*, 41(Especial), 169-180. <http://dx.doi.org/10.4067/S0718-07052015000300011>.
- Muñoz, J., Serrano, R., & Marín, V. (2014). El aprendizaje colaborativo y su desarrollo a través de mapas mentales. Una innovación educativa en la formación inicial docente. *Educatio Siglo XXI*, 32(2), 193-212. <https://bit.ly/3mempJ6>
- Nel, M., Engelbrecht, P., Nel, D., & Tlale, D. (2014). South African teachers' views of collaboration within an inclusive education system. *International Journal of Inclusive Education*, 18(9), 903-917. <https://doi.org/10.1080/13603116.2013.858779>
- OCDE (2013). The role of financial education in financial inclusion. OCDE. <https://bit.ly/3hoFjcK>
- Pastor, C. G. (2003). Segregación, integración e inclusión. Bordón. *Revista de pedagogía*, 55(1), 9-26. <https://bit.ly/35v7Wmf>
- Pegalajar, M. & Colmenero, M. (2017). Actitudes y formación docente hacia la inclusión en educación secundaria obligatoria. *Revista Electrónica de Investigación Educativa*, 19(1), 84-97. <https://doi.org/10.24320/redie.2017.19.1.765>
- Penfield, R., & Giacobbi, P. (2004). Applying a score confidence interval to Aiken's item content-relevance index. *Measurement in physical education and exercise science*, 8(4), 213-225. https://doi.org/10.1207/s15327841mpee0804_3
- Puigdellivol, I., Petreñas, B., & Jordi, A. (2019). *Estrategias de apoyo en la escuela inclusiva: Una visión interactiva y comunitaria*. Graó.
- Rebolledo, M., García, R., Piedra, J., & Vega, L. (2011). Diagnóstico de la cultura de género en educación: Actitudes del profesorado hacia la igualdad. *Revista de Educación*, 355, 521-526. <https://doi.org/10.4438/1988-592X-RE-2010-355-035>



- Ruffinelli, A. (2013). La calidad de la formación inicial docente en Chile: La perspectiva de los profesores principiantes. *Calidad en la educación*, (39), 117-154.
<https://doi.org/10.31619/caledu.n39.80>
- Sampieri, H., Collado, F., & Lucio, B. (2010). *Metodología de la investigación*. (5. ed.). Mc Graw Hill.
- San Martín, E. (2014). ¿Es la prueba INICIA una medida predictiva de efectividad docente? FONIDE. <https://bit.ly/33cj4BC>
- Sotomayor, C., Parodi, G., Coloma, C., Ibáñez, R., & Cavada, P. (2011). La formación inicial de docentes de Educación General Básica en Chile. ¿Qué se espera que aprendan los futuros profesores en el área de Lenguaje y Comunicación? *Pensamiento Educativo*, 48(1), 28-41.
<http://dx.doi.org/10.7764/PEL.48.1.2011.3>
- Tébar, L. (2010). La evaluación de aprendizaje y competencias en el aula. *Fides et Ratio-Revista de Difusión cultural y científica de la Universidad La Salle en Bolivia*, 4(4), 86-98.
<https://bit.ly/35y3Fyi>
- Torres-Santomé, J. (2019). Formación del profesorado y educación como proyecto político e inclusivo. *Educação & Realidade, Porto Alegre*, 44(3), e84911.
<http://dx.doi.org/10.1590/2175-623684911>
- Vadillo, R. (2014). Integración e inclusión educativa vs integración e inclusión excluyente. *Revista Mexicana de Investigación Educativa*, 19(63), 1285-1290. <https://bit.ly/2FmDDTQ>
- Vargas, F., Sazatornil, J., & Cisternas, C. (2017). Aprendizajes, inclusión y justicia social en entornos educativos multiculturales. *Revista Electrónica de Investigación Educativa*, 19(3), 10-23.
<https://doi.org/10.24320/redie.2017.19.3.830>

