



Migration in the Classroom to the light of Multicultural Beliefs and Constructivist Teaching Practices

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The significant increase in immigration in Chile poses great challenges in schools that receive new students. However, there is not enough information on how schools and teachers embrace this new diversity. In this context, this article analyses multicultural beliefs and constructivist teaching practices in Chilean schools. Although this study tries to describe teaching beliefs and practices, it also explores, through a multivariate analysis, the explanatory factors of teachers' constructivist and multicultural tendencies. A questionnaire was applied to teachers and students to analyse and compare their perceptions and practices. The results suggest clues about the relevance of "individual educational" personal variables informing inclusive and culturally sensitive education. The "systemic level" variables, the institutional ones, do not show the same incidence in terms of multicultural beliefs and constructivist teaching practices. This statistical study opens future possibilities for complementary qualitative studies and comparative exercises.

Keywords: Chile, constructivism, education, migration, multiculturalism, teachers

INTRODUCTION

Chile has experienced the sustained arrival of Latin American migrants from the 1990s until today. Added to the migration from neighbouring countries such as Peru, Argentina, and Bolivia, in this new century, we have witnessed the arrival of migrants coming from greater geographical distances such as Ecuador, Venezuela, Haiti, Colombia, Dominican Republic, among other South American and Caribbean countries. Following the data reported by the last 2017 CENSUS (INE, *National Statistical Institute*, 2018), Chile hosts around 746,465 people born abroad with permanent residence in our country. Although this is the official current census figure, Chile's National Statistical Institute estimated that on December 31st, 2019, 1,492,522 foreign

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people were living in the country. This implies an increase of, at least, 3 percentage points compared to the 1992 Census. Regarding their national origin, mainly people from Peru (28%), Colombia (14%), and Venezuela (14%) stand out, according to the data issued by the Department of Foreign Affairs and Migration.

If, until 2015, and according to the data provided by the Ministry of Education (2016), there were 30,635 migrants registered in the pre-school, primary, and secondary education levels in the country, this number would have increased significantly for the year 2018, reaching a total number of 160,461 migrant students, representing 4.4% of the total. Most of them can be found in public education (94,811), and come mainly from Venezuela (23,790), Colombia (7,451), Bolivia (8,218), Perú (6,246), and Haiti (6,209).

This transformation in the morphology of the Chilean educational system has not only had an impact on demographic order. Research on social sciences and education has shown that the presence of migrant boys, girls, and teenagers is changing school cultures, learning environments, coexistence, and educational policies (Barrios-Valenzuela & Pelou-Julian, 2014; Joiko & Vázquez, 2016). A large part of the studies related to migration and education have been focused on the integration difficulties that migrant children present once they enter the educational system, emphasizing how the school setting – from micro-interactional levels to institutional actions – is constituted as a reproducer of relations characterized by forms of domination, discrimination, and differentiation, based on oppositional logics (Hevia Kaluf, 2009; Barlett, 2012; Tijoux, 2013; Riedemann & Stefoni, 2015; Joiko & Vázquez, 2016;).

This confirmation has boosted the development of a series of proposals that, from the academia and civil society, are questioning the State and institutions about the necessary transformation of educational settings to promote, as required, more inclusion, respect for cultural diversity, the conformation of multicultural ways of learning, anti-racist educational policies, education with intercultural perspective, etc. (Tijoux, 2013; Pavez, 2012; Riedemann & Stefoni, 2015; Barrios-Valenzuela & Pelou-Julian, 2014).

These previous challenges are brought up by the mere presence of the migrant population in the country, but they are also defined by a series of technical and academic proposals of critical and constructivist education oriented to the construction of educational settings that horizontally integrate the current diversity of beliefs, ethnicity, national origin, functional, sexual, and gender diversities (Cruz, 2018; Orellana, 2018; García-Yepes, 2017; Galarce, 2017; Moreno, et.al., 2017; Espejo, 2016). Similar interpretations and proposals have also been developing in countries such as Germany, Spain, the U.S.A., and Israel where international migration has been spreading for several years (Hachfeld et.al., 2011; 2015; Ridaó, 2006; Leutwyler et.al. 2012; Nurit & Harari, 2014).

Among the diversity and complexity of factors that affect formation, inclusion, and coexistence in the classroom and educational setting, a series of studies has stressed the importance of teachers (Navas & Sánchez, 2010; Aranda, 2011; Jiménez & Fardella, 2015; González et.al., 2013, Hernández, 2016; Mora, 2018; Kim, 2018). This research

have suggested that teachers' attitudes and convictions towards cultural diversity are fundamental to have an influence either on the inclusion or exclusion of migrant students.

This article asks about multicultural beliefs and constructivist teaching practices in 6 schools in the Santiago Metropolitan Region in Chile. Specifically, it is intended to identify the explanatory factors of their constructivist and multicultural tendencies in their teaching practices with migrant students. Although the emphasis of this study describes teaching beliefs and practices of teachers in schools with migrant students, it also explores, through a multivariate logic, the explanatory factors of their constructivist and multicultural trends. The results here exposed correspond to the first stage of the research which considered the implementation of a self-applied questionnaire answered by Science and Mathematics teachers of secondary education, and by students from second, third, and fourth grades of secondary education, to analyse and compare their perceptions and dispositions.

State of the Art: studies on migration and education in Chile

The sustained arrival of migrants and its social, economic, political, and cultural repercussions in Chile has created, since 1990 but specially in the last decade, a strong field of study on migration. A series of studies oriented to characterize – in a general manner – the effects of migration on several points of the national reality, have been carried out (Rojas Pedemonte & Silva, 2016; Stefoni, 2011). In the same way, there are research that have identified elements associated with migrant groups from certain specific nationalities, and their forms of insertion in Chilean society (Rojas Pedemonte et.al., 2017; Guizardi & Garcés, 2014) or geographic areas (Stefoni & Stang, 2017). Likewise, a series of research have been conducted on specific subject areas such as work (Stefoni & Fernández, 2011; Solimano et.al., 2012), housing (Contreras et.al., 2015; Margarit & Bijit, 2014), gender relations (Pavez, 2016; Carrère & Carrère, 2015), formation of migrant families and ethnic networks (Garcés & Maureira, 2018), among others. In general, this research has tended to confirm two fundamental issues; (i) Latin American migrants experience a series of forms of discrimination, stigmatization, and mechanisms of exclusion that work from micro-relational to institutional levels, due to the prevalence of racist discourses and practices (Tijoux & Córdoba, 2015), and (2) Migrants put a strain on the traditional notions of citizenship, rights, or territory, from their social practices, agencies, and forms of insertion (Stefoni & Stang, 2017; Guizardi & Garcés, 2014).

Research on migration that specifically deals with education in Chile, has addressed a set of subjects, using different research methods. Among them, it is possible to distinguish at least three types of research. The first one focused on school settings with the presence of migrant students, from qualitative approaches, have tended to emphasize forms of discriminatory interactions, discourses, and practices towards foreign students from different members of the educational community (teachers, headmasters, management teams), ranging from expressions of biological racism to cultural racism (Tijoux, 2013; Riedeman and Stefoni, 2015). The second seek on the reasons behind the decision made by migrant families when it comes to choosing a school. Joiko and

Vásquez (2016) have pointed out that, potentially, schools would not only be spaces in charge of the integration of migrant students but also, they can act as an institutional bridge for the integration of migrant families into Chilean society. The third type of research, relevant for the present study is the incidence of the teachers' role and their thoughts and attitudes in front of multiculturalism in the integration or exclusion of migrant students.

Regarding the teacher's role, authors such as González, Berrios, and Buxarris (2013) have mentioned that teachers are the main axis of an education that promotes the integration of cultural diversity, and the motor of educational changes required by the current cultural diversity in schools. In the same way, Navas and Sánchez (2010) have stated that preschool education is a privileged space to develop formative perspectives on the integration of minorities. The authors identified that education students show positive attitudes towards multiculturalism in the learning process. However, they also express the existence of forms of masking prejudicial attitudes against foreign students. This could be explained, as demonstrated by other studies, by the monocultural character of teachers training in Chile, understanding cultural differences more as a problem rather than a dynamizing educational fact (Barrios-Valenzuela & Palou-Julián, 2014; Jiménez et.al., 2017; González et.al., 2013). It is commonly mentioned that the absence of teacher training programs, school curriculum, welfare, coexistence, and integration programs, hurt the experience of foreign children and teenagers (Mora, 2018; Hernández, 2016; Stefoni & Riedeman, 2015; Joiko & Vásquez, 2016). In the last decade, Chile has grappled with a serious deficit in the initial training of teachers in multicultural contexts (Ruffinelli, 2013, quoted in Gaete, 2016). 54% of teachers interviewed by the Teacher Census (Eduglobal, 2018) admitted that they were trained to educate "students of similar customs, values, and ways of speaking". Meanwhile, only 24% of teachers claim that they were trained to work with foreign students.

This research studies how teachers address cultural diversity in the classroom and their beliefs concerning multiculturalism. Also, through a comparative exercise, we shall proceed to contrast their opinions and perceptions with those of Chilean and migrant students, in schools with the recent and significant presence of foreign students. As we are dealing with two relevant actors in the educational process (teachers and students) who have been studied, so far, mainly ethnographically in Chile, this study has adapted two quantitative scales: the scale on constructivism, known as CLES (Constructivist Learning Environment) and the scale on multicultural/egalitarian cultural beliefs, known as TCBD (Teacher Cultural Beliefs Scale). Later, we will go more deeply into it.

Multiculturalism and constructivism in school education

The relevance of egalitarian and multicultural beliefs in education.

In this study, the importance of teachers' cultural beliefs in classrooms with migrant populations stands out, emphasizing the fact that if a teacher has multicultural or equal beliefs, this is not indifferent. Recognizing the great discussion about the concepts of egalitarianism and multiculturalism, in this study, both shall be used as binary categories, only with merely analytical objectives. Multiculturalism shall include all

variants that recognize and value diversity in a society, including liberal views, and those from a critical tradition associated with interculturality. In contrast, all views that deny or dismiss the existence of diversity, this is, that do not recognize it or value it as social wealth and reality, emphasizing similitudes among people as value, shall be considered analytically in the egalitarian approach. Indeed, there are gradients between these two approaches, but, as analytical categories, we shall use them here as binary typology, which shall undoubtedly make other variables gain richness, systemic or individual, and as will be seen below, with other binary categories over teaching practices: constructivism and behaviorism.

In the first case, individuals with multicultural trends believe that cultural differences exist, must be accepted, and are rewarding. Thus, in the educational context, teachers with multicultural beliefs would incorporate cultural differences of their students in daily life, while planning their classes and interacting with students. In turn, equal beliefs would emphasize the importance of treating everyone the same, looking for similitudes and common elements that bring people from different ethnic and cultural origins together. For supporters of equality, categorization based on ethnicity would be a source of discrimination, and this must be avoided. In this sense, in the educational context, teachers with equal beliefs would pay less attention to the cultural backgrounds of their students, focusing on similitudes and elements that make them equal, giving less emphasis to the cultural background in the planning of their classes and of daily interaction (Hachfeld et.al., 2011; Hachfeld et.al., 2015).

Even though in practice, Hach Feld and her team have identified that favourable beliefs toward multiculturalism do not necessarily imply teaching that transmits a true valuation of human diversity, our position supposes that these beliefs are an inadequate, but necessary, condition for ideal learning within – and about – diversity. Likewise, teachers' positive beliefs on diversity do not necessarily have beneficial consequences for the education of students from ethnic or national minorities, but these work as the basic condition of possibility. In other words, in these contexts of diversity, the lack of multicultural beliefs is more defining in the quality of teaching than its presence.

Constructivist perspective in education

Following the studies of Navas and Sánchez (2010), Hachfeld, et.al (2011; 2015), Leutwyler, Petrovic, and Mantel (2012) among other authors, we assume that teaching beliefs and practices toward migrant students are key elements of their educational process, academic success, development of identity, and integration. This does not only result in a favourable or unfavourable attitude towards migration or cultural diversity but also – and fundamentally – in the perspectives concerning the ways of teaching and conceiving the educational process. Despite the diversity of existing theories about education and how the educational process is addressed, it is possible to state that constructivist education is closer to this kind of teachers' beliefs.

Constructivism in education has its origins in philosophy and psychology. For constructivists, knowledge is not received passively, but it is developed by the cognitive subject and his interactions, this is, it is constructed relationally. In this sense, learning

or cognition is adaptative and works for the organization of the experiential world. According to Glaserfeld (1989), for constructivism, people not only have access to mind sensations and operations, through which they construct their experiential world. Things such as space, time, or causality, are not elements of human reason, but they are the result of the adaptation of living beings to the universe. This adaptative process would always be under continuous production and operation; therefore, it depends on the reality of the world experienced. For constructivism, knowledge, in this sense, cannot and must not be true, but it should be viable and useful for the individual's experiences (Glaserfeld, 1989; Canaparo, 2012). Accordingly, Leutwyler, Petrovic, and Mantel (2012) say that, for constructivism, reality is constructed constantly through interactions with others, assigning individual meanings to their events and experiences based on our constructions. These authors suggest that people continually construct hypotheses on how reality works, to predict the behavior of others and prove these hypotheses in a continuous process of construction and reconstruction. In these processes, sometimes, our beliefs are confirmed, and at other times, challenged. In this last case, the need of expanding or changing them would be assumed.

In this respect, in the educational field, we distinguish between the teaching strategies that aim to generate understanding and those that look for the repetition of behaviors (teaching vs training). For the constructivist approach, teachers must be focused on what they could infer about what happens in the student's head, guiding their construction. In this light, they are interested in the students' "mistakes", insofar as they shed light on how they organize their experiential world. Thus, there would not be standardized teaching methods, and these would depend, to a large extent, on each set of reality. According to Glaserfeld (1989), teachers' actions should not only aim to infer the conceptual structures and operations of students, but they must find ways and means to change them.

Constructivism and culturally sensitive education

A constructivist perspective in education is related to a mostly favourable attitude towards the recognition of the singularity of each person and the development of educational strategies that could – hypothetically – allow the development of forms of culturally sensitive education. Nevertheless, what do we mean by this concept when applied to the study of education with migrants? Following the postulates made by Bennett (2004) and Leutwyler, Petrovic, and Mantel (2012), when applying the constructivist approach of teaching to the field of multiculturalism, it becomes evident that beliefs produce realities through different levels of sophistication and complexity.

In this way, both Bennet (2004) and Leutwyler, Petrovic, and Mantel (2012) culturally sensitive education would have to do with the development of complex categories for human diversity. For the authors, cultural sensitivity could be seen in a development model of six levels. In the first three levels, a view of the ethnocentric world would be identified, which considers the frame of reference of culture itself to assess and organize perceptions and actions concerning reality, keeping beliefs and behaviors learned in primary education is unquestionable. The next three levels would be delimited on an etnorelative view, where personal beliefs and behaviors are assumed as a form of

organization of reality among many other possibilities. In this way, it shall be understood that teachers construct their images based on cultural differences and similitudes for their constructions of reality. These constructions have an influence on their ways of thinking, feeling, and acting in contexts of cultural heterogeneity, and these can be adapted to their personal experiences. In this sense, intercultural sensitivity states that there will be significant differences between ethnocentric and etnorelative views of the world, which have an impact on the educational processes of migrant students.

Based on the information exposed in previous sections, the present study searches for the response of teachers in front of cultural diversity in the classroom. Understanding that migration and incorporation of Latin American migrant students to Chilean schools is a relatively recent phenomenon, we wonder about the kind of teaching practices with which teachers would face this new reality and the factors that would influence their ways of teaching. Therefore we intend to inquire into teachers' practices assessing how constructivist these are.

METHOD

General Background

This study has a quantitative approach and intends to analyze and compare teaching practices from the students' perspective, as well as teachers' self-report. Although there are studies that have investigated the incorporation of migrant students into Chilean schools, demonstrating racist or xenophobic practices occurring within the school setting, the present research intends to be a first exploration of constructivism in contexts of cultural diversity. Although there are investigations that use the scales used in this research, until now, this same exercise has not been carried out in the national context. We believe that this is an important first approximation to know how multiculturalism works in the classroom in South America.

Participant

The sample included educational establishments from the Metropolitan Region, both of municipal dependence and local service, belonging to districts with growing migration rates, but which, historically, do not register the largest presence of foreign population (as Santiago Centro, Quilicura, Recoleta, Independencia, etc.). This selection responds to the over-intervention of schools with a high percentage of migrant enrolment, as well as to the possibility that, in those schools, teachers would have accumulated experience in multicultural classrooms, while we are interested in knowing teachers' initial answers before the new diversity. Besides, schools where migrant enrolment is over 30% do not exceed 1% of the total number of schools at the national level (Expósito et.al., 2019).

In addition, the criteria of accessibility to schools were considered. This allowed having, in the sample, a semi-private school that belongs to one of the districts with the largest migrant population in the region, enabling comparisons among different kinds of schools.

Thus, the sample is made up of 6 schools; 5 of them of municipal dependence, whose percentage of the migrant population does not exceed 20%, and 1 semi-private school whose proportion of migrant enrolment comes to 35%. The establishments belong to the following districts of the city of Santiago: Peñalolén, Maipú, Pudahuel, Lo Prado, and Estación Central.

For its part, the contact with the establishments was made directly with the headmasters, or through the Migration or Diversity Offices of each district.

The sample considered students at some level of secondary education (from first to the fourth year), this is, their ages fluctuated between 14 and 20 years. In the case of teachers, we considered those whose subjects taught were Mathematics, Science, and Technology, and who were teaching classes of secondary education at the time of the fieldwork. This selection is since, originally, the questionnaire enunciates practices for the Science class, aiming to greater neutrality in the classroom, dismissing possible trends or positions that are more marked for the migration phenomenon and cultural diversity that could emerge from social sciences or humanities.

There is no minimum sample size by convention, however, it is recommended, at least, 30 cases for univariate and bivariate analyses, and 300 for multivariate analysis (Tabachnik et al., 1989). In this context and given the access possibilities, the sample was formed by 18 teachers from the areas already mentioned, and their 33 students who were at some level of secondary education at the time the study was conducted.

Instrument/Procedure

From the bibliographic review concerning the subject studied, it was decided to use the CLES (*Constructivist Learning Environment*) scale on constructivism. The scale was applied and validated in other contexts, both university, and school, and at the international level (Taylor & Fraser, 1991; Taylor et.al., 1994; Wong Su Luan et al., 2010; Che Nidzam et al., 2015). Nevertheless, this instrument has not been used in the Chilean school context to measure teachers' abilities to generate environments of constructivist learning. Particularly, the interest in the use of this instrument lies in accounting for the teaching abilities and practices in contexts of cultural diversity in the classroom, because of the arrival of students from diverse origins. The CLES scale is a Likert-type scale of 20 items referred to the frequency in which the teacher carries out certain practices. The answers to each item range from 1 "Never" to 5 "Almost always", being 100 points the highest score on the total scale. Now, this scale is divided into 5 dimensions, with 4 items each, which allow accounting for several characteristics of teaching practices: *Personal Relevance*, *Uncertainty*, *Critical Voice*, *Shared Control*, and *Student Negotiation*.

A similar situation occurs with the Teacher Cultural Beliefs Scale (TCBS). Although this has been studied and validated in other contexts (Hachfeld et al., 2011 and 2015), in Chile, it has not been applied to teachers to measure cultural beliefs and their possible effects in the classroom.

The Teacher Cultural Beliefs Scale is a Likert-type scale of 10 items referred to the degree of agreement with statements about beliefs related to the cultural diversity in the classroom. The answers to each item range from 1 “Strongly disagree” to 5 “Strongly agree”. It is worthy to mention that 6 items are referred to multicultural beliefs, this is, where a view that emphasizes the differences within students prevails; while the other 4 items refer to equal (or egalitarian) beliefs that seek the coexistence from stressing similitudes among students.

For both cases, a translation of the original questionnaire from English to Spanish was made, and this was validated by experts. In addition to this, as the original version of both questionnaires was for its implementation to teachers, a version to investigate students were created, keeping the statements of each item. It is worthy to mention that both questionnaires were answered by teachers themselves and by students, this is, they were carried out in a self-applied manner in the same classroom.

The questionnaires designed had: 1) questions on the socioeconomic characterization, 2) questions on their relationship with migrant people, 3) CLES scale, 4) Teacher Cultural Beliefs Scale, and 5) questions on the personal evaluation of cultural diversity. These instruments were self-applied both for the case of students and teachers, under the supervision and guidance of one of the researchers. The implementation of these questionnaires tried to contrast the teacher’s perception regarding his/her class and the students’ perception of the same class regarding the teachers’ practices.

For this, the participant teacher needed to be teaching his/her subject with the group previously indicated; therefore, a visiting time was agreed with the teachers or with the Head of the Technical-Teaching Unit. In this way, the questionnaire was applied in the classroom with the teacher present. Thus, students were requested to answer the questionnaire thinking about the lesson the teacher mentioned, while the teacher answered the questionnaire thinking about his/her practices and beliefs.

The implementation lasted between 20 to 30 minutes, and it depended on the speed of each student to answer the questionnaire.

Data Analysis

Once the data were collected, these were entered and analyzed in the SPSS statistical software, through descriptive, univariate, and bivariate techniques, and afterward, through multivariable techniques such as the hierarchical cluster analysis and the logistic regression. First, a descriptive analysis of the results of the two scales was performed. Subsequently, a hierarchical clusters analysis was carried out where three groups of teachers were identified based on their results on the scales. Consecutively, the profile of these three groups was described. Finally, we constructed a logistic regression to explain/predict constructivism in teachers in order to identify the explanatory capacity of the variables of a systemic level and individual educational level on the teachers’ level of constructivism.

FINDINGS

Positive evaluation of teachers from their students

On a first data reading, these reveal that there is a positive evaluation from students on their teachers, in the sense that the last ones would act as professionals with constructivist practices in the classroom setting. The *Constructivist Learning Environment Survey* (CLES) answered by students shows that more than half of them, in most of the items, recognize that teachers are constructivist: open and sensitive teachers concerning reality that they, as students, bring into the classroom. The item that generates more agreement among students is “My teacher is open to hearing if I’m learning or not” (73.8% agree). But, between 8% to 32% of students, depending on the item, considered that their teacher is not constructivist, or hardly ever acts in the classroom in this manner. A critical example is the item “My teacher asks us for help to plan what we’re going to do” (32% disagree), which reveals that teachers barely take students’ opinions and ideas into account, reducing the possibilities of incorporating new needs that new students might express.

In the case of the second “multicultural” scale, the *Teacher Cultural Beliefs Scale* (TCBS), the results also show that teachers are favourably evaluated by their students. Even the evaluation is more positive compared to the case of the scale on constructivism. 70% and more of students indicate that their teachers have an open attitude towards other cultures within the classroom. This reveals a predominant assessment of teachers’ cultural sensitivity, and of their willingness to include diversity in the classroom. With a first descriptive view, we could state that, in general terms, students – including those from families who have migrated in the last five years – believe that their teachers exhibit constructivist abilities. At first sight, teachers would be open to multiculturalism, and they would work with constructivist practices in the classroom. Now, this data reading does not address, for example, the diversity of students that took part in the study, neither the different educational establishments where this was performed nor the different kinds of teachers. Next, certain particularities and differences in the sample shall be identified.

Three typologies of teachers working in multicultural classrooms

Given the above, the study incorporated a multivariable technique: the analysis of hierarchical clusters. Given that the instruments were applied not only to students but also to teachers, these last ones were grouped in the function of the distance of their scores in the scales of constructivism and multiculturalism, from their discrepancies between their self-assessments and those performed by students, the features of coexistence in their schools and their teaching careers. The variables used are described below in Table 1.

Table 1
Variables used in hierarchical clusters analysis

Name of variable	Description	Descriptive statistics
Clas_multi	Variable developed from the scores obtained by teachers on the <i>Teacher Cultural Beliefs Scale</i> . The scores were grouped into 3 categories and distributed 18 teachers in 3 groups.	-Median= 2.00 -Range=2 -Deviation=0.840
Clas_score	Variable developed from the scores obtained by teachers on the “ <i>Constructivist Learning Environment</i> ” scale. The scores were grouped in 3 categories distributed to 18 participant teachers into 3 groups	-Median= 2.00 -Range=2 -Deviation= 0.840
Delta Classification	Variable created from the difference between the score obtained by teachers on the CLES scale and the average score assigned by their students on that same scale.	-Median= 1.50 -Range=2 -Deviation= 0.786
Classification of proportion of migrant students	Variable constructed from SIGE data for the number of migrant students per school. The proportion of migrant students was calculated to the total enrolment of the school. The categories were established from theoretical criteria regarding the presence of migrant students in Chilean schools.	-Median= 1.33 -Range=2 -Deviation= 0.686
Teaching rank	Variable constructed from the years in which teachers have been working. The categories were constructed from theoretical criteria for the teaching rank: 0 <= novice; 5 >= 10 average career; 10 >= veterans.	-Median= 2.06 -Range=2 -Deviation= 0.802
Atmosphere of respect	Variable constructed by the Ministry of Education for each institution concerning school coexistence.	-Median= 1.556 -Range=2 Deviation= 0.7838

This set of variables allowed identifying three typologies of teachers. The three teaching categories differ from each other in terms of their answers to the instrument, but they also differ for the type of school in which they work. These are, indeed, typologies of analytical character, in the sense of ideal types, and not pure real groups, separated clearly. This means, for example, that it is possible to find some teachers of the first type with some features of the third type. In short, this typology talks about trends, about the greater closeness of teachers to some types more than to others. Next, we expose the dendrogram that classifies groups hierarchically, with the cutting gap for the grouping of three conglomerates.

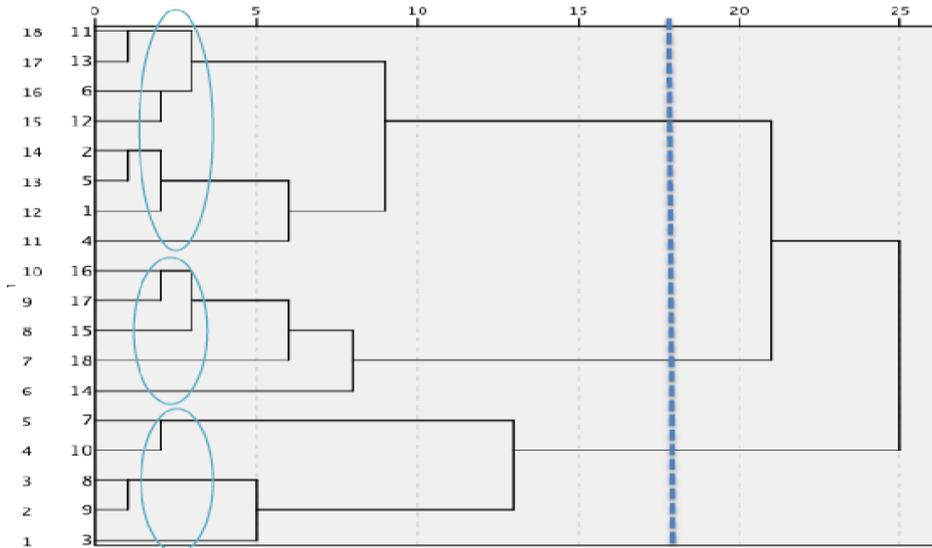


Figure 1
Dendrogram used by a full link

The dendrogram represents the agglomerative grouping of teachers based on their characteristics and scores on the shared scales. And it exposes the existence of at least three groups of teachers internally homogeneous and different from each other.

Rescaled distance clusters combine

The first type of teachers corresponds to **Neutral Realistic**, which can be seen in the upper part of the dendrogram, and gathers the largest number of teachers, specifically 8 out of 18. As Table 2 shows, these are teachers, most of them qualified as “veterans” in teaching (more than 10 years of practice), who teach in contexts where between 10% and 20% of students are migrants. They are called Neutral Realistic because, all teachers, are the ones who best adjust self-perception to students’ perception concerning their degree of constructivism. In addition, their scores on the scales of multiculturalism and constructivism are average to the rest of the teachers in the other two typologies. They studied in different Chilean universities. They also teach in diverse districts and schools, with or without an “inclusive” Institutional Educational Project, or IEP.

Table 2
Scale of constructivism

My teacher...	(NR)	(NCC)	(CSC)
listens when I tell him/her about the things that impede or complicate my learning	76.1%	62.6%	79.2%
is open to hearing if I'm learning or not	73.7%	62.1%	81.0%
Is open to accepting that I talk and agree with my classmates when we must solve problems	64.4%	54.7%	63.1%
relates the things I must learn with my daily life experiences	45.8%	36.0%	46.5%
believes that students learn better when we question the things we are taught and how these are taught	54.6%	45.4%	57.2%
values the things I learn out of the school (with my family or in the neighbourhood)	52.5%	33.8%	53.6%
teaches me those scientific explanations have changed over time	52.1%	53.4%	59.5%
allows me to express my complaints about activities that are confusing	68.8%	56.8%	67.9%
teaches me that science is influenced by cultural values and people's opinions	44.1%	37.4%	45.5%
is open to hear if I need more or less time for the activities of the class	61.60%	41.4%	58.2%
Score (median) of the Likert scale on Constructivism	61.65	69.65	74.10

The second group is found in the middle of the dendrogram, with 5 cases, and they receive the name of the **Non-Constructivist Complacent**. These are teachers with the lowest score both on the CLES scale and on the Multicultural scale. These teachers perceive themselves as more constructivist when compared to their students' evaluations. They are novice teachers, this is with less than five years of practice, and they work in schools where less than 10% of students are migrants. They studied, mainly, in universities whose schools are not historically specialized in education. They teach in diverse districts and schools with or without an "inclusive" IEP.

Finally, the third kind of teacher corresponds to **Constructivist Self-Critical**, also with 5 cases. These are teachers, mostly women, with average practice (between 5 and 10 years), and who work in contexts where more than 20% of students are migrants. They have a high score on both scales and are critical concerning their way of being constructivist; this is, their students have a more positive perception compared to their perception to their teaching practice. They studied in Chilean universities with schools of education historically recognized for their specialization in the area, but they are also the only group with teachers trained in foreign universities (Latin America). They teach, like the other two groups, in diverse districts and schools with or without an "inclusive" IEP. Nonetheless, among the 5 teachers belonging to this group, 2 teachers from a school that is part of a religious educational network stand out.

On the scale of constructivism, the Constructivist Self-Critical type is the one with the highest rank in teaching practices. As shown in Table 2, there are certain items where

this group remarkably stands out above Non-Constructivist Complacent and Neutral Realistic groups. The biggest gaps in favour of this group compared to the group of “Non-Constructivist Complacent” are expressed in the following items: “My teacher is open to hearing if I’m learning or not” and “My teacher values the things I learn out of the school (with my family or in the neighbourhood)” of the subscale “*Personal Relevance Scale*”. For its part, the items where this groups are best evaluated are “My teacher listens when I tell him/her about the things that impede or complicate my learning” of the dimension “*Critical Voice Scale*”, and “My teacher is open to hearing if I’m learning or not” of the subscale “*Learning to learn*”. Both the Neutral-Realistic and Constructivist Self-Critical groups widely surpass the Non-Constructivist Complacent group in these two items. Also, this last group, the worst evaluated, exhibits their worst results in the items “My teacher values the things I learn out of the school (with my family or in the neighbourhood)” (33.8%) and “My teacher relates the things I must learn with my daily life experiences” (36.0%), corresponding to the dimension “*Personal Relevance Scale*”. It is precisely in this group of teachers where students would identify less horizontality, flexibility, and personal approval concerning their singularities as students, which, by the way, corresponds with a low valuation and consideration of diversity and multiculturality.

As it can be seen in Table 3 according to the students, more multicultural teachers are gathered in the Constructivist Self-Critical group, and on the other side, we have the Non-Constructivist Complacent group. Certainly, the correlation between the two scales is significant (0.942) and positive. The two items of multiculturalism where Constructivist Self-Critical teachers obtain greater advantages compared to the Non-Constructivist Complacent teachers are: “My teacher is open to, and values cultural differences” and “My teacher seems interested in learning about cultural diversity”. For its part, the items where we see the highest number of positive answers (agree and strongly agree) are “My teacher teaches us to respect other cultures” and “My teacher thinks that it is important to know that people from other cultures might have different values”. As in the scale of constructivism, these results are far from those obtained by Non-Constructivist Complacent group. Even when most of the Non-Constructivist Complacent teachers are evaluated positively concerning the respect for other cultures (77.3%) and the consideration of diverse cultures and nationalities of students and parents (77.4%), they reach significantly lower levels compared to the other two groups, mainly the Constructivist Self-Critical group. Even less than half of these (46.6%) would be “interested in learning about cultural diversity”.

Table 3
Scale of multiculturalism

My teacher...	(NR)	(NCC)	(CSC)
is open to, and values cultural differences	85.40%	60.40%	85.40%
thinks that it is important to know that people from other cultures might have different values	84.40%	78.10%	83.40%
teaches us to respect other cultures	78.80%	77.30%	81.30%
considers cultural differences of students and parents from different nationalities and cultures	82.60%	77.40%	82.50%
seems interested in learning about cultural diversity	65.80%	46.60%	62.50%
promotes and supports similitudes of students from different cultural backgrounds	71.40%	64%	72.40%
recognizes and emphasizes similitudes among students, even though they come from different origins	71.40%	72%	76.10%
when there are conflicts among students, my teacher encourages us to solve them by finding common grounds	65.80%	65.30%	70.80%
teaches us that people from different cultural origins, often have a lot in common	66.70%	68%	69.40%
devote time to understanding and empathizing with students and parents from different cultural backgrounds	72.80%	62.60%	70.70%
Score (median) of the Likert scale on Multiculturalism	24.84	23.55	25.49

From the point of view of Chilean and foreign students, in general, there is no negative perception concerning teachers. Conflicts among students are recognized, but not between teachers and students. Migrant students value their teachers positively, in a larger proportion compared to the opinion of Chilean students. The classroom, possibly unlike the public space, or the same yard/break, seems to be a space of safety and neutrality. It is a differentiated space, where probably the teacher, to a greater or lesser extent, acts as a mediator, an authority, or an arbitrator who can stop conflict or bullying. The teachers' role is key, and the practices and beliefs would be more associated with their features and career, rather than with their institutional contexts.

Incidence of personal and systemic matters on the teaching constructivism

When successive models of logistic regression were applied to explain/predict constructivism in teachers (0 = low and 1 = high), it was not possible to construct a highly explicative model. However, when it comes to explaining constructivism (CLES) through logistic regression, the importance of personal variables of "individual educational level" became more important than contextual and institutional variables of a "systemic level", following Nusche's typology (2009). The model of logistic regression outlined in Table C is not statistically predictive, but it displays two personal variables that are closely related to constructivism. The personal variable on "time in teaching" (0 = average career or veteran, and 1 = novice), presents a statistically important relation with culturalism, and it is highly predictive of this trend in teaching practices. This variable, which is highly correlated with the variable of age, provides

important information about the types of teachers. The youngest teachers, those with less time in the system and school, are the ones who tend to be more complacent (they perceive themselves with a higher score compared to the one assigned by their students) and less constructivist in their practices. It might be that their initial experience in the classroom and strict adherence to the teaching formation recently received (generally not characterized by providing real constructivism), make them be less open and less horizontal. Effectively, it happens that those who adjust their self-perception to the evaluation made by students concerning their practices are the ones who have been more time in the classroom. The analysis of logistic regression confirms this (Odd ratio = -.42.5; Sig: 0.009): being a teacher with few years of experience reduces the probability of obtaining a high score on the CLES scale is 57.5%.

Table 4
Model of logistic regression

Variables in the equation	B	Standard error	Wald	gl	Sig.	Exp(B)
Novice range	-.856	.329	6.757	1	.009	.425
origin	.865	.351	6.066	1	.014	2.374
Vulnerability index - Dummy	.802	.497	2.599	1	.107	2.230
Mention to inclusion in IEP	.243	.491	.245	1	.621	1.275
Coexistence score by the school	.028	.060	.212	1	.645	1.028
Constant	-2.603	4.468	.339	1	.560	.074

a. Variables specified in step 1: novice range, origin, Vulnerability index – Dummy, Mention to inclusion in IEP, Coexistence score by the school.

* With 60.1% of certainty in the classification/prediction of cases and the following coefficients of the model: 431.571 corresponding to the log -likelihood -2, 0.048 to R-squared of Cox and Snell, and 0.064 for the R-squared of Nagelkerke.

While none of the variables of “systemic level” is shown as predictive of constructivism (the vulnerability index associated with the school, the level of “inclusiveness” of IEP, or coexistence in the school), the student’s origin, which is evaluated as a predictive variable, shows up. As indicated by the coefficients (Odd ratio = 2.374; Sig: 0.014), when the student who evaluates is a migrant, the probability that the teacher obtains a high score on the scale of constructivism increases by 237%.

CONCLUSION AND RECOMMENDATIONS

The results of this study suggest important clues on the relevance of “individual educational” personal variables in the formation of inclusive and culturally sensitive education. The variables of “systemic level”, this is, institutional ones, do not show the same incidence concerning as multicultural beliefs and constructivist teaching practices. The teachers’ career training would be having a direct impact on their trends and orientations in front of diversity. The questions of when and where the teacher studied become very relevant for the education of migrant students in Chile.

The initial training of teachers seems to be key. This study confirms the diagnoses already made by Ruffineli (2013) and by the Teacher Census (Eduglobal, 2018) regarding the deficit of initial training in teachers to face a context of diversity and

multiculturality. However, some concerns are raised for the formation of new generations of teachers who, in this study, present the worst evaluations from the students. Precisely, younger teachers would be the least prepared and the strictest to develop their work in multicultural scenarios, according to the reports analysed.

Despite the favourable evaluation obtained by teachers trained abroad, through the literature, a sign of the lag of training plans in Chilean schools has been confirmed, mainly in those less traditional or less specialized schools of education. Although we cannot discard that life experiences abroad predispose teachers favourably when facing diversity within the classroom, this is a sign of a possible deficit of teaching programs in Chilean universities. It is not illogical to think that curriculums require an important update. Given the qualities of the youngest group of teachers, Non-Constructivist Complacent, we deduce that study plans oriented to a culturally sensitive, open, and ethnorelative education are required.

Given this, the example in New Zealand is interesting, where the emphasis is placed on improving the teaching formation, as this will have an impact on students' learning. The government program that intends to train quality teachers, has as one of its key elements the development of teachers with cultural competencies, paying attention to the context of the country (Ell & Grudnoff, 2013). So far, we have seen that Chilean young teachers are the ones who exhibit an ethnocentric trend with a sort of cultural *color-blindness*. The term color-blindness refers to the beliefs based on the categorization of a group of the society from its ethnic origin or culture, a source of discrimination) and behaviorist practices. Behaviorist education considered that the teaching material designed must work, likewise, at all levels. According to Morales and Irigoyen (2016), behaviorism also states that it is possible to establish standards of excellence and scales that apply to all people who behave "normally" in statistical terms (Ulate, 2012). The, this paradigm suggests exceptions can be treated in isolation and specifically without deviating from the normal trend.

Finally, regarding the low explicative level of the "systemic level", it is impossible to dismiss that, given the low consolidation of policies and plans oriented to education in contexts of multiculturalism, there is no possibility of identifying contextual and institutional differences among schools. Certainly, having or not an education plan with references to diversity and inclusion, today might represent a declaration of intentions rather than a real policy or institutionalism.

Likewise, it is important to acknowledge that some methodological limitations of our study, mainly, its exclusively quantitative character and the range of the sample, demand future analyses to confirm these findings. A qualitative approach such as the one performed by Phillion (2008), who – through narrative research – sought to understand the academic experience of migrant students, might be established as an orientation to complement the quantitative approach of this study. In addition, it is believed that performing a comparative exercise with other regional realities might be a contribution to this type of study. All this would be beneficial and convenient for future research.

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