Education for all and attrition/retention of new teachers: A trajectory study in Chile

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ARTICLE INFO

ABSTRACT

This article centres on teacher retention and its importance for achieving quality education for all. It analyses the state of early career teaching attrition and turnover in Chile over a ten-year period, and goes on more closely to the study of new teacher trajectories over their first two years of teaching. In line with literature on issues of retention/attrition it considers the impact of school conditions and changes in professional satisfaction and self-efficacy perceptions in the early years of teaching. Data sources include econometric analysis of existing databases as well as surveys, interviews and narratives. Quantitative results indicate high attrition rates of early career teachers in Chile, and teacher narratives show "critical" as well as "protective" conditions that foreshadow decisions to leave or the stay in the profession.

1. Introduction

Retaining qualified teachers in schools is considered to be a key factor in the quality of schooling (OECD, 2005) and the attainment of Education for All goals (UNESCO, 2014). Conversely, teacher attrition and turnover negatively impact on the quality of learning (Boyd et al., 2008; Ronfeldt et al., 2013), especially in classrooms that serve disadvantaged students in high-income countries (Allen et al., 2012) and more so in low-income countries (Pitsoe and Machaisa, 2012; Xaba, 2003).

Increasingly in different school systems the extent of teacher attrition and turnover is cause for concern, particularly in relation to teachers who are in the early stages of their career. Several pieces of research have reported on early career teacher attrition in Francophone Belgium, Norway, Australia, England and the USA (Dupriez et al., 2015; Lindqvist et al., 2014; Ingersoll and May, 2012; Borman and Dowling, 2008; Ingersoll and Smith, 2003; Ingersoll, 2001). There are also school principal that report low to medium levels of teacher stability in Brazil, Argentina, Perú, Paraguay and Chile (UNESCO, 2008). Despite these general indications elsewhere there is less evidence in Chile about the degree of early career teacher retention in schools. This now has become an important policy issue in the country as new legislation requiring higher entry qualifications into teacher education and more stringent conditions to qualify, may limit the amount of new teacher supply able to replace teachers who retire or abandon teaching.

In order to contribute to the assessment of rates of teacher attrition and its factors, this article presents results of a comprehensive study designed to examine the early career of teachers in Chile, their rates of retention over a decade, focusing more closely on the first years of teaching and conditions that affect or could affect decisions to stay or leave. It begins with a synthesis of the general characteristics of the education system and its teachers, and of the conceptual framework that guided the study. It moves on to the methods and results of two related sub-studies that: (a) examined the rates of attrition and school turnover of Chilean teachers with five or less years of service over a ten year period (2000–2009) and (b) followed the path of a group of new teachers over their first two years in school (2013–2014). The first sub-study was modelled on similar ones conducted in other countries, especially the United States, while the second one examined more closely changes in professional satisfaction and self-efficacy perceptions of teachers after completion of initial teacher education. On the basis of results of the second sub-study and survey information from the first one, the paper concludes with a discussion on factors that impact on new Chilean teachers' experiences and could affect their decisions to stay or leave the profession. For all data collection instruments requiring individual and group information, participants signed informed consent.

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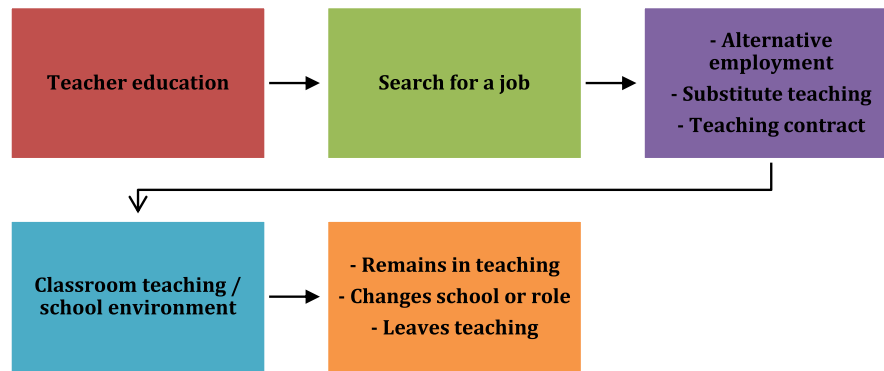jp.valenzuelab@gmail.com (J.P. Valenzuela).

Fig. 1. Early career teacher trajectory phases.

Source: authors.

2. The Chilean education system and conditions of the teaching profession

Chile stands out among Latin American countries as a middle-income economy with the highest GDP per capita (US$15,732 in 2013) and one of the lowest rates of population living below the poverty line at (15.1% in 2010). It is also a country with large socio-economic inequities expressed in its Gini coefficient of 0.5 after taxes (OECD, 2012). These inequities are observable in the education system and its different types of school management: public or municipal, subsidised private and independent private schools. Most of the lower socio economic and more vulnerable school population is enrolled in public municipal schools, while a mix of middle- low and middle socio-economic students attends the subsidised private schools, which are allowed to select their students and charge fees.[1] Both these types of schools cater for around 90 of the school population. In terms of educational outcomes, Chile compares well with other Latin American countries as shown in results of the recent 2013 UNESCO-TERCE (UNESCO, 2013) study and of PISA 2012 (OECD, 2014), but remains below the average of countries that participated in the PISA 2012 test.

There are around 180,000 classroom teachers in Chile of which 74% are women (MINEDUC, 2014). They are employed in the public municipal schools (44%) in subsidised private (46%) and in private fee-paying schools (10%). Almost all teachers have the needed teaching qualifications (92%), although there are shortages of fully qualified secondary science and mathematics teachers. Most teachers are prepared at universities in four to five year teacher education programmes and are awarded a degree and teacher qualification, which enables them to practice after graduation without further certification. Upon completion of their teacher education they must look for available positions that suit their expertise, although some only find fragile replacement or out-of-field posts. While there are various types of contractual arrangements a high proportion of new teachers are hired for 32 chronological hours a week compared to the fulltime contract of 44 h. Their contract time is largely composed of teaching hours with little time left for preparation or teacher collaborative work, in a proportion of 75% to 25%.[2] Average teacher salaries are around 40% lower than those of other professionals with equivalent education, though teachers in elite private schools earn comparatively more.

Currently those who teach in municipal schools are subject to performance evaluation, but all teachers must deal with accountability pressures produced by the large amount of standardised testing of their students' learning.[3] Given the context of inadequate salary and working conditions it is not surprising that the teaching profession has not attracted the best school leavers, and that teacher education institutions mostly tend to recruit candidates belonging to the first generation in their families to engage in university studies (Ávalos, 2013; Cox et al., 2010).

3. Early career teacher trajectories: main concepts and research evidence

Teacher trajectories may be described as an observable movement in time involving changes in professional identity construction and practices, triggered by the conditions and options under which they carry out their profession (Chong and Low, 2009; Malmberg, 2008; So and Watkins, 2005). Teacher trajectories may be traced in line with identity changes over time on the basis of initial depictions of professional future (Giddens in Smith, 2007) and "possible selves" (Markus and Nurius, 1986; Hamman et al., 2010; Leijen and Kullasepp, 2013) as well as through changes in professional self-efficacy and satisfaction levels (Sahin and Atay, 2010).

The study of teacher trajectories may start from where they are at a given moment in time and request that they look back into their history by means of self-reports (Ball and Goodson, 1989) or move with them longitudinally as they progress in their first career stages (So and Watkins, 2005; Goddard et al., 2006). Teacher trajectories are also constructed using a cross-sectional approach by eliciting information from teachers with different experience as in Huberman's (1989) study on the lives of teachers, or do so quantitatively through the analysis of existing teacher databases (Ingersoll and May, 2012; Ingersoll, 2001). The literature on teacher trajectories offers examples of all these types of research, ranging from single life histories to complex econometric or mixed methods longitudinal studies (Hultell et al., 2013).

For the purposes of this study we describe early career teacher trajectories as illustrated in Fig. 1 below.

Finding a teaching job in education systems that do not centrally deploy their teachers is usually dependent both on expectations or preferences about the kind of job desired and on diverse sources of information. In a study of new teacher school preferences in the United States, Canatta (2012) detected differ-

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[1] This situation will change in the near future, as a law was passed in 2015 whereby no selection or additional fee-paying will be allowed in schools that receive public funding (public or privately managed).

[2] Recently approved legislation sets up a teacher career ladder and proposes salary improvements as well as a slightly better ratio of teaching/non teaching hours.

[3] Chilean students are tested in 4th, 6th, 8th and 10th grade in the main subjects of Language, Mathematics, Science and Social Studies. Students are also tested in English knowledge as well as ICT skills.

ences between "espoused preferences" in line with general professional criteria, and "preferences in use" such as closeness to home or similarity to the type of school the teacher attended. In Chile, Paredes et al. (2013) questioned a group of 207 teachers on criteria and processes they followed to find their first teaching job in the city of Santiago in Chile. In terms of "preferences in use" the teachers studied preferred schools with a similar composition and characteristics to their own schools or those they got to know during their teaching education fieldwork. As far as the process of selecting a school they relied on a wide system of informal social networks and an average of 2.7 months to decide on a job after submitting multiple applications.

Resulting from their search process teachers may be offered a full teaching contract or a temporary teaching position. In Chile, these offers tend to be in line with the school's needs and orientation but also, as the evidence consistently shows, they reflect non-educational criteria such as similarity in socio-economic background and type of higher education institution attended (Paredes et al., 2013; Rufinelli and Guerrero, 2009; Meckes and Bascopé, 2012).

Once employed in a school new teachers face the complexities of teaching and classroom management duties, as well as having to learn, understand and take in the particularities of the school's environment and teacher community. These experiences vary in quality and are highly dependent on the degree of support new teachers receive. Teachers who have administrative support and opportunities to collaborate with colleagues feel better in emotional terms (Day et al., 2007; Johnson et al., 2004). Also, they are better able to handle less favourable school conditions, depending on their degree of commitment and resilience as well as capacities developed through teacher education (Johnson and Down, 2013; Jones and Youngs, 2012). On the other hand, salary limitations, inadequate school environment and lack of support on the part of the school's administration may prompt new teachers to search for another school as has been shown to occur in different educational systems (Paredes et al., 2013; Skaalvik and Skaalvik, 2009; Borman and Dowling, 2008).

Different studies have examined more closely the conditions that contribute to teacher attrition or conversely to teacher retention in schools (Johnson and Down, 2013; Hong, 2012; Schaeffer et al., 2012). The decision to leave teaching is recognised as a gradual process, which may be triggered by "emotional burnout" (Masslach, 1999). Its contributing elements have been linked to emotional exhaustion and depersonalisation on the one hand and to feelings of inadequacy and inefficacy on the other (Hultell et al., 2013). Teacher burnout may be produced by classroom or school demands and by policy reforms impacting on personal and professional attributes of teachers such as commitment and preparation (Vandenberghe and Huberman, 1999; Skaalvik and Skaalvik, 2009).

Three different studies looked at the effect of teacher burnout and other factors on attrition. In the first study, using a "person-based approach", Hultell et al. (2013) examined longitudinally over the first three years of employment the different burnout levels of 816 Swedish teachers as they moved from teacher education into schools. Reviewing over time the turnover intentions of these teachers, the authors were able to show that positive perceptions of self-efficacy (presumably developed during teacher education) and self-rated health were inversely related to burnout and turnover decisions. In the second study, using a cross-sectional approach Hong (2010a, 2010b) examined the attrition patterns of teachers who were part of the same teacher education programme in the United States, finding that both context and professional identity factors interacted to produce emotional burnout and the decision to leave teaching altogether. These factors included "unfulfilled commitment, lack

of efficacy, unsupportive administrators and beliefs emphasising heavy responsibilities" in contexts where classroom management and discipline issues weighed heavily (Hong, 2010a, 2010b). Cornejo' study (2012) examined levels of burnout among secondary teachers in the city of Santiago, Chile, concluding that these were largely affected by the emotional exhaustion component of burnout (Masslach, 1999), and more so occurring in the case of women teachers. Unsatisfactory working conditions, a high number of teaching hours and the lack of sufficient teaching materials were important factors and in this they differed by type of school management under which they worked (Cornejo, 2012).

4. Early career teacher trajectories in Chile: sub-studies and methods

To pursue the broad objectives indicated in the introduction to this article, we carried out two sub-studies centred on: (a) rates of attrition and school turnover of early career teachers and (b) trajectories of teachers from the end of their initial teacher education into their first two years of teaching. We refer below to the methods used in both sub-studies.

4.1. Attrition and school turnover rates

The study of the rates of attrition and turnover was conducted by means of an econometric analysis of the National Teacher Database (*Encuesta de Idoneidad Docente*) for the 2000–2008 period and a survey of teachers with five or less years of experience that left the education system between 2008 and 2012.

The National Teacher Database collects annual information provided by principals of all types of schools and includes a numerical identifier for each teacher. This allowed us to trace the trajectory of teachers who were 30 years old or younger in the period studied by identifying those teachers who appeared in a school for the first time in the year 2000 and subsequently noting those who either had moved schools or were not active in any school by 2009. We estimated simple and cumulative rates in relation to teachers remaining, changing or leaving the school system, and related these patterns to teacher employment characteristics such as type of school management, years of experience and others. Subsequently, in order to learn about reasons for leaving the school system we identified teachers in the National Teacher Database who, having been certified in 2006 had left their schools in the 2008–2012 period. We contacted these teachers and requested their consent to respond a questionnaire on reasons for leaving their teaching positions. Out of close to 4000 teachers contacted, there were 541 who consented to participate in the study. We sent them a questionnaire translated and adapted from the *Teacher Follow-up Study* applied yearly in the USA (http://nces.ed.gov/surveys/sass/) and received 346 responses of which not all were eligible, either because they were on leave or did not agree with the sample criteria. This left us with 157 responses from teachers who had stopped teaching by 2012, of which 112 (71.3%) had not looked for a job since, and another 45 (28.7%) were looking for jobs.

4.2. Teacher trajectory from initial teacher education into the first two years of teaching

In sub-study 2 we focused on the trajectories of new teachers from university into schools with the purpose of learning about changes in general motivation to teach, their professional

satisfaction, self-efficacy, as well as possible school factors that might foreshadow decisions to stay or leave. Our initial population included 159 future teachers who in the year 2012 were in their final year of preparation for primary and secondary teaching in 11 teacher education programmes, in three cities of the country. Three of these programmes prepared primary level teachers (an 8-year basic school) and the other eight prepared for secondary teaching (a 4-year secondary school). Over two thirds of the teachers were female (71%), aged between 22 and 26 years, over half had attended a subsidised private school (64%), less than an third had attended a public municipal school (28.5%) while the rest came from independent private schools (7.5%). Just over half of the group studied were preparing for secondary teaching (53,3%) in Spanish language, mathematics and physics, history and English language and the rest for primary teaching (46,7%).

We used a mixed methods approach consisting of questionnaires, semi-structured interviews, classroom observations written narratives and focus group discussion. For each one of these applications all participant teachers signed informed consent documents.

Prior to their extended field experience or practicum we surveyed all future teachers on their motivation for becoming teachers, the degree of satisfaction with professional capacities acquired during teacher education and their perceived self-efficacy to handle teaching demands. Towards the end of their field experience we carried out classroom observations and interviewed a group on their field experience, extent of their commitment to becoming teachers and their sense of professional identity. During the interviews we asked them to provide us with a metaphor encapsulating their vision of teaching and their role as teachers as well as how they viewed their future commitment. We also sent a second electronic questionnaire to the original group, which included questions related to their professional satisfaction and self-efficacy perceptions, and to the effects of teacher education over their perceived readiness to teach. During their first year of studies we contacted several of the group through meetings and electronically to find out what they were doing (some sent us accounts of critical incidents). At the end of the first year of teaching we sent out electronically a third questionnaire, inquiring again about professional satisfaction and self-efficacy perceptions and effects of their teacher education, and we invited the group to participate in a two-day workshop with the purpose of writing narratives on their first year of teaching. At the end of the second year of teaching we sent a further electronic survey to those teachers who in the preceding year had responded the questionnaire. We also carried out a second narrative writing workshop focused on a particular teaching situation or process occurring during that year and conducted a focus group meeting centred on how they viewed the effects of their teacher education after two years of teaching in schools. The sequence and number of participants at each stage is presented in the table below (Table 1).

5. Attrition and school turnover: main results

5.1. Extent of teacher attrition (2000–2009)

In the 2000–2009 period there was a 7–8 percent yearly increase of new teachers in the educational system, amounting altogether to 126,442. This increase was due to replacement of retiring teachers and to increased student coverage in pre-school, secondary and special education levels, as well as to the lengthening-of-the-school-day policy implemented towards the end of the 1990s. In contrast to this increase, we found that by 2009 around a third of teachers with less than 10 years experience could not be found in any school listed in the Ministry of Education data base. This meant that out of 124 thousand teachers who began teaching in 2000 only 73,752 were still in schools by 2009. As observed in Table 2 below this rate of attrition was higher towards the end of the period than during the first years. Thus, while 9–12 percent of teachers with one year of experience had left schools in the 2000–2004 period this rate had increased to 18–20 percent in the 2005–2006 period. The attrition rate of teachers with three years of experience had also increased from 22 percent in the year 2000 to 39–39 percent in 2000. These levels are considered high in international terms and comparable to those in the United States in the early 2000s when around 46% of teachers with five years experience were leaving the profession (Ingersoll, 2003) and to Flemish Belgium where a similar rate of attrition of 44.9% has been found among secondary teachers (Dupriez et al., 2015). These Chilean rates are also similar to the 7.8% current attrition rate in the United States of teachers with one year of experience (Golding et al., 2014).

In terms of gender, the proportion of men who abandoned teaching was higher than for women, who in turn make around 70 percent of the teaching body. Thus, 49 percent of men who began teaching in 2005 had left the profession by 2008, compared to 41 percent of women. Attrition rates did not differ greatly by type of school management, being almost equally high in public

Table 1
Data collection stages in year 2012, 2013 and 2014.

| STAGES	Activities	Number of teachers
I (2012)	• Survey I (before extended field experience	159
	• Classroom observation	12
	• Interviews	16
	• Survey II (after completion of studies)	52
II (end of 2013)	• Survey III (end of first year post graduation)	29
	• Written Narratives	9
III (end of 2014)	• Survey IV (end of second year post graduation)	22
	• Written Narratives	9
	• Focus group	5

Table 2
Accumulated rate of attrition of new teachers by year of entry into teaching and work cycle.

Year of entry	Proportion of new teachers who leave teaching at the end of the first year (accumulated percentage)								
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
2000	9%	22%	22%	35%	40%	45%	49%	53%	56%
2001[a]	*20%*	*20%*	*35%*	*40%*	*45%*	*49%*	*52%*	*55%*	
2002[a]	*1%*	*20%*	*28%*	*36%*	*41%*	*46%*	*49%*		
2003[a]	*31%*	*31%*	*31%*	*41%*	*45%*	*48%*			
2004	12%	23%	30%	36%	40%				
2005	19%	31%	38%	43%					
2006	22%	32%	39%						
2007	20%	30%							
2008	18%								

[a] Data for these years are not compatible with other years and are treated with caution. Source: Chile Ministry of Education, Encuesta de Idoneidad Docente, years 1999–2009.
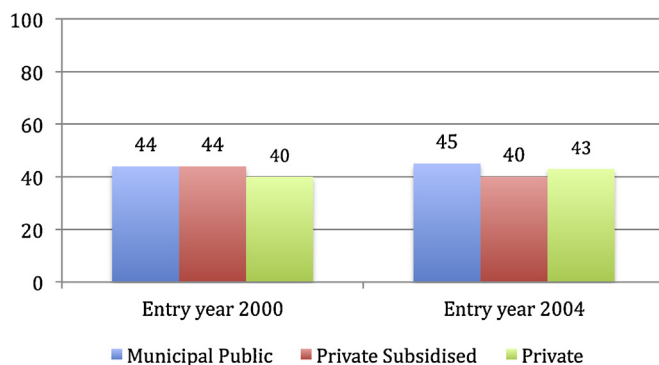
Fig. 2. Teacher attrition levels after five years of service by type of school management: 2000 and 2004 cohorts (% of teachers).
Source: Chile Ministry of Education, Encuesta de Idoneidad Docent, years 1999–2009.
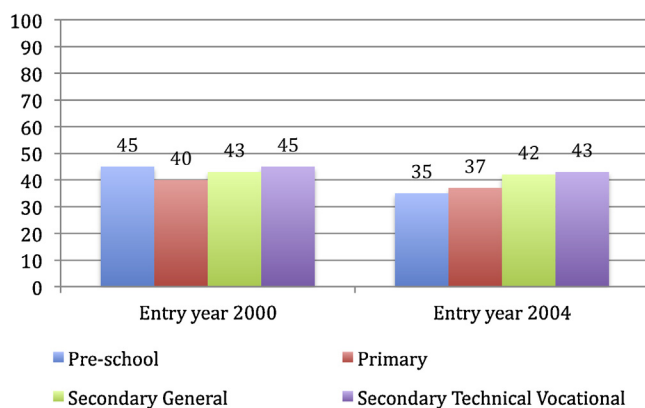
Fig. 3. Teacher attrition levels after five years of service by school level: 2000 and 2004 cohorts (% of teachers).
Source: Chile Ministry of Education, Encuesta de Idoneidad Docente, years 1999–2009.

municipal, subsidised private and independent private schools as shown in Fig. 2 below. Nor did they differ much in terms of school levels (Fig. 3), although for the 2004 cohort they were slightly higher in secondary education similar to the situation reported for francophone Belgium (Dupriez et al., 2015).

5.2. School turnover

Besides attrition we were also concerned about school turnover rates. Taking three cohorts of teachers during the period (2000, 2005 and 2007) we found that on average one out of ten teachers had changed schools after their first year of teaching. Furthermore, for the 2005 and 2007 cohorts the proportion of school changers increased to 14 percent. In general, two thirds of teachers moved to schools within the same type of school management, particularly within the private subsidised group, possibly because these schools tend to contract and dismiss teachers more frequently than the municipal schools. Although the 6 percent turnover rate of Chilean teachers (including new teachers) is lower than in England or the United States at 9 and 8 percent respectively (OECD, 2005), it is of concern in Chile.

5.3. Reasons for teacher attrition and school turnover

Given that not all teachers surveyed on their reasons for not being in schools had effectively abandoned teaching, we analysed responses to the questionnaire separately for both groups: early attrition teachers and teachers who hoped to return to teaching and were looking for a job.

Whatever their condition, as shown in Table 3 below, their reasons were various but tended to cluster around professional development opportunities, working and school management conditions.

6. Early career teachers' trajectories: main results

We now refer to the trajectory study of the teachers originally contacted at the end of their teacher preparation in 2012, and more specifically to those we followed in their first (29) and second year of teaching (22). These teachers responded questionnaires at the end of each year, and nine of them wrote narratives about their experiences for each one of the two years. In what follows, we refer to initial declarations on their motivation to become teachers, and to changes over their first two years of teaching of the conditions in which they began to teach, their degree of professional satisfaction and their self-efficacy perceptions.

6.1. Early motivation and commitment

We used a well-proven scale of 16 items to inquire about motives to become a teacher at the end of their teacher preparation (Watt and Richardson, 2007; Richardson and Watt, 2007). Through means of exploratory factor analysis we found that their key

Table 3
Main reasons for leaving school teaching, either permanently or on a temporary basis: Percentage of teachers who state that the reason was "extremely" or "very" important.

		Early Attrition (N = 112)	Looking for job (N = 45)	Total (N = 157)
Professional expectations	Dissatisfied with available professional development opportunities	60.7	53.5	58.7
	Wanting to continue studying so as to have more opportunities in the education field	30.9	23.3	28.7
	Wanting to continue studying so as to have more opportunities outside the education field	24.5	14.0	21.3
Working conditions	Income was not enough to sustain my livelihood needs	47.6	46.5	47.4
	Wanted to improve my standard of living	34.8	25.6	32.2
	Did not have adequate complementary benefits	43.3	23.2	30.5
	Had too many students	30.0	18.7	26.8
	Dissatisfied with school conditions (security, materials, etc)	38.7	50.0	42.0
School leadership and management	Dissatisfied with the management leadership	41.8	50.0	44.1
	Lack of support from other teachers	26.8	40.9	30.8
School climate	School discipline was a problem	24.5	40.9	29.2
Professional autonomy	Lack of sufficient freedom to enact my teaching	33.3	30.2	32.4
	Lack of influence over school policies and practices	36.9	38.6	37.4
Self-efficacy perception	Did not feel prepared to work with special needs' students	14.4	15.9	14.7
Personal reasons	Mi health or that of a family member required me to leave teaching	5.4	20.5	9.6
	I needed more time for my children (or was pregnant)	6.3	13.4	8.3
	I moved house or wanted to work nearer to home	15.2	15.6	15.3

Source: Questionnaire for non-active teachers.

motives were related to making a social contribution and to the intrinsic value of teaching. Least important factors were those connected with working conditions such as summer holidays or security in getting a job (see Table 4):

These reasons were supported in interviews during or after their final field experience, and by their expressed degree of commitment to enter the field of teaching: "*I think that what pushed me most to become a teacher was to feel I could be part of people's history*" (María, mathematics teacher). During these interviews we also asked them to provide a metaphor encapsulating their views about teaching. Their metaphors tended to emphasise a gratifying sense of the importance of teaching, but also a critical view of the broader teaching contexts in which they would begin to teach:

> **Sour and sweet**: *The crash into practice makes one see sort of negative things about the profession; and in my case, not so much about myself but about the education system. What I mean is that it was very sweet to work with the children, very gratifying, especially because they thanked me. This was a lovely experience for me. But the education system, the atmosphere of the schools . . . that seemed sour to me. I didn't like it. Working with children, yes. But what goes in schools, I didn't like". (Jorge, primary teacher))*

> **In education not everything is written**: *The different scenarios have an effect on oneself as a teacher. I could have done my fieldwork in a school that wasn't so socially and economically difficult and it might have been different. But, I wouldn"t have developed the strength to face its problems. I have learnt a lot, perhaps much more than what I could have learnt elsewhere. (Andrés, secondary history teacher)*

6.2. The schools in which they taught

The teachers, who responded questionnaires at the end of their first and second year of teaching, were employed in municipal, subsidised private and independent private schools, and in some cases they worked in two schools. Their contracts in the first year followed the practice of rarely hiring new teachers for more than a 30 chronological hour period, although in the second year most of teachers had contracts ranging from 31 to 44 h. At the end of the second year there were four teachers in the group whose contract had not been renewed, one who had stopped teaching, and two others who had not taught that year. There were also moves from one school to another in the first year of teaching.

Table 4
Degree of agreement about reasons for choosing the teaching career (1 = Not at all in agreement; 7 = Very much in agreement, N = 154).

Factors	I chose teaching as a career because	Mn	S.D.
Social Contribution	I could influence new generations	5.97	1.40
	I could offer a contribution to society	6.13	1.24
	I could reduce inequality in my country	5.62	1.60
Intrinsic value of teaching	I always wanted to be a teacher	4.97	1.92
	It's the career I always wanted to pursue	5.72	1.71
	I like to work with children and young people	6.09	1.31
Teacher working conditions	I would be sure to get a job when I graduated	3.92	1.93
	Convenient working hours and summer holidays	4.03	1.91

Source:Pre-practicum questionnaire.

The narratives written at the end of the first year of teaching highlighted with greater or lesser detail how each teacher viewed their school and its culture. Rodrigo, a primary male teacher, illustrates in his account how the school context impacts on a new teacher's identity and self-respect. He was contracted as assistant teacher to a first grade teacher in a highly structured school belonging to a religious organisation, which served a very poor neighbourhood of the city of Santiago. By mid-year, in his position as assistant teacher, Rodrigo was frustrated at not being able to engage in direct teaching and use the skills he felt he had acquired during his teacher preparation. He also resented the attitude of other teachers with which he had contact:

> By the time you finish teacher education all you want is to teach and test your capacity, but I still haven't had the opportunity to do so. However, learning to work in the culture of this school has contributed substantially to reduce the mistakes I might make when I'm finally given responsibility for a class. I remember thinking, in the first term, that this was a normal process and then, in the second semester, being frustrated at not being able to teach and be more of a part [of the school] as everyone else. . . . The negative side [*in the school*] is the way teachers in other classes look down at us, without realizing how incredibly thoughtful, reflexive, idealists, efficient, operative and especially technologically able new teachers are [*Rodrigo, first year narrative*]

However, at the end of his second year, Rodrigo had come to feel at ease in his school and though he continued to be a first grade teacher assistant, he grew in admiration for the school ethos and culture, feeling particularly gratified at new opportunities to work with other teachers:

> Some things have changed. Now the first grades have teachers and assistant teachers that share the planning and work in equal conditions, share on how to do things and prepare assessments and meet together to review progress. [*Second year narrative*]

The two school contexts in which David, a secondary Spanish language teacher began to teach were very different. In both his first and second year David divided his time between a school for youngsters in prison and an independent private school in a better neighbourhood of the city of Santiago. For his first year narrative David chose to focus on the difficult but gratifying effect of working

control my emotions – not as an oak in front of the chalkboard, but by using them with the class, and by being sincere with the students.

In his second year narrative, David focused on the private school in which he taught. He described his work with students and colleagues, and the fact that he was appointed head of the Spanish Department. But David also commented extensively on his contractual conditions particularly the ratio between teaching and non-teaching hours, which despite requests and promises by the school authorities had not improved:

> I felt the effects of a sort of existential crisis . . . I felt that I was being used, and even more so, I felt that my trust [*in the school authorities*] was damaged given their lack of clarity about my working arrangements, and that I was not willing to beg for improved conditions . . . "

6.3. Professional satisfaction

The degree to which the teachers felt professionally satisfied was related to their school's characteristics and culture, but in most cases there was a sense of discomfort with their working conditions. As shown in responses to the questionnaires there was great variation in the total number of pupils per week allocated to them, from a low of 24–26 to a high of 320/340 students. The higher number reflected the situation of secondary and some specialist primary teachers who taught the same subject to several classes. Two thirds of the teachers surveyed had some help during their first year of teaching in terms of being told how the school operated, but only three of the 18 teachers who were actually teaching at the end of their first year, indicated that they had been assigned a mentor.

In order to learn about these teachers' degree of perceived professional satisfaction, we used a modified scale from the Boston College' Teacher Education Survey[4] and administered it at the end of the first and second year of teaching. As shown in Table 5 below, on a scale from 1 (not satisfied) to 4 (very satisfied) teachers were somewhat satisfied in both years with several of the options shown, but notoriously less satisfied with time at their disposal for lesson preparation and opportunities for school-based professional development, as well as with salary and opportunities for collaborative work with other teachers.

Table 5
Degree of satisfaction with teaching conditions at the end of the first and second year of work (1 = Not satisfied; 2 = Somewhat satisfied; 3 = Satisfied; 4 = Very satisfied; N = 19).

	Mean 2013	S.D.	Mean 2014	S.D.
General working conditions	2.84	0.688	2.91	0.811
Salary	2.21	0.855	2.36	0.953
Personal security	3.05	0.780	3.10	0.768
Pupil behaviour	2.68	0.820	2.82	0.907
Parent or guardian support	2.83	0.786	2.55	0.963
Class size	2.74	0.872	2.64	1.049
Degree of control and autonomy in class	3.05	0.848	3.27	0.631
Curricular material, books, learning resources available for lessons	2.95	0.911	2.82	0.853
Technological equipment available for lessons	2.79	1.032	2.82	0.907
Time to prepare lessons	2.00	0.943	1.91	1.019
Opportunity to work together with other teachers	2.53	1.020	2.36	0.902
Formal support of school management	2.68	0.946	2.50	1.058
Professional development opportunities offered by the school	2.16	0.898	1.86	0.941
Your teaching in general	2.84	0.765	2.86	0.710

Source: End-of-first-year and second-year teaching questionnaire.

with prison kids and of how he was able to overcome their initial resistance, reach over to them and gain their respect:

> To work at this centre has been a challenge and not an easy one. But it provided me with many rich experiences. I've learned to

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[4] Boston College Lynch School of Education, Teacher Education Survey: One and Two Year Out Surveys 2010.

Time is a major cause for dissatisfaction among Chilean teachers as the ratio of teaching versus non-teaching hours is extremely high (Ávalos, 2013). But for new teachers scarcity of time for lesson preparation, pupil assessment and feedback is particularly stressful. These difficulties are illustrated in Valentina's narrative. On a 43 chronological hour per week contract and as a homeroom fourth grade teacher, Valentina also had to teach mathematics to five other primary classes:

> As the weeks went by I began to feel physically and mentally exhausted. Going up and down the stairs, hushing pupils during roll taking, and trying not to make mistakes in this, as it might endanger the subsidy [*under the Chilean voucher system schools get their monies on the basis of students actually present in the classrooms*] . . . I began to wonder what to do in the 20 minutes of recess: go to the toilet or have breakfast, or talk to parents. At the end of each day −I was in school from 8:30 to 16:00 hours including lunch and recreation time- I was exhausted and had no desire to prepare lessons. My feet hurt and my voice was hoarse from talking–all I wanted was to go home. Added to this, were the problems with the noisy fifth grade B. [*Valentina, primary teacher in a private subsidised school]*

The first year of teaching was not necessarily a critical one for most of the teachers we followed. The experience of those who completed a full year of teaching with all its complexities and little support was a mixed one: "sweet and sour" as illustrated in one of the teacher's metaphor. But they continued to battle along and ended the year with a sense of relative success despite early or continuous problems. At the end of the year Valentina was satisfied with what she had been able to achieve and finished her narrative on a positive note:

> I think that part of the positive results I had was because I was able to learn from a teacher with long experience in the education system, and because of my own perseverance and collaborative work with my colleagues . . . And finally its clear to me that there will always be "glorious kids" [*nickname given to the difficult fifth grade class*) in any school system, and we have to be prepared [*Valentina, primary teacher in private subsidised school, lower income students*]

However, two other teachers were not sufficiently satisfied with their early conditions and moved to another school. Ivan, a physics teacher, explains why he did so:

> It was early June and I had not even thought about it. I felt good working at the school and was adapting better to the place. But a question from one of my colleagues was decisive: "*Do you now when Angelica returns*?" I had been hired to replace her, but had not been told exactly for how long . . . only that there was a good chance it would be until the end of the year. So I asked when teacher Angelica was returning. Someone said it would be at the end of September and someone else said it would be at the end of August, but those were not definitive dates, as they had not been able to contact the teacher. . . . I had mixed feelings. The working conditions were not very good, or at least we teachers thought so. Teachers were owed money for over a year. I had heard at least twice that teachers don't last much in the school, that they leave because they're not paid well or because of not being able to manage the students. . . . On the other hand, I felt a bit "burnt out". There were moments in mid semester that I was under stress. I wondered whether my efforts were bearing fruit. Teaching in some classes was exhausting, keeping an orderly classroom climate for learning, was almost impossible. These were students from a socially vulnerable family context, which included violence, drugs or delinquency. Despite these work difficulties, I became fond of the students I taught in the technical and industrial strands

[*Ivan, a secondary physics teacher in a technical-vocational school*].

6.4. Self-efficacy perceptions in the first and second year of teaching

While the school contexts and conditions under which teachers begin to teach are important in terms of their wellbeing and degree of satisfaction, equally important to them is their ability to teach and elicit their student learning, as we heard during focus group meetings and through their yearly narratives. We examined their perceived teaching and classroom management capacities on the basis of Bandura's concept of self-efficacy Bandura (1977, 1983) and used the short form scale developed by Tschannen Moran and Woolfolk Hoy (2001) to measure self-efficacy. The scale consists of 12 items related to classroom activities. Respondents were asked to react to each one the items on the basis of a 9-point agreement scale. After confirmatory factor analysis we were able to group responses in the same categories found in other studies using the scale: classroom management, student engagement in learning and teaching skills. We elicited the teachers' self-efficacy perceptions at the end of teacher preparation and at the end of the first and of the second year of teaching (Table 6 below). While the number of teachers who responded the first questionnaire was larger (52), those who responded the second (29) and third one (21) belonged to the same group and thus were more directly comparable.

As seen above, there were significant differences in perceptions of teacher self-efficacy depending on their stage of experience. Thus, at the end of the first teaching year (2013) teachers felt less efficacious than they did at the end of teacher preparation (2012) in all of the capacities measured, with most of them being significantly lower. In other words as teachers took on more direct teaching responsibilities, their self-efficacy perceptions lowered. This lowering of self-efficacy is consistent with findings in other follow-up studies from pre-service to beginning teaching (Woolfolk Hoy and Bourke Spero, 2005; Sahin and Atay, 2010). However, at the end of their second year of teaching (2014) their self-efficacy perceptions were higher than in their first year and four of them were significantly higher: (a) feeling able to attend to diverse student needs, (b) motivate uninterested students, (c) help students to value learning and (d) use a variety of teaching strategies in class. Nevertheless, on the whole, their second year self-efficacy perceptions remained lower than what they were at the end of their teacher education studies.

7. Discussion: staying or leaving?

We now turn to a re-reading of the material provided by questionnaires, narratives and focus group meetings in order to examine conditions that, in the light of the literature reviewed, offer an indication of possible decisions to stay or leave the profession. The facts highlighted by the sub-study on attrition of young teachers over ten years in Chile on reasons for abandoning teacher either permanently or temporarily tended to cluster around three main areas: lack of sufficient opportunities for professional development, inadequate working conditions as well as unsatisfactory school leadership. As we shall discuss below, some of these conditions were already part of the experience of the new teachers we studied more closely.

The teachers we studied chose their profession because they felt they had a social contribution to make and because they recognised the value of teaching. They were aware that salaries and working conditions were not good compared to other professions. At the time of graduating from teacher education, these teachers showed a reasonable degree of satisfaction with their preparation,

Table 6
Changes in teacher self-efficacy perceptions from post-practicum (2012) to end of second year teaching (2014): 1 = Not at all; 3 = Very little; 5 = Some degree; 7 = Quite a bit; 9 = A great deal.

To what extent did you feel able to:	End of 2012 N = 52 Mean	End of 2013 N = 29 Mean	End of 2014 N = 22 Mean
Classroom Management			
Control disruptive behaviour in the classroom	7.1	6.63	6.90
Get students to follow classroom rules	7.4	6.06***	6.48
Calm a student who is disruptive or noisy	7.38	5.94***	6.57
Establish a classroom management system with each group of students	7.25	5.81**	6.86***
Student Engagement in Learning			
Motivate students who show low interest in school work	6.98	6.06**	6.48**
Get students to believe they can do well in school work	7.8	6.44***	7.05
Help your students to value learning	7.43	5.94***	6.95**
Assist families in helping their children to do well at school	5	6.27***	6.71
Teaching Skills			
Craft good questions for students	7.13	6.50	6.81
Use variety of assessment strategies	7.03	6.13*	7.20***
Provide an alternative explanations or example when students are confused	7.75	7.13	7.71**
Implement alternative teaching strategies in your classroom	6.98	6.53	7.14

Differences significant at *P < 0.1; at **P = 0.05; at ***P < 0.01 of 2013 in respect to 2012 and 2014 in respect to 2013.

and a moderate level of teaching efficacy (Ávalos and Bascopé, 2014). Though most of them looked and found a teaching position not all were able to do so immediately after graduation. In their first year they were employed in different types of school management, with contracts as substitute, part-time or quasi-full time teachers and with different levels of teaching load. In some cases, they had to teach out of their level of preparation (primary or secondary), a situation described as teaching "out-of-field" (Ingersoll, 2003). As we learn from their narratives, they felt anxious and nervous during the first weeks of teaching like those in many studies of beginning teachers around the world (Veenman, 1984; Goddard and Foster, 2001).

Beyond the usual concerns of beginning teachers, we were able to discern in their accounts evidence of situations and experiences that might predict or not their continued motivation and professional commitment to teaching and to remaining in schools. In this respect, we were able to distinguish two kinds of situations that we describe as "critical" or as "protective" predictors.

7.1. Critical situations

Consistent with findings in the literature on beginning teachers we identified four kinds of critical situations related to teaching conditions that could lead to early

school turnover and early attrition: pressures on time (Borman and Dowling, 2008; Skaalvik and Skaalvik, 2009), perceived deficits in school organisation and management (Johnson et al., 2012; Ingersoll, 2001), insufficient skills to handle "uninterested" and special needs' students, and having to take on "out-of-field" teaching responsibilities (Ingersoll, 2003). These situations tended to interact in different forms in the overall perception of teachers regarding their work and experience.

Almost all the teachers we studied felt the pressure of having insufficient time to perform their duties adequately, reflecting the general dissatisfaction of teachers in Chile with the existing teaching/non teaching hour ratio that guides teacher contracts. Lack of time was more acute in the case of teachers who worked in more than one school, not just because of time spent in commuting, but also because of criteria for allocating teaching responsibilities. David taught both in a prison school with a

reasonable distribution of teaching/non teaching time and in a private school that practically left no contract time for non-teaching tasks. By the end of his second year of teaching, feeling exhausted and angry at the lack of improvement in the private's schools conditions, he decided to stop teaching, make use of a grant to travel abroad and prepare for further studies. Valentina's heavy teaching load in a primary school was almost unbearable by the middle of her first year of teaching and was exacerbated with a particularly "unmanageable" class that other teachers referred to as the "glorious ones". But, Valentina sought help from another teacher, was able to learn how to establish order in the class of the "glorious" and ended the year reasonably satisfied with her performance. Nevertheless, she left the school at the end of her second year to join a prestigious private school.

The characteristics of the school management and culture weighed heavily on Ivan, a physics secondary teacher, who changed school twice in his first year of teaching due to uncertain and unsatisfactory conditions. His second move from a secondary private school was prompted by his dislike of the management culture of the school, which he felt undermined teachers' professionalism. Luckily, in his second year of teaching Ivan settled well in a secondary public municipal school, which though challenging as far as the background of his students, provided him with the experience of a supportive teacher community.

One of the biggest complaints of the group we studied was that their teacher preparation had not adequately prepared them to deal with learning difficulties or special needs' students. Samuel, a secondary history teacher, struggled with a 7th grade student with Asperger syndrome. No help in the school was provided to deal with such cases. Carla enthusiastically began to teach in the first grade of a subsidised private school in a middle-low socio-economic neighbourhood. Soon, she became aware of dyslexia problems in one of the children. She was ill prepared to handle the situation and could not get help from the school's special needs' advisor. Nevertheless, she decided to handle the case herself as best as she could. She worked with him every day after school and enlisted the assistance of the child's mother. As she wrote in her end-of-the-year narrative she felt enormously gratified at her a "partial" success. But it was her private success, not one seen by the school. For, without explanation, at the end of the year her contract

was not renewed. Carla found another similar school to teach the next year.

7.2. Protective factors

Three situations appeared to protect the new teachers from frustration, excessive stress and lack of the capacity to search for solutions. The first one also found in Hong's (2012) study of new teachers who stay and who leave, is the emotional gratification resulting from challenging students and winning their recognition. A second condition is the power of reflection and analysis of the critical situations encountered, as this enabled teachers to recognise both progress and mistakes that needed correction. Finally, the experience of working collaboratively with other teachers sustained the commitment of those teachers who had the experience.

In their decision to move schools both David, who taught prison kids and Ivan who taught difficult to reach equally disadvantaged students, expressly affirmed that it was not their students' conditions that prompted them to leave. On the contrary, it was precisely their students assets and shortfalls, that made it hard and delayed his decision to go: "*I began to say good bye to them over a week, They didn't want me to go, they had come to like me and I had also become fond of them. I had just started to know them and felt I was abandoning them*" (Iván). Care for their students caused teachers to search for ways of improving their behaviour and learning. Valentina transformed her instinctive way of teaching when she realised that the difficult "glorious" group needed structure and discipline and felt successful at the end of the year when: "*despite many 'red' marks, many came to respect me, like mathematics, raise their marks and remain active during the entire class . . . I felt satisfied when at the end of the year one of my students thanked me 'for putting up with us for a whole 130 lessons'*. Though frequently frustrated at the difficulty of getting his secondary final year students to understand the physics concepts they should have learned in earlier years, Ivan did not give up on them. His second year narrative was entirely centred on the process of getting his students to experience success through challenging them to build an electric motor. The positive results led Ivan to decide on similar activities for the next year of teaching: '*I feel they raise interest and motivation at a time when all that these kids want is to finish the year and leave the school.*'

In practically all the narratives and focus group discussions there were examples of reflective analyses of successes and failures, as well as recognition of having moved ahead in professional learning. One of the two "out-of-field" secondary history teachers illustrates this well. Philip's challenge was to teach history to fourth graders and help them understand the differences between "historical" and "chronological" time. He devised an activity which he thought might work but which in the end was only partially successful. Upon reflection, he attributed this to a degree of improvisation in organising the activity, and concluded "*improvisation can lead to errors in learning*". He would be more careful the next year. To some extent, these teachers' increased professional learning was not seen by them as increase in content knowledge or in conceptions about teaching and learning, but rather as an "enhancement" of these: "*I used to think in a simpler way before, but I now see context and elements that I could not have known at the University, and much less through my field work. For example, time, so important, but only now have I learnt to manage it*".

Teaching in a school or for that matter in any institution is not just the solitary performance of a teacher before a single group of students. It is the task of the entire body of teachers. The teachers we studied discovered its importance and resented the lack of such opportunities, as indicated in responses to the first and second year questionnaires. When there was an opportunity it was recognised

as important both in the focus group discussions and in the end-of-year narratives. A key change from one year to another in Rodrigo's appreciation of the school in which he worked was the experience of first grade teachers and assistant teachers' decision to work together and share responsibility and results: "*Well, some of the old teachers moved to another school, so there we were the four new ones and we talked about working together. That was what I liked most*". During a focus group meeting Ivan spoke about how the physics teachers in his school came to share in the planning of a lesson guide; "*concept by concept, word by word, make it clearer, let's change this and put that. Make room for the students to debate . . . We were thinking*". Ivan also noted the value of working together with teachers from other specialisations: "*I feel I grew a lot through collaboration. I was able to talk to teachers of history, Spanish, English, biology, chemistry despite these being conceptually different disciplines, but there are many things that cross each other not only in terms of content but also on ways of doing things*".

In synthesis, what emerges from the study is that decisions to stay or leave are not necessarily taken in the first two years of teaching. The teachers in the study improved their perceptions of self-efficacy in the second year which in other studies have shown to be related to decisions to stay or leave (Hultell et al., 2013; Hong, 2010a, 2010b) but remained professionally dissatisfied in terms of working conditions and thus potentially prone to decisions to move or leave (Borman and Dowling, 2008). Nevertheless, faced with difficult contextual conditions these teachers were protected by their emotional and professional commitment to students and teaching, their reflective analysis of complex situations and their ability to extract professional lessons from these. The level of this protection, however, has limits as shown in Ivan's decision to move twice from schools due to unsatisfactory management or in David's decision to stop teaching on account of the excessive workload and limited time for non-teaching duties. None of the teachers we studied had mentoring support although they sought help when needed and valued any opportunity for teacher collaboration both emotionally and professionally. All these conditions, as we know from the literature on teacher attrition and turnover as well as from the survey of out-of-school teachers presented in section 5.3 above, may trigger decisions to move permanently or temporarily away from teaching.

8. Conclusions and policy implications

Chile is a country with a reasonable level of economic development. Yet, as far as education is concerned it resembles the situation of poorer countries given its levels of inequality in schooling and learning results as marked by socio-economic and ethnic background. In this respect, it has still a way to go in meeting the Education for All goals of equal opportunity to quality education, including the more recent ones included in the Education 2030 Framework for Action (http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/education-2030-framework-for-action).

The well-known mantra for the improvement of education quality, especially for disadvantaged populations, has been to "attract, develop, retain and deploy teachers equitably" (EFA Monitoring Report 2013/14; OECD, 2005), and this is correct in principle. However, in practice, good candidates for teaching who are reasonably well-prepared and willing to work in difficult conditions and with disadvantaged school populations may not do so for long if their working conditions in the broad sense of the word are not reasonably adequate and if they are lacking in collegial support. Some of these situations can be dealt with through actions directed at improving school leadership and providing opportunities for teacher collaborative work, and more specifically by making school leadership aware of the needs of new

teachers and of the importance of their role in schools. But others require changes in policy.

The working conditions of the new teachers in Chile when we began to study in 2012 were in many ways unsatisfactory as noted earlier in the paper, and there was no sign of change at the time. However, recently a new teacher law has been approved that could improve on a number of factors associated with teacher attrition and turnover analysed in this article (4 March 2016). The new law raises teacher education entry qualifications and requires all teacher education programmes to be duly accredited. It recognises the right to mentorship opportunities for every teacher in publicly funded schools in their first year of teaching and provides for adequate mentor preparation. It establishes a teacher career path and increases the entry-level salaries of new teachers in all publicly funded schools, whether municipal or privately managed. It raises the proportion of non-teaching hours for teachers in all publicly funded schools and protects a portion of non-teaching time for tasks related to classroom teaching requirements. It also recognises the value of school-based collaborative teacher activities as an element in teacher performance evaluation. These are important measures that in time could ease the pressures over new teachers, adequately reward their preparation and work and stimulate professional development as well as quality work in schools. This in turn might help to reduce current attrition levels and retain good teachers in schools. But progress will need to be constantly monitored.

Reaching the state of an almost universal agreement that there was need for a law of this kind was the result of long-term discussions, not just on the part of the teacher union and of teachers in general, but also of a strong civil society movement all over the country that during a long year pushed for changes in teachers working conditions (Plan Maestro, 2015). The contribution of research for asserting the facts was also important. Similar initiatives may help other societies to move towards rewarding good teaching with improved working conditions and stimulating career opportunities and so advance towards having conditions for a quality and equal education for all.

Acknowledgements

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