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Executive summary

terce

THIRD REGIONAL COMPARATIVE AND EXPLANATORY STUDY

Associated factors

LATIN AMERICAN LABORATORY FOR ASSESSMENT
OF THE QUALITY OF EDUCATION

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Acknowledgments

This study has been a collective regional effort which has involved numerous teams, organizations, and regional and national authorities over the past five years. TERCE has been characterized by its consideration of the educational context of the region, and for having followed a model of participatory construction. The study has involved the participating countries in all decisions, stages of implementation, and activities conducted. Specifically, the countries played a key role in the design of the assessment instruments and in their application at the local level, with technical assistance from institutions and experts coordinated by OREALC/UNESCO Santiago. Using their respective realities as a basis, the countries have contributed to the development of the theoretical frame of reference, the curricular analyses, and the elaboration of items, only to name a few things.

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Executive summary

One of the purposes of the Third Regional Comparative and Explanatory Study (TERCE) is to provide pertinent information that contributes to the improvement of educational systems in the region. To do this, the study provides countries with empirical evidence as a contribution to the development of educational policies that make the right to quality education effective for all children in the region. Therefore, the study puts the emphasis of its work not only on the measurement of learning outcomes, but also on the analysis of factors that explain differences in academic achievement between students and between schools.

Since the year 2000, Latin America has experienced unprecedented economic growth that went hand in hand with a strengthening of educational and social policies that produced significant transformations. Among these are the incorporation of more vulnerable populations into schools, the drastic decrease in the percentage of the population living in conditions of poverty, the provision of support to the neediest families, and the provision of different types of educational materials and textbooks. These governmental efforts increased the reach of school education and also reduced the rates of dropout and grade repetition. In this regard, it can be asserted that significant progress was made in terms of guaranteeing the right to education in the region.

Despite the economic growth, Latin America is still the region of the world with the greatest indices of inequality. This is an outstanding challenge that deeply affects the lives of families and children in the region. Thus, it is essential to continue efforts to offer increased opportunities to more disadvantaged students, and to generate social policies that reduce inequality so that a promising future can be built for coming generations.

The results and recommendations from the study of associated factors of TERCE are presented below, organized into three sections: a) characteristics of students and families; b) characteristics of teachers, pedagogical practices, and resources in the classroom; and c) characteristics of the schools.

Characteristics of students and families

The characteristics of students and their families have a strong relationship with learning achievements. The primary findings of this chapter show that the academic performance of students is influenced by their academic background, educational practices at home, and the socioeconomic, demographic, and cultural characteristics of their families. The primary results in each one of these areas are summarized below.

Academic background: The academic background of a student gives an account of his or her educational history and is associated with academic achievement. In fact, repeating a grade, which is the mechanism for remedying falling behind in learning, is the variable that had the greatest negative influence on academic achievement. After the socioeconomic level, grade repetition is the second variable that has the strongest relation with learning achievement. Attending preschool between the ages of 4 and 6 is a factor that has a positive relationship with learning. Children who received a preschool education demonstrate higher learning achievement in all assessed subject areas and

grades, which occurred practically in the entirety of all of the countries participating in the study. Lastly, absence from school has a significant negative association with learning achievement in the majority of the countries included in the study. Students who miss school two or more times a month tend to exhibit a lower performance than those students with fewer absences.

Educational practices at home: Educational practices at home can boost academic achievement, and this is demonstrated by the TERCE findings. Students whose parents believe they will reach higher education exhibit greater academic achievement. In turn, students show higher levels of achievement when their parents stay on top of them, congratulate them, and support them in their learning processes. Similarly, when parents supervise the academic development of their children, the results of the students tend to be higher. Furthermore, in the majority of the countries, students who dedicate at least 30 minutes daily to their studies demonstrate higher performance than those who do not implement this practice. In the same manner, students who display reading habits outside of school achieve greater performance. Lastly, the recreational use of computers among sixth grade students has a negative relationship with learning.

Socioeconomic, demographic, and cultural characteristics: the index of socioeconomic level predicts student learning in all countries, subject areas, and grades assessed. When taking this index into consideration at the school level, the increase of one unit in this index carries an increase of up to 60 points (more than half of the standard deviation) in the school learning results. At the student level, increase in the index by one unit can imply an increase of up to 41 points in individual results.

In another area of social characterization, those students whose families declare receiving State subsidies contingent to school attendance or regular health checkups demonstrate lower performance than those students coming from families who do not receive this support. Such a finding is to be expected, given that this type of support in the region tends to be targeted at the most vulnerable population.

Remunerated child labor also exhibited a negative influence on learning achievements, because child workers obtained achievement averages that were significantly lower than those who do not work.

The results also show significant gender disparities. The observed pattern reveals that females demonstrate greater performance on reading exams, while males achieve higher scores in math and science. In the case of mathematics, a widening of the gaps in favor of sixth grade males has been observed. On the contrary, in third grade mathematics, there are no significant differences in learning results between males and females in 13 of the 16 educational systems assessed. Generally speaking, the impact of gender differences on academic achievement exhibits considerable variation throughout the countries.

Indigenous students demonstrate learning achievements that are consistently lower in the different countries of the region. Those countries where the relationship between achievement and belonging to an indigenous ethnic group is greater, measured through maternal lineage and the use of the indigenous language in the home, are Peru, Paraguay, Panama, and Nicaragua.

Migrant students obtain lower results on applied tests than those children who are not migrants. This situation is verified more consistently in the Dominican Republic, Guatemala, and the Mexican state of Nuevo León. The exception is Paraguay, where migrant children appear to have an advantage on the third grade mathematics test.

Some general recommendations for educational policy are presented based on these findings:

1 Replacement of grade repetition.

The evidence produced by the TERCE study demonstrates that repetition is one of the factors that have the most negative relationship with performance. This result is consistent with the data collected in the previous regional study (Treviño et al., 2010). Repeating a grade, aimed supposedly at improving student learning, appears to be an inefficient mechanism that is associated with less learning. It is possible that this involves problems of stigmatization, motivation, and classroom environment that cause difficulties in the performance of those students who have repeated a grade. Due to this, it is essential to search for preventative formulas to avoid students lagging behind, and leave grade repetition as a last resource only to be used in exceptional situations. Designing and testing out academic support programs for stragglers in specific subject areas is recommended. These programs should be available to schools and teachers, who should implement them. Such initiatives need a temporary defined timeline for completing their objectives, in such a way that student progress can be continuously evaluated, and to adjust or adopt additional strategies for specific time periods when necessary. It is crucial for support programs, materials, and implementation to be rigorously evaluated, in such a way that they are transformed into tools based on evidence, and their effectiveness is understood. In this regard, it is important for schools to have early detection devices for challenges in student learning, to be able to initiate a timely intervention of support and not necessarily at the end of the year. Finally, searching through international evidence for specific prevention and support programs for students with learning difficulties, that have been carefully evaluated, is recommended. These can be used as a foundation for the generation of local support mechanisms for students.

2 Expansion of preschool education for children between the ages of 4 and 6.

In accordance with international evidence, the TERCE results demonstrate that attending preschool has a statistically significant relationship with later academic performance. In fact, preschool education has become a national priority for various educational systems in the region (Treviño, Place, & Chávez, 2013). In this regard, it is essential to prioritize the expansion of this educational level to the most vulnerable population, given that this group has more difficulties accessing this level of education. However, international evidence has warned that the increase in the scope of preschool education is not enough if a quality education is not ensured, particularly regarding physical spaces, materials, care, and social interactions that foster child development (Britto, Yoshikawa, & Boller, 2011). For this reason, it is necessary to invest in qualified teaching and technical personnel who have specialized studies at this level. The development of infrastructure, materials, and texts that are appropriate for the preschool age is also an essential component of the provision of quality services. Finally, the creation of an institutionalism that encourages the development of capacities in different methods of attention and childhood education is necessary. This institutionalism must take on the responsibility of establishing quality standards of infrastructure, materials, and teaching processes, as well as verifying their adequate fulfillment.

3

Parent participation and support of vulnerable students.

The positive association between academic performance and the involvement of parents or legal guardians in the educational processes of students suggests the importance of considering the significant role of the family as a partner in educational processes. Student performance tends to increase when their parents have high expectations regarding their achievements, when they use school information to support their studies, and they supervise the academic development of their children. Thus, it is recommended that educational systems design strategies for fostering a positive partnership between school and home. Programs for parent participation at school could be implemented, establishing joint plans of action between teachers and parents, with the objective of supporting the harmonious development of children. Such instances must not be a substitute for the school, but rather a complement that helps to generate expectations and strategies for promoting social, emotional, and academic skills in minors. This design must integrate special measures so that the teachers and schools have realistic expectations regarding what the families can do, and not create disadvantages for those children whose parents have greater difficulty participating at school or offering support to their children. Research has shown that parents from more affluent social sectors have child-rearing styles that produce skills in their children which allow them to adapt themselves to the academic context with greater ease, and these socialization practices tend to be in sync with the expectations of the school. In contrast, parents from lower socioeconomic levels sometimes expect the school to take responsibility for academic support, because they perceive themselves to not have the necessary tools to offer an effective framework for their children in terms of academics (Lareau, 2003; Reay, 1998; Reay, Crozier, & James, 2011). It is also necessary to reinforce continuous education for teachers, so they obtain tools that help them in the gradual process of the incorporation of parents of students with a lower socioeconomic level into school activities. Lastly, it is important that parent participation is not understood by schools as a way of creating additional economic resources.

4

Policies and practices for equity in education between females and males.

The TERCE results exhibit that there are learning disparities between boys and girls. In comparison with boys, girls demonstrate better performance in reading and lesser achievement in math and natural sciences, even though this pattern is not repeated in all countries. In order to bridge these gaps, explicit educational policies are required that aim at evening out learning opportunities, which must consider structural elements as well as the educational process. It turns out to be essential for States to openly make it clear that these disparities are a problem of public policy that concerns the educational sector and the work of schools and teachers. A careful review of the curriculum, texts, and educational materials is necessary so that gender equality is explicitly addressed, showing males and females in different social roles equally, for example, in household chores, in the care of children, in the development of science, in leadership roles in political and business spheres, to mention only some possibilities. Teachers play a key role in this regard, and therefore should receive the necessary training so that in their daily practices they have gender equality as an aim, how to distribute classroom organization with the same number of boys and girls in different activities, fostering participation in scientific activities,

encouraging the participation of boys and girls when asking questions or holding debates in class, assigning leadership positions during group work, and maintaining similar expectations for what boys and girls can achieve in different subject areas. Teacher education which promotes an inclusive and equitable perspective on gender in teaching processes must be part of their initial and continuous training. In summary, a deliberate and explicit work is required from all levels of politics, and educational practice to bridge the learning gaps associated with gender, given that these are related to socialization practices rooted in culture, and schools tend to inadvertently carry this on (Aikman & Rao, 2012).

5

Policies and practices that enable equality in education between indigenous students and non-indigenous students.

Given the cultural diversity of the region, it is worrisome that indigenous students, on average, tend to obtain lower results than non-indigenous students. Unfortunately, this result is consistent with the assessments conducted previously by UNESCO in the region (Treviño et al., 2010). Bridging gaps between indigenous and non-indigenous peoples is a major challenge for educational and social policies. As mentioned in this chapter, indigenous peoples are lagging behind in the majority of the social indicators. However, even after considering the differences in socioeconomic level of both groups, the disparities between indigenous and non-indigenous students remain. This suggests that there are disadvantages present that go beyond social gaps, and are probably associated with patterns of social relations in the various countries of the region that are expressed as differences when it comes to opportunities (Borja-Vega et al., 2007; Hall & Patrinos, 2006; Psacharopoulos & Patrinos, 1996). Within education, the countries in the region have recognized their indigenous peoples in various laws, and in many of these countries educational policies have been implemented to cater to this diversity, commonly denominated as bilingual intercultural education (López, 2001; López & Sichra, 2004). Even though progress has been made in the establishment of educational services for indigenous peoples within legal and political frameworks, the TERCE results show that there are still outstanding challenges in the area of equity of opportunities, and with regard to the test results.

Strengthening education for indigenous peoples is recommended in at least three areas, from respect for their culture to their languages.

First of all, it is important to reinforce teacher aptitude for the proactive inclusion of indigenous children into educational processes. Both initial and continuous teacher training programs should offer specific options for cultural and linguistic inclusion at school. It has proven to be essential for the initial training of teachers who serve indigenous populations to provide the tools for teaching a second language, which allows students to make an appropriate transition between their native language and their second language. It is worth mentioning that this could involve two different directions. On the one hand, in contexts where the indigenous language is sought to be revitalized, this type of teaching skill would allow students to move from the majority language towards the indigenous language. On the other hand, in contexts of intensive use of the indigenous languages, this type of teacher training would facilitate learning the majority language, without losing or denigrating the native language.

Secondly, it is essential to develop various teaching and assessment methods that consider the cultural characteristics of the indigenous population, which identify different ways of organizing the learning processes and the assessment of these processes (De Haan, 2000; Treviño, 2006).

Thirdly, strengthening the curricular design and developing educational materials that foster interculturality and that are available to all schools is fundamental. This is because, given the dynamics of territorial migration, it is more and more common to find indigenous students in urban schools and in areas that traditionally have not been recognized as indigenous. Schools must have materials for proper inclusion and effectively respond to the educational challenges that the cultural diversity poses, particularly in educational establishments that have not had the experience of receiving students from indigenous communities.

6

Measures to remedy the association of socioeconomic inequality with academic achievement.

The strong association between the socioeconomic level of students and schools with performance, as well as the relationship between performance and child labor, reveal the existence of important social conditions of the population that need to be looked after in order to improve academic performance and learning opportunities. Given that these factors involve cultural, economic, and political situations that go beyond the field of education, it is necessary to develop intersectoral social policies (e.g. health, food, housing, work, etc.) in order to mitigate the relationship of the aforementioned factors with academic achievement. Even though conditional monetary subsidies are not positively associated with learning, they represent a worthwhile strategy for fostering the continuous participation of more vulnerable students in health and educational systems. The regular presence of children at school, as well as the promotion of health care, are initial and necessary conditions for learning, but do not necessarily guarantee that this will occur. It is essential for teachers and educational centers to have pedagogical tools and strategies, as well as the material conditions to promote child development. In this regard, support programs are required for schools, with guidance and rigorous evaluation that allows for continuous adaptation until the desired results are obtained. This implies long-term programs, with a continuous improvement approach, that require three or four years of working with a network of educational establishments to share teaching strategies and academic organization that have proven to be successful in different contexts. Within this context, a policy to attract and retain teachers who are effective in situations of vulnerability has proven to be fundamental. The aforementioned strategy should include economic incentives and employment conditions that promote professional development. Also, it is important to create physical spaces for sharing and collaborating at school which give teacher performance a certain value in environments that tend to be highly challenging due to the work and emotional burden that comes with dealing with the precarious situations of students and their families. Lastly, it is fundamental to foster and teach healthy living habits at school, together with maintaining and reinforcing nutritional school programs for students with a low socioeconomic level, which allows them to receive the intake of necessary nutrients for healthy development.

Characteristics of teachers, pedagogical practices, and resources in the classroom

International evidence points out that the teacher and practices in the classroom are some of the main variables that affect academic performance. In this chapter, aspects of initial and continuous teacher training are highlighted, regarding their motivation, pedagogical practices, and the resources available in the classroom that are related to the TERCE results.

Teacher training: The educational levels of teachers, obtaining a teaching degree, the type of studies of the initial teacher training, the length of the academic track, and the participation in opportunities for improvement are variables that did not have a significant relationship with academic achievement. This is due in part to the fact that the majority of teachers in each country have similar training characteristics. Therefore, this attribute is almost a constant, and therefore it would be difficult for it to explain the differences in academic performance. In spite of the lack of statistical significance, these variables are important for educational policy because they denote the minimum requirements that countries have established for teacher training. Data from the study shows that the amount of teachers with a teaching degree, the educational levels of teachers, and the length of their studies are generally high in the region, although important differences are distinguished among the countries. On the other hand, it is warned that participation in initiatives of continuous training is low in the region, which reflects the need to improve teacher education throughout their professional career through different opportunities for improvement. Similarly, it has been noted that the participation of teachers in graduate studies, such as master's degrees and doctorates, is very uncommon.

Teacher attendance and punctuality: Teacher attendance and punctuality stands out for its high incidence in school achievement. Students who are taught by teachers who are regularly present from the start of the class tend to demonstrate better results. This reveals the importance of valuing and using time effectively at school, because absence and lack of punctuality of the teacher means that the students have fewer hours of activities during their education, which negatively affects performance.

Classroom resources: The availability of educational materials for students is a necessary condition, but not enough to ensure a proper educational process, given that their use must be mediated by interactions in the classroom that foster the harmonious development of students. Children who have a personal notebook to take notes tend to perform significantly better than those who do not have one and therefore have to share. Similarly, students who have their own book for each subject area demonstrate higher performance than those who do not have these resources. Even though a large part of the assessed students indicates having notebooks and school books, a significant amount of them do not have these minimal educational resources. These deficits are even more pronounced in sixth grade. The use of a computer at school tends to have a negative relationship with learning, even though some exceptions are discerned depending on the context and the frequency of use. Their use outside of school has a positive relationship with student performance.

Classroom practices: The TERCE results reiterate the importance of the classroom environment on student academic achievement in the region. Evidence shows that learning processes are benefited when the relationships among the parties involved are cordial, collaborative, and respectful.

Some recommendations for public policy are provided below based on the results of the associated factors:

1 Development of programs that reinforce strategies and practices in the classroom.

Teacher practices in the classroom are essential in the improvement of education. The TERCE results indicate that the socioeconomic climate and positive interactions in the classroom have a high association with learning. In this regard, the creation of new strategies of professional development for teachers, directly linked with classroom practices, is required. Programs that involve teacher guidance in the classroom with modeling strategies that follow criteria for continuous improvement represent a promising option. These programs must sustain themselves over time in order to strengthen teacher capacities at school, and progress according to teacher skills at school and the organizational development of the school. School networking is an opportunity that must be taken advantage of. The effectiveness of these programs depends also on the support of principals and leaders, for which, beyond offering training and support to teachers individually, they should focus on the school as a unit of intervention. Therefore, school management must also be trained to understand and develop strategies that increase the possibility of sustaining classroom processes over time throughout the educational establishment. Data from this report indicates that, even in the traditional model for continuous teacher training, low levels of participation are recorded. Policies which promote and provide continuous teacher training have been proven to be fundamental. Lastly, measures are needed that help to maximize learning time for students, particularly in what is referred to as attendance and punctuality of teachers. It is fundamental for local authorities responsible for the school, such as principals, to have among their duties and obligations ensuring that the criteria of the continuous presence of teachers is complied with, as well as the thorough use of the work schedule for the education and care of children.

2 The importance of having individual educational materials in the classroom.

It has been observed that the individual possession of a notebook or a subject area's book has a significant positive influence on student learning. Even though simply having the materials does not necessarily guarantee learning, the fact that each student has his or her own notebook or book facilitates learning and boosts academic performance. National educational systems need to develop strategies for the production and distribution of books and notebooks. The most vulnerable groups of the population deserve special attention, given that due to issues related to cost or physical distance, they do not have access to these materials. A subsidy program is recommended which facilitates the free provision of these materials, as well as the implementation of a distribution system to rural and/or remote areas.

3 Strengthening initial teacher training programs.

The countries of Latin America seek to satisfy the need to have a professional teaching staff. Initial training should be strengthened through two ways. First, by focusing teacher education on elements that foster effective pedagogical

practices based on evidence, and that are also enriched by the professional opinion of teachers. For this, it is necessary to redesign the institutions of teacher training, strengthening their academic faculty and demands for the production of knowledge relative to pedagogical practices that are related to the cognitive, emotional, and social development of students. In summary, initial training must promote future teachers to have the capacity to put didactic and pedagogical knowledge into practice in order to support children from different social backgrounds. Secondly, the evidence shows that teachers with the most diverse education achieve comparable results among their students. This suggests that teacher capacities developed in different programs are relatively homogeneous; thereby, crosscutting policies for improving initial training are needed. Therefore, the creation of an independent and external institutionalism is recommended, which frequently evaluates and accredits the quality of initial training programs. For this, it is necessary to define the criteria of quality that the different types of training programs must fulfill, and review them regularly to adapt them to the changing conditions of the environment. The accreditation of programs must be mandatory for all educational institutions. Graduates of academic tracks and institutions that are not accredited should be prohibited from working as teachers, at least in schools that are completely or partially funded with public resources.

Characteristics of the schools

Schools are the institutions that are responsible for providing educational services. In them lies the expectation of guaranteeing the right to education for children in their daily lives. Below the main school factors that are associated with learning are presented.

Disparity in academic results between schools and within schools. Disparities in learning occur in two complementary areas within the region. The greatest disparities in achievement are recorded among students within the same school. The differences in academic performance within the school represent between 36% and 82% of the total learning disparities in all of the countries, subjects, and grades. In contrast, learning disparities between schools range between 18% and 64% in all subject areas and grades. Socioeconomic differences explain a large part of these gaps in learning between schools, but not the differences in achievement within each educational establishment itself.

Population that attends the schools. Learning and the average socioeconomic level of students in the different countries, grades, and evaluated subject areas exhibit a strong association. In addition, in some countries, the strength of this relationship suggests that the socioeconomic level of students predicts the performance of children with a high degree of certainty. This reality is associated with the low social inclusion that the educational systems of the region demonstrate. The possibility of two children with different socioeconomic levels going to the same school is low. Despite the fact that residential segregation partly influences this phenomenon, it is not clear that educational systems have implemented policies for increasing educational equity, for example, promoting greater social inclusion in schools or preventing implicit and explicit admission processes that reinforce residential segregation.

Type of school and social environment. The educational systems in the participating countries of TERCE show significant differences in their composition: in some, the majority of the schools are rural. In others, there are more urban public schools, and there are countries in which no type of school represents the majority (rural, public urban, or private urban). Meanwhile, there are enormous differences in the average socioeconomic level of the populations that attend these different types of schools. In all countries, rural schools receive the most vulnerable population, followed by urban public schools, while the urban private schools receive the population with the highest socioeconomic level. On the other hand, when comparing the learning results of urban public schools with rural schools and those of the urban public schools with urban private schools, it has been observed that the differences tend to disappear, lessen, or, in some cases, they are even reversed when considering the students' socioeconomic level.

Violence in the school environment negatively affects learning. Measured through a perception index that students' families have regarding the occurrence of situations of aggression or of illegal conduct in the neighborhood or community of the school, it has been observed that for each point in which the index of violence increases in the surroundings of the educational center, the test results of the students decrease by between 8 and 27 points in third grade, and between 8 and 38 points in sixth grade.

School resources: The study suggests that the material resources of the schools (infrastructure, facilities, and services) influence the academic results of students and illustrate their learning conditions. These tend to be unevenly distributed within educational systems and less available in schools that serve children who are socially and economically disadvantaged. The availability of infrastructure is significantly linked with student results in 91% of the subject areas, grades, and countries assessed, before considering the socioeconomic level. However, once this last variable is taken into account, the significant relationship that has been observed between achievement and infrastructure in the evaluated subject areas in third grade in the majority of the countries, and, to a lesser extent, in sixth grade, disappears.

Full-time day school is another variable that belongs to the area of school resources. With this, increasing the daily instruction time for the children is sought after. When considering the socioeconomic level of the students, it has not been observed that a school day with extended hours is significantly related with learning in the majority of countries and subject areas evaluated. This could be due to the fact that the majority of the schools in the countries assessed share a similar extension schedule and, therefore, differences in achievement associated with the school day cannot be found.

School processes: The results show that the work environment is significantly related to academic achievement in 10% of the countries, subject areas, and grades assessed. Similarly, monitoring and feedback of teaching practices by school management is not frequently related to academic performance. What is more, the study reveals that in half of the situations, this practice is associated with lower results in student performance, which could suggest two phenomena. On the one hand, it is feasible that in some cases school management visits the classrooms where they see more problems, and on the other hand, there is a lack of a culture and employment organization in which the perfection of teaching practices through mutual monitoring and feedback is used to improve teacher work, and, thereby, learning.

Policy recommendations, based on school factors associated with academic achievement and which can help to improve student learning, are presented below:

1

Support of vulnerable students and the schools that they attend.

Given the great influence of the students' socioeconomic level on learning, comprehensive strategies of support are needed for underprivileged students. In the history of the region, the 1990s were characterized by the startup of compensatory programs for schools attended by vulnerable populations, and the 2000s by the creation of conditional and directed programs of monetary transfers. It is apparent that in order to improve learning, explicit coordination is necessary between both policies. The support of the demand, meaning, the students and their families, improves economic conditions and the probability of attending and staying in school. However, this policy is insufficient if the schools the students attend do not have the necessary resources and teaching and organizational capacities necessary to adequately serve the most disadvantaged population of the country.

2

Improve the focus of the educational and social policies.

As observed in this chapter, school profiles give very important information for the design of educational policies. Targeting criteria can be defined according to the information provided by the educational profiles and can be grouped, broadly, into four types. First, if the relationship between the average socioeconomic level of schools and achievement presents a high slope and explained variance, target policies related to characteristics of social vulnerability would be more effective. This means that educational and social policies must focus on the students who face the greatest instability and the schools they attend. Secondly, with the relationship between the socioeconomic index of the school and performance with a low slope and low effort, universal policies would be preferable, due to the low link between both variables. Thirdly, when the association between the average school achievement and the socioeconomic level of the schools demonstrates a high slope and low explained variance, the policies must focus on the schools with low performance, with relative independence from the socioeconomic level of these. Fourthly, when the association between achievement and social characteristics of the school describes a low slope and a high percentage of explained variance, compensatory programs are required that are targeted at vulnerable students which remove the obstacles to performance. Finally, it is necessary to clarify that even though school profiles offer useful information for targeting policies, it should be considered together with other evidence in order to define the criteria and aims of the educational policy with greater specificity.

3

Strengthening of teaching capacities and educational management for the harmonious development of students.

Given that the majority of the disparities in learning occur between students who attend the same school, it is necessary to strengthen the educational capacities of teachers, together with developing academic management mechanisms that foster continuous improvement of the school organizations, with a focus on the harmonious development of students. These policies must represent a new generation in terms of design, because it is not to be expected that traditional teacher training programs and traditional preparation programs for school management yield different results from those that have been known until now. It is fundamental for the aforementioned policies to focus on supporting schools in practice, and that they commit themselves

to the progressive development of capacities of the whole school system, with a long-term vision that will surely transcend the administration periods of the different governments. Strengthening the focus and the quality of monitoring and feedback practices of teachers could positively complement the achievement of these objectives.

4

Equity in access and school retention for greater social inclusion at school.

School systems in the region have proven to be highly socioeconomically segregated; therefore, specific policies are needed that prohibit educational systems from intensifying social and geographic segregation, which is seen on the continent. There are four measures that can assist in improving equity in access and retention. First, by eliminating all types of charges to families by schools or the parents' association, which implicitly or explicitly can impose an economic barrier to the poorest families. Second, it is fundamental to explicitly prohibit selection processes, either directly or indirectly, in schools that receive public resources. On occasion, policies for preventing selection have led to the establishment of systems of random selection, in cases where schools have a higher demand for available spots. Thirdly, local school transportation programs can help families with lesser resources broaden their schooling options for their children if they receive these services free of cost. Fourth, incentive and support programs are necessary so that schools become more effective in their retention of and learning development in the most vulnerable students.

5

Development of social capital in the school environment.

Even though the social situation in the school environment could be viewed as outside of the area of educational policy, given the results of this study and the proximity that schools have with the families in the local settings, it is feasible to carry out actions from the school that improve social capital networks with the community. In this case, cultural, physical, and social activities with support from local authorities can strengthen social bonds among members of the community and the school, while providing the school legitimacy as an institution in their immediate surroundings. Lastly, this type of activity should not be taken away from the human or economic resources of the school permanently, but rather these should be joint and collaborative actions between local public and social authorities.

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