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# INDIGENOUS POPUEZȦTION 

 AND DIFFERENCES IN ACCESS TO PRIMARY EDUCATION IN BOLIVIA
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## ABOUT THIS PROGRAM:

FOCAL's Education program proposes to use analytical tools in order to produce fact-based evidence about the degree of inequalities and inequities in education and their main determinants among marginalized populations such as Indigenous Peoples and Afro-descendants in Bolivia, Colombia and Peru. This initiative will assist in the identification of policy gaps for the development, discussion and exchange of more accurate education policy ideas.

Reform efforts that have been undertaken in Bolivia, and are underway today, are essentially linked with the implementation of intercultural bilingual educational programs, conditional cash transfers and decentralization to give local governments more power to deliver more focused and effective policies. Despite these efforts, the results have fallen far short, confining improvements in access and supply of education services to urban and surrounding areas while leaving rural and marginalized populations to face growing levels of inequalities and inequities.

## Executive summary

In the last few years, the gap in access to primary education between indigenous and nonindigenous populations has been decreasing in Bolivia. Proof of this is found in primary education enrolment rates for children that have learned to speak in an indigenous language and those that learned to speak in Spanish; the difference between these rates has fallen from six to three percentage points. However, the differences in Grade 8 completion rates between these two groups persist.

This document analyzes the situation in Bolivia and trends regarding access to primary education over the past years, particularly based on access and completion indicators. In addition, this paper investigates the factors associated with these trends using school registries and available household surveys.

The main recommendations flowing from our diagnostic are:

1. In order to close access gaps, interventions could focus on specific population groups (e.g. working students or street children) and regions of the rural area. In urban settings, emphasis could be placed on school transportation and food programs.
2. Interventions could also focus on improving the quality of primary education, such as boosting teacher training, with the objective of increasing the continuation rates and reducing the dropout rates of school-age boys and girls, particularly in rural areas.
3. It would be important to develop universal coverage policies that not only stimulate secondary education enrolment and continuation rates, but also define a labour marketoriented secondary education that offers different outlets in rural and urban areas, including vocational secondary programs that are linked to the needs of the productive sector.
4. It would be worthwhile to distribute school resources according to the needs of indigenous students, especially in low income-per-capita areas.

## Introduction

The problems of access to and continuation in primary education in Bolivia have yet to be solved, despite almost two decades' worth of education policies since the creation of the "Education Reform Law" in 1990 and the decentralization of the education system that started in 1994. In fact, equal opportunities in education are not guaranteed for all of Bolivia's population: substantial differences in the availability of school services still exist, and the socioeconomic situation of each household determines educational attainment, which is especially low among the indigenous population. This is a barrier to equity and to the fulfilment of the social rights of Bolivians.
The quantity and quality of education greatly determine an individual's opportunities for social and economic mobility, and are also the basis for the accumulation of capital and economic growth. Moreover, the externalities of education support democratic ideals and a safer and more equitable society.

As is the case in most Latin American countries, 90 per cent of Bolivians agree that education could improve income distribution. In addition, the lack of access to education and its poor quality are reflected in the low intergenerational social mobility of Bolivians; this mainly affects the country's indigenous population, as described by Werner Hernani in a 2007 Fundación Aru study. ${ }^{1}$

This lack of equity would not be so pressing if inequalities were being corrected at least in access to basic services such as primary education. Although Bolivia's education coverage is close to universal, there are many students that do not move up at a yearly rate or drop out of formal education entirely. The last national report on the Millennium Development Goals, written by the Social and Economic Policy Analysis Unit (UDAPE in its Spanish acronym) points out that, compared to the national average, net enrolment and continuation rates are lower in departments with a high proportion of rural population and in mainly indigenous municipalities. ${ }^{2}$

The data provided by the Ministry of Education (ME) are insufficient to analyze access gaps and their possible implications for public policy. For example, they do not allow the reader to identify the influence of accessibility conditions, family socioeconomic status and household resource availability on school attendance and continuation. Through the use of these criteria, some studies -such as Wilson Jiménez's 2004 report for the Program for the Promotion of Education Reform in Latin America and the Caribbean (PREAL in its Spanish acronym) ${ }^{3}$ - have put forward a wider characterization of Bolivia's education gaps using information from the late 1990s. This characterization identifies specific population groups whose education indicators are lagging even after controlling for place of residence (urban versus rural), family socioeconomic traits (such as educational attainment of the head of the household) and other conditions that serve as a proxy for family resources (such as the availability of electricity and sanitation in the home). Compared to other groups, Quechua girls are less likely to attend school and more likely to drop out earlier, which suggests that there are specific barriers to access and continuation for the girls that belong to these population groups.

After the implementation of the education reform that took place between 1994 and 2005, there were few projects created to explicitly promote access to and continuation in education as highlighted by Manuel Contreras in a report on education reform in Bolivia. ${ }^{4}$ However, Bolivia's National Development Plan and its new education bill (introduced in 2006 but not yet passed)
acknowledge the need to promote equal opportunities by giving priority to the "discriminated" segment of the population. Within this framework, and even though it does not focus specifically on these groups, the so-called "Juancito Pinto" school voucher, which was introduced in 2006 for girls and boys in public primary schools, is an intervention that can significantly improve school attendance and continuation for primary school children.

Beyond the political change that has taken place in the last few years, the country's education system has generally improved. The investments in school infrastructure, the upkeep of educational units, the increase in the number of teachers assigned to formal education and the funding of school materials support a certain "momentum" for an increase in the schooling supply. These measures, together with the introduction of the Juancito Pinto school voucher (BJP in its Spanish acronym), which favours greater demand in schooling, may have reduced inequalities in education access and continuation. However, there is still no empirical evidence that allows us to link these changes with variations in school access and continuation rates.

This paper seeks to answer the following questions: How did school access gaps and lags change between 2002 and 2008? What influence do area of residence, socioeconomic conditions and family resources have on closing these gaps? Finally, how does being part of specific groups limit access and other education outcomes?

## Indigenous population and access to primary education

There is evidence of the existence of education and social gaps that adversely affect Bolivia's indigenous population, but there is also ample discussion on the observable criteria that can be used to define this population. The 2001 Population and Housing Census and subsequent household surveys started to include information about population characteristics, including language (mother tongue and language currently spoken) and self-identification as indigenous or aboriginal.

The definition of who is indigenous is controversial. Many authors consider it a multidimensional concept, as presented in a 2005 United Nations Development Program (UNDP) document on ethno-linguistic characteristics. ${ }^{5}$ Other authors believe that such a status could be defined through two of the three traits mentioned above, and International Labour Organization (ILO) Convention 169 establishes that self-identification as indigenous or aboriginal is sufficient.

In order to estimate the gap in access to primary education, it is more convenient to evaluate population groups according to differences in mother tongue and currently spoken language as these characteristics are related to learning and the design of an education system, whereas selfidentification as indigenous or aboriginal has a different connotation.

According to the 2002 and 2008 household surveys, roughly 26 per cent of the population between the ages of six and 13 have Aimara, Quechua, Guaraní or another native language as their mother tongue, compared to 74 per cent that have Spanish as their mother tongue. Among the latter, approximately 16 per cent also speak a native language, whereas 83 per cent speak Spanish only or in combination with any number of foreign languages. In any case, almost 40 per cent of school-age children speak a native language or have one as their mother tongue. Although Bolivia's indigenous population has traditionally lived in rural areas, recent demographic trends have led to the growth of a number of largely indigenous urban areas.

## Proposal for the transformation of education

The government's proposal for the transformation of education, to be implemented in the next few years, goes beyond reform. For example, the National Development Plan (PND in its Spanish acronym) emphasizes the value of aboriginal cultures, gives the state a central role in the economy and favours the use of public policy to reduce economic and social inequality. The government's framework is based on three pillars: (a) a new conception of the state as a main actor and promoter of development; (b) a definition of development from the point of view of cultural diversity; and (c) a plurinational public administration as a form of decolonised national administration. ${ }^{6}$

The PND includes the following strategies for the education sector: (1) the transformation of the education system, which implies reforming the curriculum and the channels for community participation; and (2) the promotion of a quality education that prioritizes equal opportunities. According to the PND:
"This policy seeks to generate equal opportunities in education for those segments of the population that suffer from discrimination, exclusion and exploitation. This will democratize access to and continuation in education through programs, actions and tasks that facilitate the inclusion of those social sectors that are disadvantaged." 7

The PND vies to create universal access to school and to ensure the continuation of children in the system in the face of inequality in opportunities in education, a problem that affects a number of social groups, especially boys and girls from rural areas and from indigenous communities.

Even though the details of how the new education policy is supposed to work have not yet been defined, the general outlines of education programs and projects have been revealed; many of the principles of this new framework have been described in the bill introduced by Avelino Siñani and Elizardo Pérez in 2006, which has been the subject of intense public debate that has not reached a defined consensus.

This proposed education bill emphasizes communitarianism, intra- and inter-culturalism, and the link between education and economic production. In practice, discussion of this prospective law reaffirmed the vision of the development and functioning of education as an element of decolonisation of the state. Both aspects are clearly different from the previous education reform (1994-2005), which was geared toward comprehensive training and the development of capacity and competencies within the framework of a quality education. ${ }^{8}$

Another difference pertains to inter-cultural bilingual education, which is a main pillar of the proposed education bill. This concept seeks to value the knowledge of ancestral cultures and incorporate it into a flexible curriculum, whereas the previous education reform emphasized only its linguistic aspect.

## Recent interventions in the education sector

Despite innovative proposals, in practice the interventions in the education sector have been a continuation of already existing initiatives. The schooling supply has been growing over time through the building of schools, the provision of educational materials through previous projects, the assignment of more teachers (at a rate of 2,000 new teachers per year), the opening of new high schools and the continuing enrolment of students in upper secondary education; these themes are discussed in a study by Miguel Vera et al. ${ }^{9}$

The process of decentralization, which is based on the laws for Popular Participation and Administrative Decentralization, has maintained municipal competence over the maintenance of school infrastructure. It has also given it new responsibilities such as providing school breakfasts; currently, school breakfast programs cover 60 per cent of the children that attend school, and are offered to primary school students in 273 of Bolivia's 327 municipalities.

These initiatives at both the national and municipal levels strengthen the supply in the education system, and have been recently complemented by demand-side incentives for girls and boys of primary-school age. The BJP is an annual voucher worth Bs. 200 (US\$24.50) that was created by Supreme Decree No. 28899 (Oct. 26, 2006) to increase the enrolment, continuation and completion rates of boys and girls that regularly attend the first five years of primary education in public schools. In 2008 the voucher already covered all eight primary school grades, and this trend was maintained in 2009.

The vouchers cover all students from first to eighth grade in public schools, and are given to those girls and boys whose names stay on the schools' attendance lists. ${ }^{10}$ In order to receive payment, proof of enrolment has to be provided to district education offices.

Although there is no formal evaluation of the results achieved by providing the voucher, the Ministry for Development Planning points out that it would increase enrolment, especially in the earlier grades. ${ }^{11}$ It is important to note that according to data from household surveys, 79 per cent of primary school students that attend public schools live in poverty. ${ }^{12}$

The voucher could possibly reduce late entries into the school system and could also lead some students to transfer from private to public schools to collect it, though there is less information available to document these potential effects of the measure. Further, the use of public education services could generate growing demands in terms of infrastructure, human resources, etc.

## Indicators of education system coverage

Statistics from the Education Information System (SIE in its Spanish acronym) give some indication of school coverage in both the public and private sectors. In 2008 -figures are still preliminary - net enrolment rates in primary and secondary education stagnated, which could be attributed to the lack of action to overcome barriers to access, especially those of a geographic nature.

In primary school, which covers the first eight grades in the current system, the net enrolment rate was 90 per cent in 2008, almost three percentage points below that of 2006; in secondary school, the rate is below 55 per cent and is also showing a downward trend (see Table 1 ). ${ }^{13}$

| $\|$Table 1     <br> Bolivia: Net enrolment rates, 2006-2008     <br>  $\mathbf{2 0 0 6}$ 2007(p) 2008(p)  <br> Net enrolment rate     <br> Primary (1st to 8th grade) 92.7 91.7 90.0  <br> Secondary (1st to 4th grade) 58.1 56.8 54.6  <br>      <br> (p) Preliminary figures     <br> Source: Education Information System (SIE in its Spanish acronym), Ministry of Education     |
| :--- |

SIE data on enrolment in primary and secondary education between 2006 and 2007 are shown in Figure 1, which shows the expected trend: enrolment tends to decrease in higher grades. School registries were modified in 2006 through the introduction of a Central Registry for Education (RUDE in its Spanish acronym), which aimed to clean up enrolment lists and improve the quality of available information about education.

Figure 1
Bolivia: Number of enrolled students per school grade 2006-2007


According to available SIE data, a total of 1.93 million students enrolled in the eight grades of primary school during the 2007 school year, of which 1.72 million were promoted to the next grade; these are very similar to 2006 figures (see Figure 2). The number of students that advanced from the different school grade levels indicates the success of education management, since students finish their grade with acquired competencies. Students who are not promoted represent those who drop out of the education system or finish the school year but fail the grade due to low performance.

Figure 2
Bolivia: Number of students promoted per school grade 2006-2007


School registries show a greater risk of failing in specific school grades, namely the first and seventh grades of primary education and the first grade of secondary education (see Figure 3). The total number of students who do not proceed to the next grade level provides some information about the systematic trending of this variable; the trend is due in large part to the different competencies required according to the grade by the curriculum, the rigidity of teaching practices in schools and the differences in curriculum application between private and public schools.


The likelihood of dropping out during the school year also varies as the student advances in the education system. Data from 2006 and 2007 on dropout rates confirm that the number of students that drop out of primary school grades has been falling. The number of dropouts is greater in Grade 8 and even higher at the beginning of secondary school, which means that progress in the education system lacks continuity (see Figure 4).


The statistics and indicators described above reveal some trends in access to and completion of formal education in recent years: notably, progress made toward universal access to primary education has stagnated. Thus, policy adjustments must be made if completion rates of primary education are to increase.

## Magnitude of the education gap between indigenous and non-indigenous populations

It has been mentioned that SIE statistics are too limited to evaluate education outcomes related to the socioeconomic characteristics of students. Therefore, instead of using SIE registries we chose to use the household surveys administered by the National Statistics Institute (INE in its Spanish acronym) in 2002 and 2008. These surveys allow for comparisons in their estimations of education indicators. The rates of enrolment and school attendance of the country's schoolage population are disaggregated into two age groups: girls and boys between the ages of six and 13 (normal age range for primary school according to the education framework), and between the ages of 14 and 18 (normal age range for secondary school, in order to compare). The surveys also include the proportion of boys and girls between the ages of 14 and 18 that completed the first eight grades of primary school, which is a way of measuring the completion rate of Grade 8.

The 2002 and 2008 household surveys are national and cover both rural and urban areas; a total of 5,764 and 3,940 households have been polled respectively. Both include data about the sociodemographic characteristics of household members, including questions about mother tongue, language currently spoken and self-identification as indigenous or aboriginal. The surveys' education modules also ask about the level and grade reached by each member of the household, their school enrolment and attendance and any reasons for non-attendance.

To define a boy or a girl as indigenous or non-indigenous, we use two variables: the mother tongue and the indigenous language currently spoken, be it Aimara, Quechua, Guaraní or any other.

This document evaluates education gaps according to three indicators: (i) enrolment, (ii) school attendance and (iii) completion of Grade 8 of primary school and Grade 4 of secondary school for each related age group.

Table 2 shows the enrolment rate of boys and girls in both of the aforementioned age groups at two different points in time. In the 2002 school year, 94.5 per cent of the population between the ages of six and 13 declared their enrolment. If the numbers are disaggregated according to language status, there is a gap of between five and six percentage points in favour of non-indigenous students. In 2008 enrolment improved to above 98 per cent and the gap between indigenous and non-indigenous students narrowed. However, this gap was greater among the population aged 14 to 18 , regardless of whether one uses the mother tongue or the current language criteria.

|  | Mother tongue |  | Current language |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non-indigenous | Indigenous | Non-indigenous | Indigenous | Total |
| Ages 6 to 13 |  |  |  |  |  |
| 2002 | 96.1 | 89.7 | 95.2 | 90.8 | 94.5 |
| 2008 | 98.7 | 95.7 | 98.9 | 96.5 | 98.1 |
| F-test | 87.03* |  | 58.46** |  |  |
| Ages 14 to 18 |  |  |  |  |  |
| 2002 | 81.3 | 60.0 | 75.1 | 76.8 | 75.4 |
| 2008 | 85.7 | 67.4 | 86.5 | 73.4 | 82.0 |
| F-test | 115.83 |  | 31.58** |  |  |

[^0]The differences in enrolment rates between indigenous and non-indigenous students in each age group show that there is a greater risk that the former will drop out of school, especially during secondary education. In aggregate terms, enrolment rates estimated by household surveys tend to be larger than those provided by SIE statistics, for both primary and secondary school. As is usual in most household surveys, the net enrolment rates of children may have been overestimated.

In order to compare enrolment estimations with SIE statistics, household surveys also ask about school attendance of those enrolled and consider the reasons that are given for non-attendance (work, household chores, health reasons, etc.). In general, attendance rates do not substantially differ from enrolment, so they capture only in part the reasons for school dropout. Also, it should be noted that attendance rates can vary depending on the dates that the surveys are administered in relation to the school calendar.

The enrolment rates that were estimated by each survey included students that enrolled in any grade, regardless of whether or not the student had the corresponding normal age. In order to obtain a better measure of school performance, we calculated the completion rate of primary school Grade 8 for respondents aged 14 to 18 and the completion rate of secondary school Grade 4 for respondents aged 19 to $23 .{ }^{14}$ In the case of the former, Grade 8 completion rates jumped almost 13 percentage points, from 64.6 per cent in 2002 to 77.5 per cent in 2008 (see Figure 3).

A smaller proportion of indigenous students aged between 14 and 18 completed primary education compared to their non-indigenous peers; these gaps are amplified when the mother tongue criterion is used. In 2002, the difference in completion rates for Grade 8 between indigenous and non-indigenous students was almost 30 percentage points and, although it fell to 24 points in 2008, it still indicates severe inequality in education opportunities.

In secondary education, completion rates for both indigenous and non-indigenous populations are in general lower than in primary education ( 64.1 average in 2008), but the rates have improved between 2002 and 2008 (a 16-point increase). Despite this progress, the gaps between indigenous and nonindigenous populations are greater, especially if the mother tongue criterion is used. In 2008, the difference in the completion rate of secondary education between non-indigenous and indigenous respondents aged 19 to 23 was almost 40 percentage points ( 71.4 per cent versus 32.1 per cent).

| Bolivia: Completion rates at Grade 8 of primary education and Grade 4 of secondary education grouped by mother tongue and language currently spoken, per age group and survey year, 2002-2008 (\%) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Mother tongue | Current language |  |
|  | Non-indigenous Indigenous | Non-indigenous Indigenous | Total |
| Respondents aged 14 to 18 that completed Grade 8 of primary education |  |  |  |
| 2002 | 72.7 43.5 | $65.6 \quad 59.0$ | 64.6 |
| 2008 | $82.4 \quad 57.6$ | 83.6 65.5 | 77.5 |
| F-test | 208.32*** | 89.97*** |  |
| Respondents aged 19 to 23 that completed grade 4 of secondary education |  |  |  |
| 2002 | 59.519 .6 | $51.1 \quad 33.7$ | 47.7 |
| 2008 | $71.4 \quad 32.1$ | $75.0 \quad 44.4$ | 64.1 |
| F-test | 237.54*** | 143.52*** |  |
| Note (a): Age was calculated according to the provided date of birth and adjusted to the beginning of the school year. Note (b): F was calculated from the analysis of variance in the distribution of enrolment by survey year and language. $\mathrm{F}^{* * *}$ significant at $\mathrm{p}=0.01$, ** significant at $\mathrm{p}=0.05$. Source: 2002 and 2008 household surveys, INE |  |  |  |

Despite the high enrolment rates, educational performance is affected by low primary (and secondary) education completion rates due to students entering the system late, failing grades and dropping out as they make their way through the school system.

## Factors associated with education outcomes

Even though there is evidence that suggests the existence of education gaps between indigenous and non-indigenous populations, these gaps do not reflect other characteristics such as the student's socioeconomic status or area of residence. In 2008, the differences in primary education completion rates between the populations aged 14 to 18 in each area (urban versus rural) was almost 25 percentage points ( 85 per cent versus 61 per cent respectively). This indicates that living in rural areas is a factor that reduces the opportunities for education and is related to the coverage of the school system, whose supply is not sufficient to guarantee the completion of primary education to every student.

A gap is also identified when looking at differences in completion rates based on the language spoken by students in urban areas ( 86 per cent for non-indigenous and 79 per cent for indigenous using the mother tongue criterion and 87 per cent and 79 per cent using the current language criterion) (see Table 4). In rural areas, the differences in completion rates between indigenous and non-indigenous students are too small to draw any conclusions.

| Bolivia: Population aged 14 to 18 that completed primary education grouped by mother tongue and currently spoken language, per area and survey year, 2002-2008 (\%) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mother tongue |  | Language spoken |  |  |
|  | Non-indigenous | Indigenous | Non-indigenous | Indigenous | Total |
| Urban areas |  |  |  |  |  |
| 2002 | 78.2 | 52.1 | 76.9 | 61.9 | 75.6 |
| 2008 | 85.8 | 79.5 | 86.9 | 79.0 | 85.5 |
| F-test | 41.41** |  | 20.92** |  |  |
| Rural areas |  |  |  |  |  |
| 2002 | 39.7 | 57.3 | 50.1 | 41.0 | 44.6 |
| 2008 | 65.4 | 58.6 | 68.4 | 53.7 | 60.7 |
| F-test | 26.51** |  | 3.33* |  |  |
| Note (a): Age was calculated according to the provided date of birth and adjusted to the beginning of the school year. Note (b): F was calculated from the analysis of variance in the distribution of enrolment by survey year and language. $\mathrm{F}^{* * *}$ significant at $\mathrm{p}=0.01$, ** significant at $\mathrm{p}=0.05$, ${ }^{*}$ significant at $\mathrm{p}=0.1$. <br> Source: 2002 and 2008 household surveys, INE |  |  |  |  |  |

In order to make comparisons in later school cycles, we estimated completion rates of Grade 4 of secondary education among respondents aged 19 to 23. In 2008, the gap between indigenous and non-indigenous students in urban areas persisted (20 or 24 percentage points depending on criteria); it is also worth noting that, even in urban areas, indigenous students could be less likely to complete secondary education (see Table 5).

Table 5
Bolivia: Population aged 19 to 23 that completed secondary school grouped by mother tongue and language currently spoken, per area and survey year, 2002-2008 (\%)

|  | Mother tongue |  | Language spoken |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non-indigenous | Indigenous | Non-indigenous | Indigenous | Total |
|  | Urban areas |  |  |  |  |
| 2002 | 66.6 | 32.7 | 64.4 | 44.7 | 61.2 |
| 2008 | 75.5 | 51.1 | 78.3 | 59.0 | 73.6 |
| F-test | 101.01 |  | $67.87^{*}$ |  |  |
| Rural areas |  |  |  |  |  |
| 2002 | 12.1 | 18.1 | 18.3 | 11.4 | 13.9 |
| 2008 | 37.5 | 28.0 | 39.6 | 23.3 | 30.2 |
| F-test | 20.08* |  | 0.06 |  |  |

Note (a): Age was calculated according to the provided date of birth and adjusted to the beginning of the school year.
Note (b): F was calculated from the analysis of variance in the distribution of enrolment by survey year and language.
$\mathrm{F}^{* * *}$ significant at $\mathrm{p}=0.01$, ** significant at $\mathrm{p}=0.05$, * significant at $\mathrm{p}=0.1$, no asterisk $=$ not significant.
Source: 2002 and 2008 household surveys, INE
In rural areas, completion rates tend to be lower than in urban areas for both indigenous and nonindigenous students. However, in 2008 non-indigenous students were more likely to complete secondary education.

If students in rural areas are less likely to complete primary and secondary education due in large part to insufficient schooling supply in the more remote areas of the country, students' low household resources also factor in. Increasing their payment capacity, access to basic services and other education supplies would contribute to a reduction in the dropout risk.

In 2008, the percentage of the urban indigenous population aged 13 to 18 that completed primary education was only weakly related to family income (see Table 6). Therefore, financial capacity does not contribute significantly to improved education outcomes among urban indigenous students.

In rural areas, non-indigenous students' income levels are more related to education outcomes; this relation is even stronger for the rural indigenous population that needs higher incomes -equivalent to the richest quintile- to attain better education outcomes (see Table 7).

Tables 6 and 7
Population aged 13 to 18 that completed primary education grouped by language currently spoken, per income per capita quintile, 2008 (\%)

|  | Table 6 - Urban areas <br> Language spoken |  | Table 7 - Rural areas <br> Language spoken |  |
| ---: | ---: | ---: | ---: | ---: |
|  | Non-indigenous | Indigenous | Non-indigenous | Indigenous |
|  |  |  |  |  |
| Total | 86.8 | 79.7 | 65.8 | 58.5 |
| Quintile 1 poorest | 86.9 | 84.6 | 31.1 | 56.5 |
| Quintile 2 | 80.4 | 78.0 | 58.7 | 58.1 |
| Quintile 3 | 85.9 | 75.5 | 62.4 | 53.6 |
| Quintile 4 | 90.2 | 83.4 | 77.1 | 54.0 |
| Quintile 5 richest | 91.0 | 68.2 | 74.8 | 77.0 |
| F-test | $2.34^{*}$ |  | $2.55^{*}$ |  |
| 2 |  |  |  |  |

Note (a): Age was calculated according to the provided date of birth and adjusted to the beginning of the school year.
Note (b): The school-age population that speaks an indigenous language includes monolingual and multilingual (with Spanish) speakers.
Note (c): F was calculated from the analysis of variance in the distribution of enrolment by survey year and language.
$F^{* * *}$ significant at $p=0.01$, ** significant at $p=0.05$, *significant at $p=0.1$.
Source: 2008 household survey, INE

All of the information presented above points to the existence of gaps in education, even after controlling for the effect of area of residence (urban versus rural) and household income. This gap could be related to the characteristics of the education system, which generates fewer opportunities for indigenous students. ${ }^{15}$

## Conclusions

Advances in education in recent years favoured non-indigenous students disproportionately, both because this population is concentrated in urban areas and because they have easier access. Despite a favourable evolution in terms of access, continuation in and completion of primary education continues to be problematic for indigenous populations -composed by those that have an indigenous language as their mother tongue or in some cases currently speak an indigenous language.

Gaps in education were reduced at least in terms of enrolment. In 2002, the difference between indigenous and non-indigenous students was greater than seven percentage points, whereas in 2008 it fell to three. However, barriers to completing primary education persist. This points to serious problems in the management of the education system, which does not promote indigenous children.

Indigenous girls and boys from rural areas and with low family income are the most vulnerable: they have lower enrolment rates and lag in school, so few of them complete primary education between the ages of 14 and 18 . This compromises the school performance and human capital formation of this population group.

Initiatives within the education system have not been effective in increasing primary and secondary completion rates to close the gap between indigenous and non-indigenous students. This indicates that the distribution of inputs was not sufficient to improve education outcomes and achieve more efficiency in the formal education sub-system.

## Policy recommendations

Measures created to increase access and ensure continuation in school are still being debated within the education sector. A recent example is the Ministry of Education's 2009 Sector Development Plan, which is based on three pillars: (1) opportunities and equity; (2) quality education; and (3) education geared toward, and training for, production. Those interventions that promote access and continuation are part of the first pillar and include projects such as: implementation of boarding schools and school transportation; specific interventions that target boys, girls, teenagers and working youth; strengthening of projects for special education; and the continuity of the Juancito Pinto voucher. It is also important to evaluate the possible beneficial effects of extending child education on the achievement of primary education objectives, especially those initiatives designed for early childhood, such as school breakfasts and lunches.

Even though access problems are being addressed by existing measures, these appear to be insufficient to deal with the division between urban and rural areas. Therefore, children should be assisted in different ways in each case. We put forward four policy recommendations related to our diagnostic:

1. Focused interventions could be created for specific population groups and rural areas (e.g. specific projects for working students, street children, etc.). In urban areas, emphasis should be placed on school transportation and food programs, with the goal of closing access gaps.
2. Interventions should be developed to improve the quality of primary education, since this could promote continuation and reduce dropout rates, especially in rural areas. This must include the appointment or reposting of teachers and encourage teacher training, which in the medium term will be crucial to improve the direction and the quality of education.
3. There should be a universal policy push to stimulate registration and continuation in secondary school. It is important to define secondary education as labour-market oriented in order to move toward a secondary education policy that provides different outlets in rural and urban areas, including vocational secondary cycles that are related to economic production policies -all of this within the framework of a new curricular design.
4. It may be worthwhile to distribute school inputs according to the particular needs of indigenous students, especially in low income-per-capita areas.

## Endnotes

1 Hernani, Werner ¿Cuál es el costo de la discriminación contra el indigenous en Bolivia? La Paz: Fundación Aru, 2007.
2 Unidad de Análisis de Políticas Sociales y Económicas (UDAPE). Quinto Informe. Progreso de los Objetivos de Desarrollo del Milenio. La Paz: UDAPE, Comité Interinstitucional de las Metas del Milenio, 2007, 40-51.
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8 See Contreras, 2006, op.cit.
9 Vera, Miguel. Estudio de factibilidad de necesidades de formación docente. La Paz:
Ministerio de Educación y Culturas, 2009.
1o See Ministry of Education and Cultures and Ministry of Development Planification. Press declarations. http://www.oei.es/noticias/spip.php?article1638.
11 In this regard, see UDAPE, 2008, op.cit.
12 Hernani, 2007, op.cit.
13 The observed trend could be related to deficient data for past school years in which student registration was overestimated in order to obtain additional resources. SIE is still revising the figures. For enrolment rates, denominators obtained through population projections for specific ages or age groups may be inaccurate due to demographic processes (such as international migration in recent years) that have modified the country's population pyramid.
14 Both surveys (2002 and 2008) were performed in the month of November, so the respondents' age was estimated according to the beginning of the school year, which was 10 months earlier.
15 Hernani, 2007, op.cit.

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[^0]:    Note (a): Age was calculated according to the provided date of birth and adjusted to the beginning of the school year. Note (b): F was calculated from the analysis of variance in the distribution of enrolment by survey year and language. $\mathrm{F}^{* * *}$ significant at $\mathrm{p}=0.01$, ** significant at $\mathrm{p}=0.05$. Source: 2002 and 2008 household surveys, INE

