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REPORT

# CENTRAL EDUCATION ISSUES IN LATIN AMERICA AND THE CARIBBEAN

Regional Preparatory Meeting 2011  
United Nations Economic and Social Council  
Annual Ministerial Review  
ECOSOC - AMR

Buenos Aires, Argentina, may 12 - 13, 2011

The Economic and Social Council (ECOSOC) serves as the central forum for discussing international economic and social issues, and for formulating policy recommendations. Global preparatory meetings, regional consultations and national reviews are essential to prepare the Annual Ministerial Review and Development Cooperation Forum, which ensures a comprehensive, qualitative review of progress in implementing the MDGs.

This is an internal working paper for the Regional Ministerial Meeting for Latin America and the Caribbean, 12-13 may, 2011, Buenos Aires.

Prepared by the Regional Bureau of Education for Latin America and the Caribbean (OREALC/UNESCO Santiago).

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Design  
Maite Urrutia



**Santiago Office**  
Regional Bureau of Education for  
Latin America and the Caribbean

Draft Report N° 2

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Abbreviations used<sup>1</sup>

<b>ECLAC -</b>	Economic Commission for Latin America and the Caribbean
<b>ECOSOC -</b>	United Nations Economic and Social Council
<b>EFA -</b>	Education for All
<b>ICT -</b>	Information and Communication Technology
<b>ISCED -</b>	International Standard Classification of Education
<b>LAC -</b>	Latin America and the Caribbean
<b>LAMP -</b>	Literacy Assessment and Monitoring Programme
<b>LLECE -</b>	Latin American Laboratory for the Assessment of Quality Education
<b>OECD -</b>	Organisation for Economic Co-operation and Development
<b>OREALC/UNESCO Santiago -</b>	Regional Bureau for Education in Latin America and the Caribbean
<b>PISA -</b>	International Student Assessment
<b>SIRI -</b>	Regional Information System
<b>SERCE -</b>	Second Regional Comparative and Explanatory Study
<b>SEN -</b>	Special Educational Needs
<b>TVET-</b>	Technical and Vocational Education and Training
<b>UN DESA -</b>	United Nations Department of Economic and Social Affairs
<b>UNESCO -</b>	United Nation Educational, Scientific and Cultural Organization
<b>UNICEF -</b>	United Nations Children's Fund

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<sup>1</sup> Some of the abbreviations are used according to their original names in Spanish

**UIS -** UNESCO Institute for Statistics

**UPE -** Universal Primary Education

**WFP-** World Food Programme



# EXECUTIVE SUMMARY

In the international context, Latin America and the Caribbean have made significant strides in elevating its education indicators, which now rank the region above the world average. The achievements obtained must not cloud the view of the stark education inequities that persist among and within the region's nations.

Statistical data that corroborates the education gap prevalent in the region today and in the past can be traced, to a greater or lesser extent, to demographic, social, ethnic, cultural and other characteristics.

Access to primary education has become generalized throughout Latin America and the Caribbean, while a significant number of countries have achieved universal completion of education for the 15 – 19 age group. For some nations, however, the goal of universal completion of education is still out of reach.

Throughout the region, at the secondary school level, 3 of every 10 young people of the corresponding age group are excluded from secondary education and half the population of secondary school graduation age (20 to 24 years) did not finish secondary education.

The education levels students attained can be a useful reference point for education quality. The Second Regional Comparative and Explanatory Study, SERCE, reveals learning deficiencies common to many of the region's students. At the third grade level, 36 and 50 of every 100 students have low levels of language and mathematics competency, respectively. By the 6th grade, the situation improves: 19 and 23 of every 100 children have low learning levels in language and mathematics, respectively. The Program for International Student Assessment, PISA, confirms similar problems in the same subject areas as well as a significant gap in regards to achievements 15-year-olds attain in OECD countries.

Information on gender parity as a factor in education access and completion indicates that the region has tended to close the distance between men and women over the years. In fact, there is increasing indication of more favorable rates for girls, especially at the secondary education level.

The greater gender equity in Latin America and the Caribbean must not make us lose sight of the persistent and deep gulf in other areas of education. The differences noted in the routes traveled by the school age population, as determined by their place of residence, and, even more so, as determined by their household income, acutely underscore the inequities that predominate in the region. It suffices to mention that an average 4 of every 5 young people between 20 and 24 years of age, belonging to the region's 20% most affluent households, finish secondary school; while only 1 of every 5 youth of the same age group who grow up in the households with the 20% lowest incomes, earn a secondary school diploma.

Illiteracy is another indication of the inequity common to the region and of the historic debt the society owes a segment of the population. While important strides have been achieved in reducing illiteracy rates among the youngest members of the population, the problem continues to plague the adult population. More than 40 million people over 15 years of age are still functionally illiterate in the region today.

Public social spending and education spending, in particular, have risen steadily in the last decade, reaching 4.7% of the GDP overall in the region. Even during the last international economic crisis in late 2008, most countries of the region did not reduce public allocation for social programs. This helped cushion the effects of the recession, keeping poverty at bay and not reversing all the gains obtained over the last decade.

The progressive nature of public spending in education is another important aspect that should be noted. One fourth of public spending in the region goes to the quintile of the population possessing the lowest income, whereas only 16% is channeled to the most affluent quintile. In education spending, progressiveness is greater in primary than in secondary education.

Teachers are education's strategic actors due to their direct contribution in the learning processes of children, adolescents and youth, in the formation of quality institutional and school frameworks, and, correlatively, for their contribution to global improvements in education quality. The proportion of students per teacher varies widely among the region's countries, although the regional student per teacher average is lower than the world average. Some 80% of primary school teachers and 73% of secondary school teachers possess a teaching certificate, however, once again, great disparities exist among countries.

The region's educational policies have emphasized design of strategies and implementation of actions to incorporate new education and communication technologies (ICTs). Efforts to improve digital density and connectivity have concentrated primarily on secondary education, and it is precisely here where progress is most visible. However, the breach between the most advanced countries remains significant.

Incorporation of ICTs as part of the educational system has particular significance in light of the role they play in reducing the digital gap, as most of the economically and socially disadvantaged school population can only access these technologies through educational establishments.



# INTRODUCTION

This working paper has been prepared for the Regional Ministerial Meeting, “Major Education Challenges in Latin America and the Caribbean: Teachers, Quality and Equity” to be held in Buenos Aires, Argentina, May 12 and 13, 2011. This Meeting is convened in support of the Annual Ministerial Review (AMR) conducted by the United Nations Economic and Social Council (ECOSOC), and will make important contributions to the next ECOSOC AMR that will take place at the United Nations Headquarters in Geneva, in July 2011, on the issue of “Implementing the international goals and commitments agreed upon in education”.

The present document will study in greater depth certain aspects of education of special interest for Latin America and the Caribbean countries.

During the first decade of the 21st century, the region has recorded some positive signs in regards to the improvement of quality of life, and some significant advancement is evident in literacy and access, as well as in completion of all levels of education in most countries.

Latin American and the Caribbean States advance towards achievement of EFA objectives, although not all at a uniform pace. Social inequality persists in the form of complex structural problems that are rooted in the region’s geography and history. It is a legacy that tends to consolidate differences in primary and secondary education completion. The roots of these disparities are grounded in social-economic, territorial, ethnic and gender factors. While primary school access is no longer a major problem in the region, flaws persist in terms of academic achievement. Student performance is low in the majority of countries, posing a real threat to achievement of quality education for all.

This report concisely summarizes the broad spectrum of factors that effect education in Latin America and the Caribbean in recent years. It describes the major trends and the difficulties the region faces in providing quality education for all the population. It offers a regional panoramic perspective that includes an analytic diagnostic of the status of education in Latin America and Caribbean during the period 2000-2008, a comparative view of the sub-region level and an analysis of existing education gaps in regards to territorial, socio-economic, ethnic and gender factors.

Our aspiration is that this document may contribute to a better understanding of the state of education in Latin America and the Caribbean, and, consequently enrich today’s debate on the issue.



# I. GENERAL CONTEXT OF THE REGIONAL EDUCATION SITUACION

This section will address, first of all, the region's education advancement as compared to other regions of the world during the first decade of the 21st century. The next point will analyze certain variables of the regional context that are pertinent to understanding the development of the region's education systems.

## 1. Latin America and the Caribbean in the context of global education advancement<sup>2</sup>

The region's education indicators situate it above the world average. In terms of illiteracy, near the close of the first decade of the new century, 91 out of every 100 Latin American and Caribbean adults were illiterate, surpassing the figure of 83 of every 100 estimated for the world as a whole. Nearly every (94 of every 100) primary school-age boys and girls were enrolled in 2008, a figure surpassed only by North America and Western Europe.

Likewise, upon comparison of net regional enrollment rates at pre-primary school level (68%) and gross secondary enrollment rates (83%), the progress achieved in the region can be clearly observed. Again, its record is surpassed only by the industrialized nations (and Central Asia, in the case of secondary school) but is far ahead of other developing regions. In terms of the years that boys and girls can expect to remain in primary and secondary school (11.7 years), once again, only the most industrialized regions surpass Latin America and the Caribbean.

The education indicators analyzed here reveal differences in the relative evolution of education different regions of the world have experienced. Predictably, areas that began with the lowest levels

tend to record the most rapid progress, so that the developing world has tended to narrow the gap that separates it from the most highly developed nations. However, the 13 percentage-point gap that persists between levels of schooling reached in the region and those of North America and Western Europe remains significant.

The undeniable education achievements regionally must not obscure the decided inequalities that coexist within the region. Some countries exhibit performance that approaches the levels of the world's most highly advanced countries, while others exhibit indicators that rank them alongside countries that lag farthest behind on the planet. The document that follows aims to explain these contrasts and the particular characteristics of each country without losing sight of the region's education situation as a whole, its issues, challenges and opportunities.

## 2. Regional heterogeneity on the socio-economic, cultural and ethnic spheres

Reference to the regional educational situation implies recognition of the pronounced contrasts that are produced between and within countries. Such differences are somehow connected to a context that, with different shades and intensities shape the way the educational system develops. Although causality relationships are neither lineal nor simple, statistical evidence indicates that, to a greater or lesser extent, demographic, social, economic, ethnic, cultural and other factors can explain the variation in performance in education.

The first factor to bear in mind is each country's

<sup>2</sup> The statistical information that supports this section was prepared on the basis of data provided by UNESCO's Institute for Statistics.

demographic profile that clearly influences the development of its educational system. Two aspects to consider are, first, the demographic growth rate that determines the potential demand for education, and, consequently, the scope of education services required to guarantee universal access. The region's growth rate declined notably over the last 50 years, from an annual 2.8% in the mid 20th century to 1.3% in the year 2010. Within the region, however, countries are experiencing different stages of demographic transition, although all surpassed the "incipient" level after reducing population growth rates well below an annual 3%. Guatemala is the only country ranked with "moderate" growth on account of growth rates that exceed 2% per year. On the other hand, Cuba and Uruguay are the only countries rated "more advanced" with less than 1% annual growth. The rest of the countries are currently measured as "advanced" with growth rates between 1 and 2% annually<sup>3</sup>.

The second point – and not less important – is the extent of urbanization, as a factor that facilitates or encumbers education service expansion. Progress in the rural areas tends to be slower due to population dispersion and difficult access conditions. Countries characterized by higher population growth rates usually have a greater proportion of rural population. At present, in the majority of countries of the region more than half the population lives in urban areas, with the exception of Guatemala, Honduras and Haiti.

Another relevant dimension that enables understanding this regional heterogeneity is the gross domestic product per inhabitant, as an approximate indicator of productivity and the extent of the country's development. Countries with a higher per inhabitant gross domestic product may have

available greater resources, both public and private, to invest in education. According to the World Bank's classification for 2008, only Haiti was situated in the "low income" segment, with this indicator lower than US\$976 per year. On the other end of the scale, a group of nine Caribbean countries with annual income of US\$11,906 per inhabitant rank in the "high income" category. Another nine countries – three South American (Bolivia, Ecuador and Paraguay), four Central American nations (El Salvador, Guatemala, Honduras, and Nicaragua) and Guyana rank in the "lower middle income" category with a per inhabitant product ranging between US\$976 and US\$3,855 annually. The remaining 24 countries are in the high middle-income category with the indicator above US\$3,856 and less than US\$11,906 per year<sup>4</sup>.

From another perspective, the incidence of poverty is also an important element because it limits a person's capacity to access education and, above all, to remain and progress throughout the course of the education system. Characteristics of poverty differ widely among the countries and the incidence of poverty is associated in part with the income per inhabitant level, as well as inequalities that exist within countries, affecting rural zones more intensely than the urban centers<sup>5</sup>.

It is important to note the contrasts related to the multiethnic and multicultural nature of the region. Indigenous and African descendant groups are more disadvantaged, facing a greater probability of falling prey to poverty and with less access to education. In early 2000, Latin America's indigenous population totaled more than 30 million people concentrated primarily in Bolivia, Guatemala, Mexico and Peru. States recognize 642 indigenous peoples,

3 CEPAL/CEPALSTAT. <http://www.cepal.org/estadisticas/> (April 2010 data)

4 World Bank classification of countries by income group, based on INB per capita of 2008. See <http://datos.bancomundial.org/quienes-somos/clasificación-paises>. (April 2010)

5 ECLAC. 2009 "Social Panorama of Latin America," ECLAC Statistical Appendix, Santiago, Chile

and throughout the region 860 languages and dialects are spoken. The Afro-descendant population of approximately 120 million people is much higher, representing 23% of the Latin American population. Countries with the highest Afro-descendant presence are Brazil, Cuba and Colombia<sup>6</sup>.

Farther along in this document, the region's education situation will be analyzed and the correlation mentioned earlier will become evident, in regards to countries with high degree of urbanization, low population growth, high income and lower incidence of poverty (various Southern Cone and the Caribbean countries, for example) which have shown the best educational achievements. On the other hand, countries that lag behind tend to be those with low per capita GDP, higher percentage of rural and impoverished population, as is the case in various Central American countries, and, to a lesser extent, the Andean nations.

Such differences in socio-economic average indicator also are associated with disparities in the income distribution inequities and other social, and cultural variables. Precisely, those nations that lag behind in education, as shall be seen later, also exhibit the greatest differences between performance achieved by households belonging to the various socio-economic stratum.

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6 ECLAC, Santiago, Chile



## II. THE EDUCATION SITUATION OF LATIN AMERICA AND THE CARIBBEAN

This section will address various dimensions of education development regionally over the course of the last decade.

### 1. Access to the education system<sup>7</sup>

The region as a whole has made such significant strides in extending access to education that practically every boy and girl now has access to primary school education. Secondary school education has a greater scope and its expansion has taken force only recently, among other reasons, because universal primary education is a prerequisite.

Quite diverse situations exist within the region, as different countries are posed at different junctures of educational expansion. Some are closer to the goal of universal education while that goal remains farther away on the horizon for other nations. Below we present an analysis of the expansion of education system coverage during the period that spans 2000-2008, without losing sight of the regional processes.

#### Early Childhood Care and Education

The importance of education during early childhood is fully acknowledged in the region's regulatory and policy framework. Children from three months of age to 5 or 6 years old, depending on the age set for entering primary education, are the framework's beneficiaries. A general consensus exists that integral and quality care in the early years of life benefit subsequent education development by fostering student learning and compensating for social inequities.

The State's responsibility to guarantee access to initial education is in keeping with agreements Latin American and Caribbean nations signed at the Dakar Summit, in the context of the Millennium Development Goals as well as the Summit of the Americas and recent commitments in the context of the Education Goals for 2021.

Early childhood education has different characteristics, generally categorized in two or three cycles. Commonly, the later cycle is termed "preschool" or "preprimary," while the previous cycles are often called "nursery school," "initial," or "child care."

Sixty-five of every 100 preschool-age children were enrolled at this level in 2008, exhibiting an improvement over the year 2000 when only 53 of every 100 children participated in this educational cycle.<sup>8</sup>

The persistent medium coverage gap results from deficiencies of different intensities that vary according to country and sub-region. The Caribbean surpasses every other area in terms of expansion, with 76 of every 100 children attending preschool, and relatively homogeneous attendance rates among countries.

The other three sub-regions consist of Central America with 56% coverage, the Andean countries with 60%, and the Southern Cone with 65%. Heterogeneities are more pronounced in these regions than in the Caribbean.

Cuba and Mexico are the only cases in Latin America with nearly universal preschool enrollment, and the Caribbean nations of Anguilla, Granada and Aruba have similar situations.

<sup>7</sup> The statistical information that supports this section was compiled on the basis of data provided by the UNESCO Institute for Statistics.

<sup>8</sup> The average regional and sub regional enrollment rates averages are simple averages of the rates of countries for which information is available each year. The sub regions referred to throughout this paper consist of the following: **Caribbean:** Anguilla, Antigua and Barbuda, Dutch Antilles, Aruba, Bahamas, Barbados, Belize, Bermuda, Dominica, Granada, Guyana, Haiti, Caiman Islands, Turk and Caicos Islands, British Virgin Islands, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Vicente and the Grenadines, Saint Lucia, Surinam and Trinidad Tobago; **Central America:** Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Dominican Republic; **Andean:** Bolivia, Colombia, Ecuador, Peru and Venezuela; **Southern Cone:** Argentina, Brazil, Chile, Paraguay and Uruguay.



### **Access to primary education**

Access to and permanence in primary education are widely regarded as necessary to develop a lifelong learning capability, and is indispensable for achievement of equal opportunities and boost economic and social development.

Universal primary education is, above all, a fundamental human right, that every country of the region has ratified and concretized in the international goals set by the Education for All initiative, EFA, and in the context of the Millennium Declaration, as well as in the regional arena of the Summit of the Americas and agreements established in relation to the Education Goals for 2021.

The significant expansion of access to this level of education, reflected in the net enrollment rate changes, has enabled the region to approach universal coverage to access in this stretch of schooling. This indicator shows that nearly every (95.3%) boy and girl accessed primary education in 2008. The situation within the region is fairly homogeneous, as every country, with the exception of the Dominican Republic and Jamaica, has rates above 90%.

Precisely in recent years, countries such as Honduras, Guatemala, El Salvador, Belize, Grenada and Nicaragua that in 2000 still had sizeable populations of children not in school, have recorded significant progress with net enrollment rates at 95% by the end of the decade.

In the rest of the region, access to primary school improved nearly two percentage points during the decade that began in the year 2000. Such progress becomes significant in light of the difficulties that exist in extending coverage close to universal access. Near this stage, significant efforts must be made to incorporate minority groups that remain excluded

from the education system, and who, for various reasons, must overcome considerable difficulties (economic, cultural, and physical access, for example) to attain schooling.

The relatively small proportion of school-age children who are deprived access to primary education, in absolute terms, totals 2.9 million children. Eventually, most of these children enter the educational system but at a later age. Late entry and the consequent older age are obstacles to full universal education at this level, as these factors tend to affect permanence and progress throughout the course of the educational system.

Repetition is another factor that sets schooling behind. On the average, regionally, 1 of every 10 first grade children repeats the year although notable differences exist among countries. However, it is complex to make strict comparisons between nations, and all the more difficult to draw conclusions regarding student performance and educational system efficiency solely on the basis of this indicator. This arises from differences observed in the countries' average, derived in part from different ways of assessing learning, due to the lack of uniform criteria regarding readiness to proceed on to the next grade.

It is important to point out, however, that the results of the Second Regional Comparative and Explanatory Study (SERCE) confirm that repetition is associated with lower levels of scholastic performance, suggesting that this measure fails to remedy the lagging learner and may even accentuate the problem.

### **Access to secondary education**

Near the year 2000, 1 of every 3 youth of secondary education age was not enrolled in school. While coverage grew significantly since then, in 2008 nearly a fourth of these youngsters were still outside

of secondary school, either because they had never entered or because they had dropped out.

Although tradition and regulations suggest a standard or “ideal” course through the education system, and through secondary education in particular, the reality has proven that many youth encounter stumbling blocks and difficulties that hinder advancing throughout secondary education. This leads them to dropout or they cannot adhere to the ideal course chartered by the standard. School careers punctuated by breaks and fissures, expressed in lagging behind and school dropout, reflect deep inequalities that precede and transcend the educational sphere.

The region’s countries with the highest net secondary enrollment rates are generally those with an earlier universal primary education and have a greater demand from families to extend the years of schooling. This reality has been verified in many nations of the Caribbean and the Southern Cone, although these sub-regions also have situations of delayed entry in the educational system. Thus, 4 of every 10 youths are outside of secondary education in Dominica, Belize, Suriname and Paraguay. Another noteworthy case is that of Uruguay where the net enrollment rate (68%) is far beyond that of Chile, Brazil and Argentina.

The Andean sub-region made significant progress in the last decade. In 2000, 6 of every 10 youth of secondary education age attended school, whereas in 2008, 7 of every 10 had the opportunity to do so. Only Ecuador fell below this average (62%).

Mexico and Central America also experienced great expansion, but despite these achievements, the region’s lowest net secondary school enrollment rates are to be found in this sub-region, with only 6 out of 10

secondary school-age youth in class. Quite disparate situations can be observed within this sub-region. Cuba boasts the most outstanding achievements, followed by Mexico, while Nicaragua and Guatemala rank at the bottom of the scale with less than half the school age children attending secondary school. The Dominican Republic and El Salvador have more extensive coverage than the latter countries but statistics of both countries hover below 60%.

Expansion of secondary level coverage represents a major challenge for nearly every country of the region. For many, it is all the more urgent because the distance from universal coverage is quite far. But even those countries with more extensive coverage must step up their efforts to attain this objective, recognizing that growth may slow down after the initial “easy” spurt of expansion. As in the situation described earlier in regards to primary education, as school enrollment expands it becomes more complex to incorporate those who have fallen behind, and, therefore, it becomes increasingly more difficult to sustain the pace of expansion.

#### **Access to tertiary education**

Unlike the situation in primary and secondary education, there is no official age for entering this level of education. Higher education is open to the population that completes secondary education, independent of the age group. Another problem is the possibility of verifying international mobility, which can skew measurement of access indicators. The latter situation has no importance in countries with large populations but may be significant in smaller countries or countries that participate in regional tertiary education programs, as occurs in most countries of the Caribbean. Much of the Caribbean lacks institutions that provide tertiary education programs; consequently, these countries send their residents to foreign institutions of higher learning.

A number of factors influence the volume of the population that can access higher education. The number of students who complete secondary education may well be the most pertinent factor, as conclusion of this level of schooling is a prerequisite for higher education. However, some parameters of tertiary educational systems favor or restrict access. Examples include whether or not tuition is free, the existence of entrance exams or open admission. Economic and cultural factors, such as the student's family income level and the head of household's educational capital, also influence the decisions young people make regarding pursuit of higher learning.

The indicator most commonly employed to account for higher education access is the number of tertiary students in proportion with the country's total population. The Southern Cone is the sub-region with the highest proportion of students in higher education, totaling 4,158 students per each 100,000 inhabitants, followed by the Andean countries (3,648 students). Mexico and Central America record the lowest number (2,578). The variable seems to be inadequate to analyze the situation in the Caribbean due to the reasons described earlier that derive from students' mobility between countries.

## 2. Completion of educational levels

To guarantee the right to education, students must successfully advance along the education levels to conclude the entire scholastic cycle.

The analysis refers to two age groups at each learning level: one is comprised of youth at

the age of the most recent graduates, and the second consists of older youth. This will provide perspective on the inter-generational evolution in the education completion<sup>9</sup>. It is important to forewarn that the analysis addressed the situation of the population that already have been through the education system, as children and youngsters who now enter the system may have a greater probability of completing their studies.

### Completion of primary education

Data available for study indicates the completion levels of primary education have gradually improved in the region, as can be discerned in the numbers of persons of various age groups who conclude this level of education. In the region as a whole, when the youngest group is compared with the oldest age group, it can be seen that the percentage that finishes primary education improved by 5 percentage points in one decade.

Nine of every 10 of the region's inhabitants of 15 to 19 years of age have completed primary school. Most countries approach universal conclusion at a level close to or higher than 95%. Such is the case of every Andean and Southern Cone countries, with the exception of Paraguay (89%). In the Mexico and Central America sub-region the situation varies much more. Mexico, Costa Rica and Panama have attained proportions similar to those of South America (95%), whereas the remaining countries attain lower conclusion rates.

Thus, several countries still face the challenge of guaranteeing the entire population the right to finish primary education. The nations with lower rates of progress also have the lowest economic development, with a significant proportion of

9 Information comes from surveys of households analyzed by ECLAC on 23 regional countries, focusing on primary education conclusion for the 15 to 19-age group and the 25 to 29-age group. The study on secondary school conclusion employed a pool of 20 to 24 and 30 to 34 year olds.

the population settled in rural areas, and more widespread poverty<sup>10</sup>.

It is important to stress that at present 23% of the population over 15 years of age, in other words, close to 87 million people, did not conclude primary education. The great extent of the problem is a clear expression of the inequities that assailed the region in the past and the debt society owes a broad segment of the population.

### **Completion of secondary education**

The region's countries have expressed the commitment to increase completion of quality secondary education, in recognition that it is the fundamental factor that enables society to endow the population with better knowledge and competencies for learning throughout the course of life. It is also essential for minimally adequate insertion in the labor market, and for obtaining income levels that help achieve an acceptable conditions of well-being. For example, CEPAL estimates that 12 years of schooling is the minimum education threshold needed to obtain income that drastically reduces the possibility of falling into poverty.

Despite the diversity of situations in the region, the commitment to raise secondary education completion represents a challenge that implies dealing simultaneously with the education debt of the past – expressed essentially in partial coverage that fails to reach all adolescents and youth – and the new challenges posed by contemporary society. Technological development, transformations in the workplace, culture, and the exercise of citizenship clamor for new responses to the meaning and scope of education, especially, secondary education.

Despite the increasingly forceful social demand to extend the years of schooling for adolescents and youth, the education system faces dilemmas and tensions that demand an educational program adequate to the students' capabilities and needs as well as the social and cultural contexts confront every day. Such tensions are expressed in the recurrent obstacles that many students confront throughout the region in trying to avoid dropping out of school, to successfully conclude the secondary educational tract.

More than half the young people between 20 to 24 years of age have not conclude upper secondary school, and 7 of every 10 only completed lower secondary school. (CINE 2) However, a positive trend can be observed over the course of recent decades as these figures illustrate in regards to the completion level of the older segment of the population, of 30 to 34 years of age. Among the latter group, six of every 10 persons had concluded lower secondary school while only 4 had completed upper secondary studies.

Upon analyzing secondary school conclusion by sub-region for the age group of the most recent graduates (20 to 24 years old), the Andean and Southern Cone areas have similar completion levels, hovering around 58%. The Caribbean countries have somewhat less (51%), while Mexico and Central America follow farther behind (40%). Within each of these regions, however, distinct differences can be observed regarding achievements attained by the various countries, differences that socio-economic or institutional variable alone cannot always explain.

In short, the difficulties and limitations that afflict the region in the area of education are more

<sup>10</sup> ECLAC, "Millennium Development Objectives," Santiago, Chile, 2010.

dramatically apparent at the secondary school level, and, particularly evident in the low completion rates. More than 200 million adults over 20 years of age who live in the region have not concluded secondary studies. While this educational deficit is more serious for the most vulnerable segments of the population, the enormity of the problem is indication of a widespread situation common to much of Latin American society.

### 3. Lifelong learning

To guarantee all the population ongoing learning opportunities, from cradle and throughout life, is an objective of education policies ratified by the region's governments in international commitments to Education for All (EFA), the Millennium Development Goals, as well as the OAS Summit of the Americas framework and the Education Goals for 2021.

To guarantee equal education opportunities throughout life implies that States must undertake efforts on various fronts, in both the formal and informal spheres, to extend the educational horizon for youth and adults alike, facilitate technical training, labor reconversion, and professional development. In addition, it is fundamental to offer new learning alternatives to the population who could not benefit opportunely from primary education and literacy.

#### **Education for youth and adults**

All countries of the region have educational programs that complement the regular educational system and address youth and adults. These programs aim to build independent places for continuous learning, and, above all, enable people

who could not go to school or complete their education earlier to exercise the right to achieve learning to adequately engage in the social and labor spheres, and exercise citizenship.

Youth and adult education is a type of learning that can take place in either formal or informal settings, comprising a wide range of contents: general subject matters, professional issues, literacy at home, family education, citizenship and many others. The priorities vary from one country to the next and from one group to the next.

Because the international collection of comparable information does not yet address this type of program systematically, the only data available derives from home surveys conducted of a group of 17 regional countries. These surveys provide the basis for calculating the percentage of individuals 20 to 39 years of age who did not complete higher secondary education who say they attend some type of educational program. Survey data indicate that the proportion is more than 10%<sup>11</sup>. This information should raise a note of concern because it implies that youth and adult education programs fail to reach their target population.

#### **Professional technical training**

Special attention should be given to professional technical training programs that aim to equip youth and adults with the competencies and knowledge they need to transit from the school to the workplace. This transition encounters difficulties related to high youth unemployment in the region - in 2008 reaching 19% according to ECLAC - to which must be added the extensive informal jobs in the region, including those that hire youth. Despite its importance, professional training has not received the attention it deserves

11 UNESCO, "Educational Situation of Latin America and Caribbean," OREALC/UNESCO, Santiago, Chile, 2007.

from governments that frequently suffer from “the effects of scarce funding, inadequate planning and a weak connection to the labor market” (UNESCO, 2010:5)<sup>12</sup>.

A vast variety of professional learning offerings exist in the region. “This type of learning is provided by a series of very diverse institutional arrangements, ranging from public to private sector services, and funding systems. In some countries general learning is complemented by professional learning options offered by private firms or training centers, while others provide differential courses for professional preparation in secondary education” (UNESCO, 2010:5).

A function of professional teaching consists of providing marginalized groups a second chance. With this objective in mind, “some programs applied in different Latin American countries, such as those called “Joven” (“Youth”) and “Entra 21” (Enter 21) have been able to harvest significant successes because they provide an integrated framework for reaching marginalized sectors and connecting employment to competency acquisition” (UNESCO, 2010:5)<sup>13</sup>.

### Adult literacy<sup>14</sup>

Literacy is a human right and a fundamental requirement for the exercise of other citizenship rights. From this perspective, the existence of an illiterate adult population is a clear expression of inequities prevalent in the region.

The scope of the concept of literacy transcends learning to read, write, add and subtract. In the present day, it is perceived as a basic learning need that is acquired throughout life, that enabling people to develop knowledge and skills to participate fully in society. That traditional view of literacy, not only is a narrow focus, but also may tend to underestimate the magnitude of the problem, considering its dichotomous nature. The most common measurement instruments only identify the most extreme situations (literate / illiterate) but are not sufficiently sensitive to assess a person’s mastery level of reading and writing. This has led to new initiatives that aim to develop different methodologies for measuring literacy<sup>15</sup>.

Despite the progress achieved regionally in education, 1 of every 10 inhabitants over 15 years of age is illiterate today. This suggests that approximately 40 million people over 15 years of age still lack basic competencies in reading, writing and arithmetic that they need to fully participate in daily life.

Strides made in recent years are reflected in the higher literacy rate of the 15 to 24 year old age group that now reaches 96.4%. However, government of various countries of the region must continue to work with the adult illiterate population to eliminate this form of marginalization that represents an historic debt society owed to a considerable segment of the population.

<sup>12</sup> UNESCO, Informe de seguimiento de la EPT en el mundo 2010, Panorámica Regional: América Latina y el Caribe. <http://www.unesco.org/new/es/education/themes/leading-the-international-agenda/efareport/reports/2010-marginalization/>

<sup>13</sup> “Joven” programs have opened in Chile, Argentina, Peru, Uruguay, and other countries. These programs combine technical training with periods of internships and aim for acquisition of basic competencies for the world of work, facilitating participants’ employment insertion and elevating the levels of remuneration they can earn. The “Entra 21” programs of the Plurinational State of Bolivia, El Salvador, Panama, Paraguay, Panama, Peru and the Dominican Republic use innovative approaches for training. These programs combine vocational technical training, employment, and internship with employment and competency for daily life acquisition.

<sup>14</sup> Statistical information comes from surveys conducted in homes in 23 countries of the region in 2008, processed by ECLAC.

<sup>15</sup> One initiative is the Literacy Assessment and Monitoring Program (LAMP) of UNESCO’s Institute for Statistics, UIS.

## 4. Quality of education

Countries of the region have exerted significant efforts to increase primary and secondary school attendance and completion. However, equally important as ensuring that children and youth access school and graduate, is guaranteeing that students develop knowledge and competencies that allow them to cope with the challenges of contemporary society.

From this standpoint, and although quality evokes a multidimensional concept that cannot be limited exclusively to the sphere of academic achievements, the results of learning occupy a prominent place in quality assessment. For this reason, the majority of the region's countries have implemented assessment systems to measure student performance, utilizing assessment tools that have been tested regionally and internationally.

In order to provide a succinct comparative panorama of the achievements primary level pupils attained in the various countries of the region, analysis is presented below on the results of the Second Regional Comparative and Explanatory Study (SERCE) for 2006, and the Program for International Student Assessment (PISA) for 2009.

The SERCE study, conducted by the Latin American Laboratory for Assessment of Quality of Education (LLECE)<sup>16</sup>, is an international standardized assessment that was applied in the subject areas of language and mathematics of a sample of 3rd and 6th grade primary school students of 16 countries of the region and the Mexican state of Nueva Leon. It also evaluated natural science learning of 6th grade students of nine countries of the region<sup>17</sup>.

The SERCE student performance assessment employed tests that referred to common elements, structured from the perspective of the skills for life promoted by UNESCO. The assessment study took into account not only knowledge learned but also the use made or that could be made of knowledge to understand and interpret the world in a variety of situations and contexts of daily life.

Presentation of the results in the areas of reading, mathematics and sciences is grouped in four levels that signify different performance thresholds, assigning to level I the most basic and progressing to level IV with the most complex.

### Reading

The figures compiled in the second regional study reflect the serious limitations prevalent in the region in regards to learning students acquired, as at least 3 of every 10 students fail to attain level II reading knowledge before 3rd grade of primary school.

Data show distinct contrasts between countries in regards to the achievements students attained. While on the average only 8% of students rank at the most advanced level of learning, in Cuba this index soars to 44% and is followed – albeit at a considerable distance behind – by the state of Nueva Leon, Costa Rica, and Chile where the proportion of pupils who attain level IV doubles the regional average. On the other end are the Dominican Republic, Guatemala, Nicaragua and Ecuador, in which less than 3% of students score at the most advanced level.

Primary 6th grade students show more promising results. The group of students that fails to reach

<sup>16</sup> In 1994 the Latin American Laboratory for Assessment of Quality of Education (LLECE) was created, consisting of a network of measurement and assessment units of education system quality of Latin American countries. Coordinated by OREALC/UNESCO, Santiago, it represented a benchmark and regional framework for cooperation among countries in the area of education assessment.

<sup>17</sup> For specific details on the design of the sample, consult SERCE in, "Los aprendizajes de los estudiantes de América Latina y el Caribe," LLECE/UNESCO, Santiago, 2008.



level II learning declines to 17% and practically no students are under level I. The average situation is more favorable for this grade, precisely due to a better performance in the four countries that had held the most unfavorable position for 3rd graders: Dominican Republic, Guatemala, Nicaragua and Ecuador. This may suggest that successful actions by those countries' educational systems have produced improved education experiences for students who initiated their school life at a disadvantage.

Likewise, 1 of every 5 primary 6th grade students is positioned at the most advanced level of knowledge, quite superior to what they achieved in the 3rd grade. Contrasts remain among the countries studied but these differences are not as stark as those to be found in the other primary school grade. Cuba continues to have the best performance (50.6%), followed, very far away, by Costa Rica, Chile, Uruguay and the state of Nueva Leon. Guatemala, Nicaragua and Ecuador reveal improved performance for this grade, with the percentage of students who attain this level at 6th grade nearly tripling the achievements of primary 3rd grade students.

### Mathematics

Results in the area of mathematics are a source of greater concern. The region's average figures indicate that nearly half 3rd grade primary school students fail to attain level II learning and 1 of every 10 student is below level I. In every country studied, with the exception of Cuba and the state of Nueva Leon, at least a fourth of students are below the level II threshold of mathematics knowledge.

In addition, on the average, no more than 1 of every 10 students has attained the most advanced competency level, and only students of Cuba and, to a lesser extent, those of Nueva Leon achieve

better performance.

Assessments of 6th grade primary students on the subject of mathematics show better results. The most heartening feature is that only 15% of students lag far behind (level I or lower). Every country had better performances than for 3rd grade, reflected in the higher percentages of students located in levels II and III. This outcome is consistent with the pattern observed earlier in the area of reading, an indication that scholastic trajectories tend to improve when students progress along in primary education. However, some differences exist in that subject area: for each 6th grader who attains the most advanced level in mathematics, another two 6th graders reach that level in reading.

### Sciences

Assessment of knowledge in the subject area of sciences focused on primary 6th grade, with participation by nine countries of the region: Argentina, Colombia, Cuba, El Salvador, Panama, Paraguay, Peru, Dominican Republic, Uruguay and the Mexican state of Nueva Leon.

Data on sciences performance levels confirm that the majority of the region's students are seriously ailing in that subject. The results can be analyzed according to three situations:

- In Cuba, 65% of students were ranked in levels III and IV.
- In Colombia, Uruguay and the Mexican state of Nueva Leon, close to half the students attain level II.
- In Argentina, El Salvador, Panama, Paraguay, Peru and the Dominican Republic over 40% of students were positioned at or under level I.

**Factors associated with learning achievement**

The SERCE study also explores the factors that explain primary student performance in the region. The main findings are:

- The educational context, in other words, the social, economic, and cultural conditions, strongly influence learning;
- The school climate also significantly helps explain students' achievements;
- Child labor is negatively associated with learning;
- Children who belong to an indigenous group have average performance rates below non indigenous children;
- The number of years in preschool yields positive effects in learning achievement;
- The director management is an important variable in educational processes that favor student learning;
- Greater teaching experience has positive effects on learning;
- Material resources available to the school are important in academic achievement;
- Repeating a grade is associated with lower levels of scholastic achievement, and is a factor that aggravates falling behind in learning.

**Secondary level educational achievements: the PISA study**

The Program for International Student Assessment (PISA) was designed as a study of competencies of 15 year-olds, regardless of the year or the student's school level. It was developed from the recognition that it is necessary to know whether people who are approaching the mandatory school completion age and are initiating their transition to adulthood, are equipped with the basic tools for handling the challenges of today's society<sup>18</sup>.

Nine countries of the region - Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru, Trinidad Tobago and Uruguay - participated in the 2009 PISA study. Given that the sampling focused on 15-year-olds, and, in theory, this age is at the secondary school level, its results comprise an estimation of language, mathematics and science competency performance of students at that educational level.

Upon studying the test results, the data reveal that generally all countries of the region exhibit considerable limitations in learning achievements. All participating countries obtain results quite distant from those obtained by OECD countries in each area assessed. Whereas 1 of every 2 students of the region attained low performance in language and sciences, in the OECD countries only 1 of every 5 students rank at that level. The situation is even more complex in the case of mathematics, as 6 of every 10 students rank at the low level, while only 2 of every 10 students in OECD countries do so.

<sup>18</sup> The criteria for this region is complex, as a proportion of the 15-year-old population is outside the educational system or in a grade lower than they should be theoretically. Considering that the sampling had to take into account the population that is in the educational system and enrolled in a grader higher than sixth (which in many countries initiates secondary education), this cannot be regarded as representative of a 15-year-old population as a whole.

## 5. Education and equity

The general diagnostic developed thus far has focused on the regional educational situation and the situation of each country, without noting the disparities that exist within each country. Nevertheless, it is pertinent to discover if the progress and difficulties previously mentioned at the national level extend among the school-age population, reproducing or tempering preexistent educational, as well as, social inequalities.

The principle of equity in education acquires particular significance in the context of Latin America and the Caribbean, where ingrained poverty and deep inequities in income distribution as well as access to social and cultural goods shape the educational routes students travel, as well as its detours and dead end streets. The educational system alone is hardly capable of reversing these social disadvantages, as these require broader interventions that can impact primary income distribution, deriving from the dominant development model adopted in the region, and recognizing the central role of other social policies.

The paper will draw attention below to disparities<sup>19</sup> documented by available data on certain education variables prevalent between population groups, which may suggest discriminatory elements that affect the exercise of the right to education. Such differences include those that exist between men and women, urban and rural zones, and household groups of varying income levels.

### Gender Equity

Information on gender parity as it relates to levels of school access and completion indicates that the region is gradually narrowing the gap between men and women. Some data even suggest an increasingly more favorable situation among women.

In 2008, education access indicators of nearly all the region's countries, both at preschool and primary education levels, were quite similar for men and women. Similar patterns can be seen in regards to completion of primary education for the 15 to 19 year old age group, with substantial differences that favor men present only in Guatemala, while in Nicaragua the scale is tipped in favor of women.

Secondary education exhibits a wider gender gap that favors women, not only in access but in conclusion levels as well. Eight countries of the region record similar access indicators for men and women, although only five maintain these indicators through completion of secondary school. Guatemala is the only country in which gender differences favor men in access to secondary education, while the pattern is reversed in the remainder of the countries. Differences in completion for youth between 20 and 24 years of age favor men in four countries – Peru, Bolivia, El Salvador and Guatemala – while women have higher conclusion rates in every other country.

In addition, consistent with the findings of other studies concerning student performance by gender, the Second Regional Comparative and Explanatory Study (SERCE) confirms that in most countries the

<sup>19</sup> Surveys conducted of households in 23 countries of the region were processed by ECLAC and provide the basis for the parity index that compares the value of a given indicator for two dichotomous population groups. The indicator uses the value of 1 to indicate parity between groups compared. If the value is less than 1, it means the group exhibits a disadvantageous condition. Likewise, a value higher than 1 indicates the group has an advantageous condition. **Values between 0.95 and 1.05 are considered equitable distribution.** The index is relevant in assessing populations divided in two comparable parts and when the objective is to attain a situation of homogeneity between both subpopulations.

differences lean in favor of girls in reading and favor boys in the area of mathematics. The exceptions are the Dominican Republic and Cuba where girls have better results than boys in mathematics in the 3rd and 6th grades, respectively.

Gender gaps in regards to literacy are practically nonexistent, with the exception of four countries - Guatemala, El Salvador, Bolivia and Ecuador – where the probability of illiteracy among women is greater than among men.

#### **Relative parity in relation to the rural-urban place of residence**

The rural areas strain under the historic legacy of marginalization from the benefits of development and education, in particular. The distance from urban centers, geographic dispersion and difficulties of access are some of the factors that have influenced a slower expansion of educational services and school enrollment.

Complex conditions of the rural setting also affect the route students follow in education, effecting late entry, falling behind in school, and dropping out of school. The low completion rate of primary and secondary studies represents the final consequence and prime reflection of education system failure.

The rural-urban equity gap in secondary education conclusion is more pronounced than in primary education. The dramatic differences reflect the greater difficulties the rural population must overcome to remain in the education system. Youth who live in the countryside continue to secondary studies and/or complete them in much lower proportion than their urban peers: 6 of every 10 urban youth of 20 to 24 years of age conclude

secondary school, whereas only 3 out of 10 rural dwelling youngsters earn a secondary school diploma.

Lastly, data also indicate that school location generates differences in student performance regionally. According to data culled from the Second Regional Comparative and Explanatory Study (SERCE), children who attend rural primary schools obtain lower reading and mathematics performance than those who go to urban schools. The distribution of urban student performance rates has an upward slant at levels above rural school distribution, resulting in a greater percentage of rural students concentrated in the lower levels (I and below I)<sup>20</sup>.

#### **Household income equity**

The equity gaps in relation to household income are quite blatant in every country of the region. A regional average of 8 of every 10 youth from 20 to 24 years of age who is raised in households of the highest income quintile earn a secondary school diploma, while only 2 of every 10 youth from the lowest quintile households graduate from secondary school. Income disparities are significant in every country of the region, both those with high as well as those with low graduation rates; across the board, parity rates are under 0.50.

Once again, the data confirms that nations with the lowest secondary completion rates are also have the highest inequity. For example, Guatemala, El Salvador and Honduras show parity levels near or under 0.1. Youth from the most affluent homes of these countries show completion rates at or higher than 60%, while those from the low-income strata fluctuate between 3% and 8%.

20 The explanation for performance levels is discussed under the section entitled Quality of Education.

Some progress towards narrowing the equity gap has been observed upon verification of improved parity rates for income earned by the most recent graduates as compared with older graduates. However, the differences in most countries are of such a magnitude that they emphatically express the difficulties young people from the most under-privileged households face to benefit fully from education advancement.

Lastly, the SERCE results prove that school segregation due to students' socio-economic and cultural origin is the second most important factor in scholastic performance, with the greatest impact in reading. An association is also evident between student performance and the country's income distribution. The greater the inequality of a country's income distribution (measured by the Gini coefficient) the lower the average student performance will be.

## 6. Resources allocated for education

Availability of resources is a fundamental requirement for providing sufficient educational instances to guarantee universal access. Resources are provided mainly by the public sector, although private sector contributions have become significant throughout the region.

From another perspective, quality education is defined as one that offers children, adolescents and youth a physical context adequate for learning, a teaching staff sufficiently prepared for the task of teaching, didactic material as well as information and communications technology to support the

educational processes. This dimension of the concept emphasizes analysis of resources intended and designed for education.

### Education spending

The region's social spending and education spending in particular have experienced sustained expansion in the last decade, maintaining an upward pattern that became visible in the 1990s. This positive evolution in social spending has differentiated the past decade from the 1980s when social spending was always the adjustment variable that suffered in the wake of the severe economic and fiscal crisis that affected the region.

ECLAC estimates that social public spending reached US\$820 per inhabitant in 2007-2008, estimated in prices of the year 2000, with significant growth (18%) in comparison with the previous period (2005-2006). The spending increase is highly associated with the greater availability of fiscal resources countries possessed during the economic bonanza of 2002 to 2009<sup>21</sup>.

Resources allocated to education provide a perspective on the budget priority countries assign to education. Although higher spending is not always directly linked to improved services, the proportion of spending is an expression of the efforts the society as a whole makes to invest in education.

Countries of the region allocated an average 4.7% of the GDP to education in the year 2008. This is a significant percentage yet it still falls short of the spending priority of 5.7% GNP the OECD assigned to education the same year<sup>22</sup>.

<sup>21</sup> Between 2002-2008, the Latin America and the Caribbean experienced steady and significant growth. According to ECLAC estimates, the regional average was 4.8% per year, an occurrence that had not been recorded in the previous four decades. This situation arose due to a favorable international context produced by international economic expansion, benefiting mostly the markets of the products and services the region exports. The economic crisis of late 2008 interrupted this growth, although many countries of the region resumed the previous the road to growth in 2010.

<sup>22</sup> OCDE, 2009. Education at a Glance. Paris, OCDE.

Despite the steady rise in education spending over the last decade, the proportion of the GDP allocated to education declined from 5% in 2000 to 4.7% in the year 2008. This resulted from a lower pace of education spending expansion in comparison with regional product expansion during the same period, which experienced a boon in comparison with the previous decade<sup>23</sup>.

Mexico and Central America is the sub-region that allocated the most GDP resources to education (5.2%), although the average is skewed by an exceptional situation in Cuba, which allocates 13% of its domestic product to education. Caribbean countries and the Andean area assign spending close to the regional average (4.8 and 4.4%, respectively), while the Southern Cone exhibits a lower proportional contribution to education (3.8%)<sup>24</sup>.

Another way to evaluate the importance of education investment is by studying the amount spent per student. In the region, the expenditure per student averages the equivalent of 14% the per capita income. The countries of the Caribbean and the Southern Cone have demonstrated a higher fiscal effort than the average (17 and 15%, respectively), while the Andes countries and the Mexican and Central American sub-region allocate somewhat less (13 and 12% respectively). Data also substantiates higher spending per student overall in the region – about 3% more – at the secondary level than for primary education, a pattern common to all sub-regions except Mexico and Central America that allocated comparable per student spending at both education levels (13% of the per inhabitant income).

Another significant aspect is the growing expansion of public spending in education, with fiscal resources allocation increasing in proportion to the decline of the population's income. One fourth of education public spending is allocated to the lowest income quintile, whereas only 16% is allocated to the wealthiest quintile. The most impoverished segments of the population receive a greater volume of resources, a majority of those children attend public school, and families tend to be larger<sup>25</sup>.

Furthermore, education spending is more generous at the primary school level than the secondary school. Primary education of the lowest income quintile captures more than twice the amount of public resources than the secondary level (33 and 16%, respectively). Such differences may be attributed to the lower coverage of secondary education as compared to primary education, which is universally mandatory in the region.

It should be noted that the preschool level now receives a greater proportion of education public spending, comparable to the primary education spending levels. On the other hand, tertiary education is the only level with a distinct decline in public spending, as highest income quintiles captured close to half the public spending in education, as compared to the most impoverished quintile that received barely 4%. Such inequities are correlated to those that persist in access to higher education.

Finally, as described at the outset of this section, public resources allocated by the State are not the

23 See explanatory note 19

24 Information on education public spending for the region's countries comes from the UNESCO Institute for Statistics.

25 CEPAL 2010, "Millennium Development Objectives," Statistical Appendix, CEPAL, Santiago, Chile

only source of education funding. Contributions by families, civil society organizations and private companies are increasingly important. The average private spending on education for the entire region is 1.2% of the GDP<sup>26</sup>. Viewed from this context, private sources account for approximately one fifth the total education spending.

It is important to recognize that a segment of the region's expanded education coverage originates from the growing private sector investments, including educational services connected to foundations and organizations associated with various churches and religious communities. This has produced a shift, with a sizeable proportion of students moving to private learning institutions, with the consequent opening of learning opportunities in public sector. At the same time, however, it has also prompted school segregation processes and increasing differentiation of education system quality.

### Teachers<sup>27</sup>

Teachers play a key role in fostering quality education as both the promoters and catalysts of change. No education reform can be successful without the active participation of teachers and their sense of pertinence<sup>28</sup>.

Teachers are education's strategic actors due to their direct contribution in learning processes of children, adolescents, and youth, in development of institutional and quality education frameworks and, subsequently, in the overall improvement of education quality. Thus, in recent decades the region's education systems made various efforts that aim to increase the number of teachers, and

also improve ongoing continuing education, initial training, advancement, and updating.

The series of data below will facilitate identification of certain characteristics of the region's teachers. This information invites reflection on the scope of certain challenges the region faces today, spurring further investigation and analysis of the gaps that still exist in teachers' professional development.

The number of students per teacher is a pertinent indicator for analyzing availability of teachers for the development of educational processes, and a high proportion can account for the lack of personnel for offering a quality service. Although each country sets its own objectives in relation to the teacher-student ratio, the maximum international standard is generally 40 to 1.

In 2008, the number of students per teacher in primary education was 20 to 1 for the region as a whole, lower than developing countries overall (27 to 1) and even the world average (25 to 1). Among countries for which information is available, Bermuda had the lowest student-teacher ration on the primary school level (8 to 1) and Honduras the highest (33 to 1). Besides Honduras, only El Salvador has a student-teacher ratio higher than 30.

In secondary education level, the number of students per teacher is lower than primary education. For the region as a whole, also in 2008, the average ratio was 16 to 1. This ratio has a range of somewhat lower variations than in primary education, with 6 (Bermuda) and 28.6 (Nicaragua) students per teacher.

26 Information on private education spending is only available for 11 countries of the region, from the UIS. For this reason, a separate analysis of this variable was not made.

27 Statistical data on the number of students per teacher and teacher certification is provided by the UIS.

28 World Forum of Education for All, Dakar, 2000.



The lack of trained teachers is also a primary concern of the region's educational policies. In 2008, the median proportion of teachers certified for the primary level was near 80%. Nevertheless, this percentage varied substantially from country to country, fluctuating between 36.4% and 100%. More than 90% of teachers in ten countries were certified and in two countries less than 50% were certified <sup>29</sup>.

In 2008, teaching certification in secondary education (71%) was situated 9 percentage points below the corresponding figure for primary education teachers. From this context, a greater implicit competency can be discerned at the secondary education level regarding specific knowledge of a given discipline that a teacher is qualified to teach and those didactic competencies that qualify a teacher to teach secondary education. In 2008, the percentage of certified teachers at this level varied between 29.3% and 100% for countries of the region. In seven countries, more than 90% of teachers had secondary education certificates in conformance with national regulations. On the other hand, four countries have figures below 50%.

### **The incorporation of Information and Communications Technologies, ICTs, in the educational system**

The widespread incorporation of ICTs is unleashing a rapid transformation of economic, social and cultural life in the region. It is becoming increasingly evident that in order to function adequately in the new technological environment a certain minimum threshold of digital literacy is needed to enable people eased mobility along the major economic, work, society and cultural circuits.

In this context, the region's educational policies have expended efforts to design strategies and develop actions to foster incorporation of new digital technologies in education. Interventions in this regard have basically sought: i) to provide schools with equipment and connectivity, ii) to ensure training and education for teachers who teach these subjects, as well as regular teachers and professors, iii) to develop educational portals and provide material with curriculum and transversal content in digital format for classroom use.

The process of incorporating ICTs in the region's educational systems generally has followed a pattern similar to that of other regions and countries of the world. The initial step is to equip secondary schools, followed by intensive incorporation in other education levels. Likewise, incorporation of computers precedes Internet connectivity; that is, school first must have adequate levels of equipment in order to subsequently advance to greater levels of connectivity.

Essentially, efforts to achieve greater information technology density and connectivity have focused on secondary education, and it is at that teaching level where progress is most visible. Secondary student access to a computer, according to PISA <sup>30</sup>, improved substantially in recent years, reducing to half the average number of students per computer, from 36 in 2000 to 19 in 2006. Similarly, Internet connectivity nearly doubled in the same period (from 27% to 52%). However, the distance from the level of OECD countries, with an average 6 students per computer and 87% connectivity, remains considerable.

<sup>29</sup> A teaching certificate is one earned through minimum pedagogical training (before or after employment), normally, required for teaching a specific level.

<sup>30</sup> Information is only available for the six countries that participated in PISA (Argentina, Brazil, Chile, Colombia, Mexico and Uruguay).

Computer and connectivity density of primary education is much lower. According to SERCE data for 2006, just 2 of every 5 primary schools in the region have a computer lab. No information is available regarding connectivity levels in primary education, but it is presumably lower than the quantity of digital equipment.

Governments commonly underscore the political importance of investing in the technological expansion, citing the great educational potential ICTs can spark as well as the possible impact on student academic achievements, as reflected in national and international learning assessment tests. However, most analysis on the subject agrees that it is difficult to reach solid conclusions regarding the possible effects of ICT on scholastic performance<sup>31</sup>.

A degree of consensus also exists regarding the role technologies should play as an educational tool. The impact of these technologies depends not simply on access but rather on the type of usage students make and the amount of time they have access to it. Studies conducted in the context of PISA and SERCE testing suggest that if the computer is used at home primarily for electronic mail, internet searches and educational programs, then its greatest usage is associated with elevated academic results at school. Studies have demonstrated the beneficial effects of moderate use of technology at school but also indicate that frequent computer use each week is associated with poor academic results, suggesting that excess use competes with other educational tasks needed for learning<sup>32</sup>.

Furthermore, ICT incorporation in schools has become important due to the role it plays in narrowing the digital gap. A majority of the most economically and socially disadvantaged school population can access such technology only at school. SERCE data for 2006 indicates that no more than 13% of 6th grade students of the lowest socio-economic sectors used a computer at home and 41% used a computer at school. On the other hand, among the most affluent economic sectors, 61% of students used computers at home and 63% at school. For the secondary education level, PISA 2006 data for a lower number of countries confirms the same significant role of the school in reducing the school population's digital gap for the most disadvantaged sectors<sup>33</sup>.

Educational institutions show signs of providing a strategic instance for offsetting inequalities both in access as well as in equitable teaching of more technology usages of computers. Such usages may have significant impact for future integration of youth as part of the labor world, and for other opportunities that may generate acquisition of these competencies and the ability to manage digital environments.

31 Jara, I "Las políticas de tecnología para escuelas en América Latina y el mundo" Colección Documentos de Proyectos, CEPAL, Santiago de Chile, 2008.

32 CEPAL ya citado

33 Sunkel G and others, "Aprender y enseñar con TIC en América Latina. Potenciales Beneficios". CEPAL, División de Desarrollo Social, Santiago, Chile, 2010.



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**Santiago Office**  
Regional Bureau of Education for  
Latin America and the Caribbean

Enrique Delpiano 2058, Providencia, Santiago de Chile  
Tel.: +56 (2) 472 46 06 / Fax.: +56 (2) 655 10 50

<http://www.unesco.org/santiago>