



DRAFT

6

REPORT

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

Buenos Aires, Argentina, may 12 - 13, 2011

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¹ This document was drawn up based on extracts from Social Panorama 2010, published by ECLAC.

INTRODUCTION

A large proportion of international commitments related to advances in education presuppose that the issue is a key axis of development. It permits improvement in social, economic, and cultural conditions in countries. An increase in education levels of the population is associated with an improvement in other key factors in development and welfare, such as productivity, social mobility, poverty reduction, the construction of citizenship and social identity, and, definitively, the strengthening of social cohesion.

Significant progress has been registered in terms of the expansion of coverage of access to education in Latin America and the Caribbean. With regard to the second Millennium Development Goal, by the beginning of the 1990s the region had already achieved practically universal access to primary education. Despite this achievement, progress and completion of this goal was still far from ideal. Two decades later, the region has made enormous advances in the issue, but it still does not seem capable of universalizing completion of the primary education cycle – although certain countries probably shall achieve this goal.

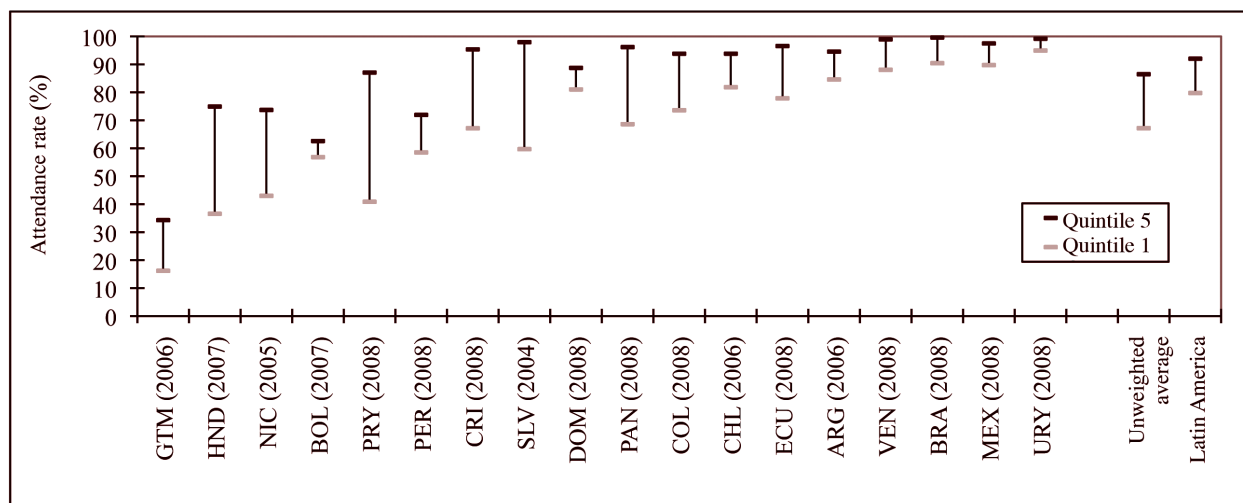
Additionally, the region has failed to transform the education system into a powerful mechanism for equalizing opportunities, partially because a deciding factor in educational achievement and results is found in the environment and available income in the home. Advances made during the past decades in terms of coverage, access, and progression in the different cycles of education have brought about a stratification of learning outcomes and achievements in education systems. This inequality is also usually reflected in a clear segmentation and stratification of the quality and efficiency of the education provision system itself.

1. CROSS-GENERATIONAL PERPETUATION OF INEQUALITY: SHORTFALLS IN ACHIEVEMENTS AND LEARNING OUTCOMES IN THE SCHOOL SYSTEM

Although progress has been seen in the education environment over past decades, the greater expansion in access has also brought about an increased segmentation of the achievements and quality of service provision, leading to the cross-generational perpetuation of inequality not because some have access while others do not, but rather because individuals have differentiated access in terms of how much they learn in the system and how far they manage to advance through it. The following pages present an examination of the clearest expressions of this mechanism of segmentation of Latin American education systems.

Access to pre-school education in the region is variegated, with nearly universal coverage in some countries, but others with access rates of around 30%. Although socioeconomic inequalities do not seem to be particularly relevant in attendance of the later years of pre-school education (ages 3 to 5), there is evidence from surveys of homes that such differences are greater for very young children. There are also serious disparities in access between urban and rural areas, and regarding groups of persons belonging to indigenous communities.

FIGURE 1: Latin America (18 countries): differences between the first and fifth quintiles in school attendance rates of children one year younger than the official age to start primary education, as of approximately 2008 (In percentages)



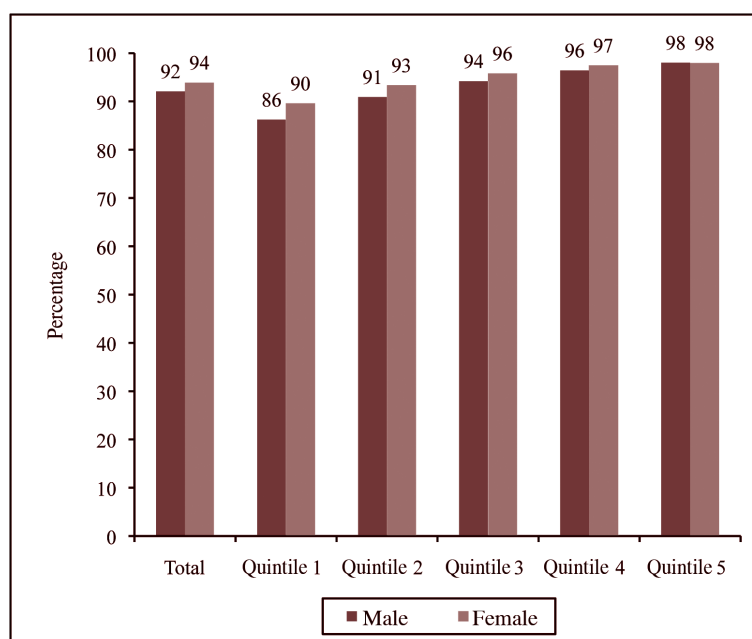
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on estimates and surveys of homes in the countries.

In contrast to the pre-primary level, access to primary education in Latin America and the Caribbean is high in almost all countries, albeit with certain exceptions, and approaches universality in a number of countries. Differences in access between boys and girls, and between socioeconomic groups, are not significant at this level. Nonetheless, access to the education system does not necessarily ensure a suitable progression through primary education or, most of all, completion of the cycle.

This level is affected by problems of students falling behind or abandoning school. Falling behind, or education lag, is the source of significant costs to education systems in the region. It is estimated that over 9 billion dollars are spent in the region on attention for children who are in primary education

but who are of the age to be attending secondary education (ECLAC/OEI, 2010). Differences of gender, socioeconomic level, and geographic area, among others, are beginning to emerge from examination of school completion levels: girls are slightly ahead of boys, and while only 2 out of every 100 children from the higher socioeconomic levels (fifth quintile) fail to complete primary education, this rate rises to 12 out of every 100 children coming from the poorest sectors (see Figure 2). Furthermore, rates of completion of primary education stand at 96% in urban areas and only 85% in rural areas, a problem that is aggravated for children belonging to communities of indigenous or African origin, of whom only 80% complete the cycle (ECLAC, 2008).

FIGURE 2: Latin America (17 countries): completion of primary education among children between 15 and 19 years old in the total population, by sex and income quintiles, as of approximately 2007-2008 (In percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Information System on Educational Trends in Latin America (SITEAL), Statistical summary I, national totals, October 2008, and special tabulations of household surveys in the countries.

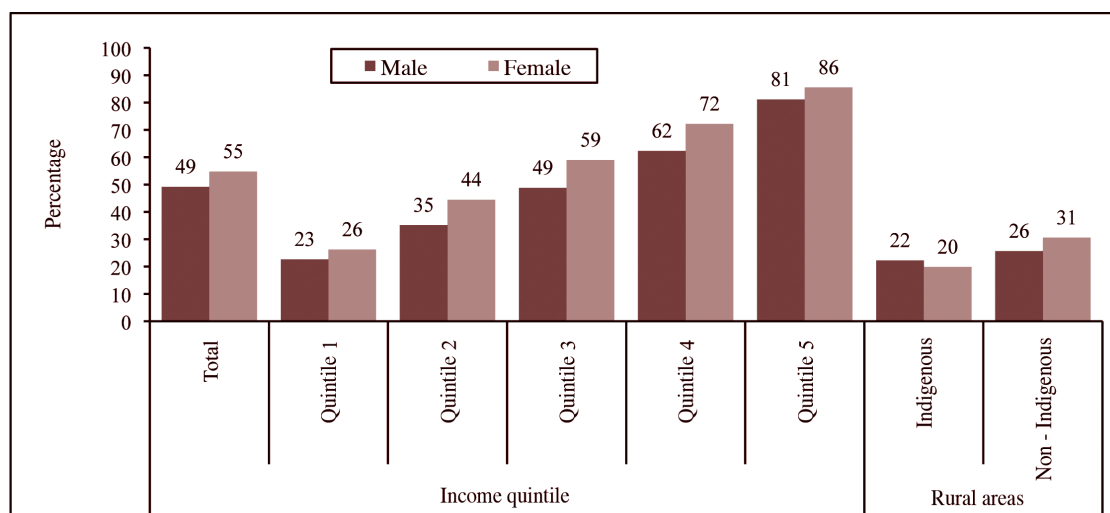
When there is general access to primary education, promoting the incorporation of the groups that have lowest access rates (those living in extreme poverty, inhabitants of rural areas, indigenous persons and those belonging to groups of African origin) requires significant investments that should be centred not only on increasing education provision, but also guaranteeing the conditions that favour effective access to these services, which often implies the organization of cross-sector intervention programmes.

Access and timely progression to secondary education, and through this level, is considerably lower than in the case of primary education, and differences between countries are more marked: the net attendance rate for secondary education is 88%, compared to 97% for primary. Conversely, the number of students falling behind increases, and inequalities grow, derived from ethnic origin, geographic location, and socioeconomic factors. The educational environment in the home

starts to emerge as a determining factor in falling behind among children aged 12 to 14: a child from a home environment that does not favour education is ten times more likely to fall behind than one from a home with a good educational environment. Significant differences are also observed depending on area of residence. This is naturally associated with levels of welfare in students' homes.

Regardless of conditions in terms of poverty, a larger proportion of females than males complete this level of education – a factor that is partially explained by the greater propensity among males to enter the labour market early. In contrast, there is evidence that this trend is reversed in young people from indigenous groups, with a smaller proportion of females completing secondary education (ECLAC, 2008). These differences in access, progression, and completion of education slowly increase through the secondary school cycle, perpetuating a chain of inequality through the education system itself.

FIGURE 3: Latin America (18 countries selected): persons aged 20 to 24 who completed secondary education, by per capita income and sex, as of approximately 2008 ^a (In Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on special tabulations of household surveys in the countries.

^a Data for young people of indigenous or non-indigenous origin relate to eight countries and refer to 2007.

Among students from homes with the highest incomes (fifth quintile), four out of five succeed in completing secondary education; among those from a low socioeconomic level, barely more than one in five complete the cycle. Gender differences in achievement are slightly greater in the middle socioeconomic levels (see Figure 3). In rural areas, where indigenous communities occupy areas that are spatially defined to a greater or lesser extent, and maintain a culture and identity that is often openly different from the “westernized” urban communities, it is seen that girls show higher rates of early abandonment of high school education and lower rates of completion than boys. They tend to be involved in agricultural activities in their communities and families. This pattern is not observed among members of indigenous groups who live in urban areas.

Ethnic minorities and indigenous peoples have historically been affected by unequal conditions in the region. Difficulties in gaining equitable access to the education system are related to a higher incidence of poverty, the distance that must be travelled to reach schools, the quality of the education institutions to which they have access, the relevance of curriculums, and discrimination, which serves to reduce their educational opportunities. Quite apart from factors related to social discrimination, which makes these persons victims of rejection and dismissal, and their poor quality of life, many of these groups inhabit rural areas that are distant from main education centres, with local provision that is scarce and insufficient in terms of infrastructure, maintenance, quality of teaching, and teaching materials (ECLAC, 2008).

TABLE 1: Latin America (nine countries): nets rates of primary and secondary education attendance and completion of primary among people aged 15 to 19, and of secondary among people aged 20 to 24, by geographical area of residence and ethnic origin, as of approximately 2008 (In percentages)

Countries	Net primary education attendance rate		Primary education completion				Net secondary education attendance rate	
	National Total		National Total		Rural areas		National Total	
	African ethnic origin		African ethnic origin		African ethnic origin		African ethnic origin	
Bolivia (Est. Plur. de)	90	95	86	90	90	94
Brazil (2008)	98	99	93	95	83	89	91	93
Chile (2006)	98	99	98	99	97	98	94	95
Ecuador (2008)	97	98	89	95	89	93	76	86
El Salvador (2004)	92	92	74	78	63	65	83	79
Guatemala (2006)	86	91	49	71	40	58	61	75
Nicaragua (2005)	85	81	58	71	46	54	86	84
Panama (2008)	98	99	73	97	73	93	74	89
Paraguay (2008)	96	98	83	94	82	87	71	92
	93	97	82	93	70	84	85	92

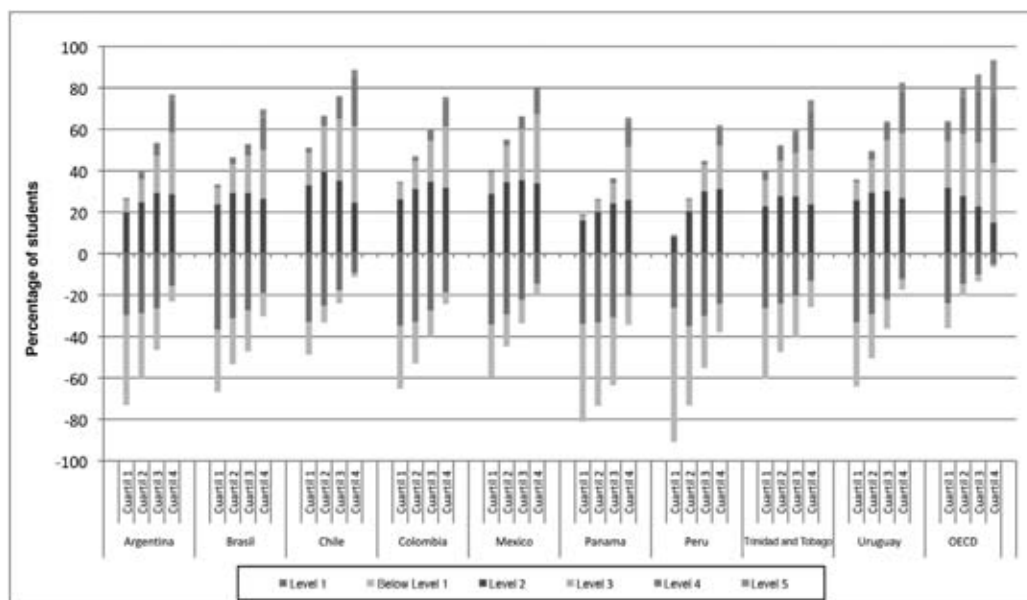
Countries	Middle school completion				High school completion			
	National Total		Rural areas		National Total		Rural areas	
	Indigenous or African ethnic origin	Not Indigenous nor African ethnic origin	Indigenous or African ethnic origin	Not Indigenous nor African ethnic origin	Indigenous or African ethnic origin	Not Indigenous nor African ethnic origin	Indigenous or African ethnic origin	Not Indigenous nor African ethnic origin
Bolivia (Est. Plur. de)	76	88	62	68	55	71	38	44
Brazil (2008)	74	78	49	53	47	56	24	27
Chile (2006)	94	96	84	89	65	81	50	63
Ecuador (2008)	47	73	38	48	31	59	23	33
El Salvador (2004)	60	57	41	35	37	36	17	17
Guatemala (2006)	19	44	12	20	13	33	7	12
Nicaragua (2005)	34	44	11	21	21	32	5	13
Panama (2008)	36	79	36	58	12	60	12	40
Paraguay (2008)	45	80	40	54	25	62	21	36
Total Countries	62	77	38	49	40	56	20	28

Source: Economic Commission for Latin America and the Caribbean based on special tabulations of household surveys in the countries.

The lack of equity in the region’s education systems is also reflected in the disparities generated in terms of learning outcomes. The most recent information on academic results in the countries of the region is provided by the Programme for International Student Assessment (PISA) study of 2009, conducted by the Organisation for Economic Co-operation and Development (OECD). This project assesses the acquisition of key competencies in the areas of reading comprehension, sciences, and mathematics for a sample of students aged 15. In 2009, nine countries in the region participated: Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru, Trinidad and Tobago, and Uruguay.

The results suggest that a high percentage of the school population have severely deficient performance in these key competencies. Furthermore, there is a very significant difference in results between the Latin American countries involved PISA and the average among developed countries in the OECD. Figure 4 shows the distribution of academic results in reading among students aged 15, by socioeconomic and cultural status². Most students from the first and second socioeconomic and cultural quintiles in Latin American countries score an achievement level of less than 2, that is, they have failed to develop basic competencies in this area.

FIGURE 4: Latin america and the caribbean (nine countries) and the oecd average: distribution of achievement levels in reading in the pisa test among students aged 15, by socioeconomic and cultural group (ISEC)



Fuente: Economic Commission for Latin America and the Caribbean (ECLAC), based on special processing of PISA 2009 microdata.

2 PISA creates this index based on three aspects believed to be linked to socioeconomic status (OECD, 2008): the household purchasing power, and the occupation status and education level of the parents of students participating in PISA tests. Household purchasing power is measured according to the possession of certain home goods, such as DVD player, a dishwasher, a desk, a PC, the number of television sets, etc. In order to determine occupation status, students are asked their parents’ jobs and, using the higher status of the jobs of the two parents; the response is classified and used to determine a fixed score according to international standard ISE. The education level of the parents is classified with the ISCED system, taking into account the higher level of the two parents.

Students performing below 335 score points – that is, below Level 1 – are not likely to demonstrate success on the most basic type of reading that PISA seeks to measure. This does not mean that they have no literacy skills, but rather that they have serious difficulties in using reading literacy as an effective tool to advance and extend their knowledge and skills in other areas. Students proficient at this level are capable of completing only the simplest reading tasks, such as locating a single piece of information, identifying the main theme of a text, or making a simple connection with everyday knowledge. Students with literacy skills below Level 1 may therefore be at risk not only of difficulties in their initial transition from education to work, but also of failure to benefit from further education and learning opportunities throughout life.

Students proficient at Level 2 are capable of basic reading tasks, such as locating straightforward information, making low-level inferences of various types, working out what a well-defined part of a text means and using some outside knowledge to understand it. Students proficient at Level 3 on the reading literacy scale are capable of reading tasks of moderate complexity, such as locating multiple pieces of information, making links between different parts of a text and relating it to familiar everyday knowledge.

Students proficient at Level 4 on the reading literacy scale are capable of difficult reading tasks, such as locating embedded information, dealing with ambiguities and critically evaluating a text. In addition to these skills, proficient at Level 5 on the reading literacy scale are capable of completing sophisticated reading tasks, such as managing information that is difficult to find in unfamiliar texts; showing detailed understanding of such texts and inferring which information in the text

is relevant to the task; and being able to evaluate critically and build hypotheses, draw on specialised knowledge, and accommodate concepts that may be contrary to expectations. (OECD, 2001).

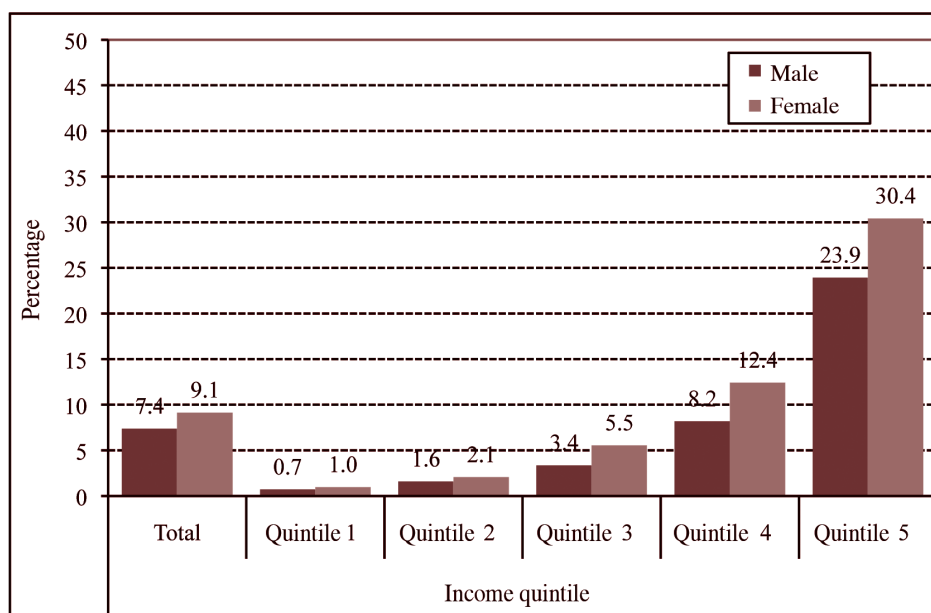
Although inequalities in learning outcomes among children from different quartiles also exist among the OECD countries, in these cases and unlike in Latin America, the great majority of students achieve the expected basic proficiency level (Level 2 or more). The most dramatic case among the Latin American countries that participated in the study, in terms of general results and levels of inequality, was Peru – where 90% of students in the first quartile failed to achieve the basic literacy proficiency needed to participate as citizens in the modern world.

2. HIGHER EDUCATION, RATES OF RETURN AND THE LABOUR MARKET

In general, access to post-secondary education is the preserve of a relatively small group of young people in the region. Due to the insufficient acquisition of the skills necessary to face the rigors of the highest levels of education – a result of the unequal quality of education that they have received at the primary and secondary levels – and other factors such as the need to obtain income in order to attain minimum levels of welfare, only a small number manage to complete a professional technical degree or university studies. Among people aged 25 to 29,

only 8.3% have managed to complete at least five years of post-secondary education (the duration of a typical university degree course in the region), with very strong stratification by income quintile, as for every 27 people from the highest income group (fifth quintile) who finish five years of post-secondary education, only one person from the lowest income group does so (see Figure 5).

FIGURE 5: Latin America (17 countries): completion of at least five years of university education among persons aged 25 to 29, by per capita income quintile and by sex, as of approximately 2008 (In percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on special tabulations of household surveys in the countries.

The encouraging aspect of the present situation is the large contingent of first generation university students who are being offered previously unheard of opportunities in socio-occupational mobility, compared to their parents. In some countries in the region, more than half of higher education

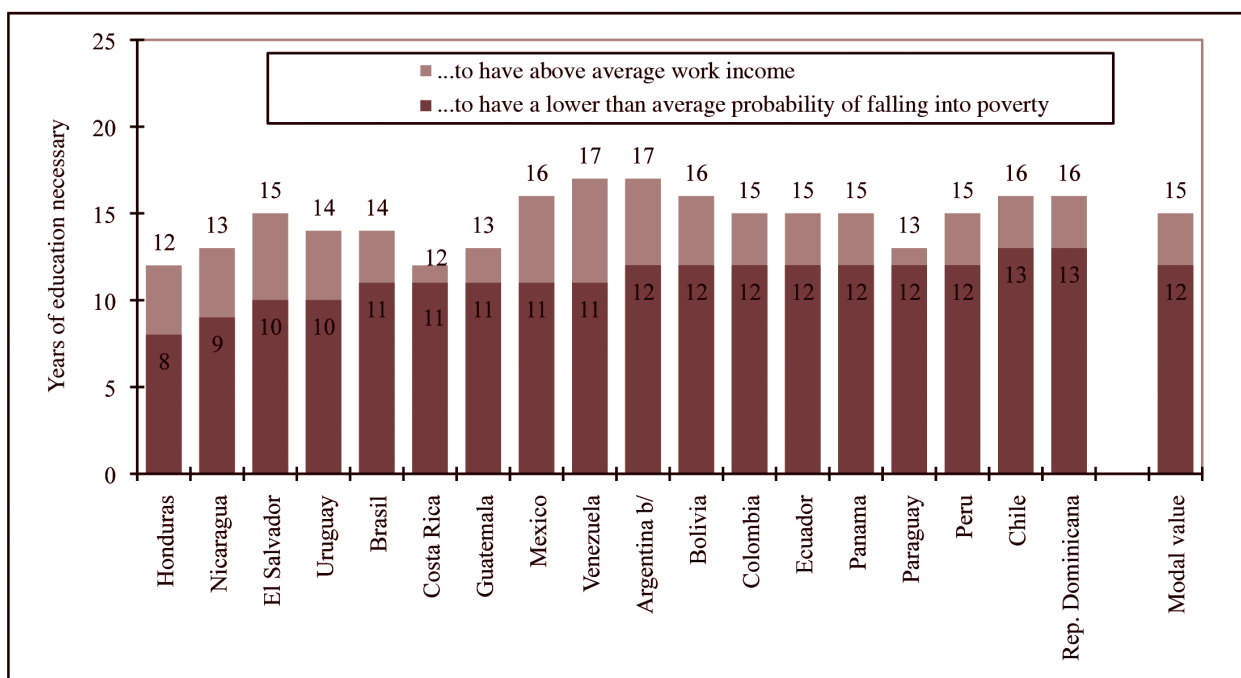
students are in the first generation of their families to be able to attend university. Nonetheless, it is still the case that only a low percentage of young people coming from families with low incomes or low educational capital achieve this feat.

In a context of unequal access to educational opportunities, the linkage of education to employment perpetuates and eventually increases social inequalities. If education is segmented according to socioeconomic conditions and education levels in student's homes, then the result of this situation on education serves to perpetuate the divide in access to quality employment and to welfare. This effect critically establishes the cross-generational perpetuation of these divides throughout the life cycle.

The generalization of access and completion of primary education, and the increased progression

to the secondary level, lead, as a negative effect, to the devaluation of education – that is, given a larger body of young people who have spent on average a larger number of years in school, the achievements that they attain begin to have a lower relative “market value” in the job market, compared to similar levels of achievement among previous generations. ECLAC has repeatedly suggested that the completion of secondary education constitutes a minimum education threshold in the region in order to guarantee a person's future outside of poverty (see Figure 6).

FIGURE 6: Latin America (18 countries): years of education necessary in order to have a lower probability of falling into poverty, or work income higher than the average among employed persons aged 20 to 29, as of approximately 2008 ^{a/b} (In number of years in education)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on special tabulations of household surveys in the countries
 a Those working over 20 hours per week.
 b Urban areas

Capacity building among people aged 15 to 20 is highly relevant in permitting their appropriate entry into the labour market, with significant opportunities for the future. Therefore, public efforts are necessary in focalizing efforts in this field of teaching, linking education provision with the production sector.

UNESCO and the ILO define the provision of technical and vocational education as a comprehensive term that involves aspects of the education process, apart from general education, such as the study of technologies and related sciences, acquisition of practical abilities, attitudes, knowledge, and understanding of occupations in different sectors of economic and social life. This training can be provided by the education institution or by another body supervised by the public authorities, and includes formal and informal teaching programmes (UNESCO/ UNEVOC, 2006). This is constituted as a significant “means of preparing for occupational fields and for effective participation in the world of work”, and also as a “method of facilitating poverty alleviation” (UNESCO/OREALC, 2005).

The change in the processes of industrialization and development in Latin America during the final decades of the twentieth century called into question the type of traditional work training institutional structure developed in the region; as a specialised branch of secondary education for specific occupations, and as professional training imparted by large institutions linked to governments, unions, and businesses. Globalization and new requirements for training in skill sets that are more flexible and can be modified over time led to a pressure to distance the institutional education provided by the State from this type of training, seeking to subcontract it to the private sector, with public funding, to follow the training requirements of the production sector (Gallart, 2002).

The development of programmes, reforms, and initiatives during past decades has grown with an uneven dynamic across the region. In general, at the level of secondary education, the aim was to postpone specialised training as much as possible; and there has been strong resistance from technical secondary education centres against converting themselves to general education, with them rather seeking to reformulate the type of professional education that they offer (Gallart, 2002).

Thus, at the level of post-secondary education, Jacinto (2010) describes two predominant models of professional training provision in the region during the late 1990s, always involving articulation between the public and private sectors. In the first model, education is imparted by traditional professional training institutions developed during the 1950s (IFPs), which are administered by the State or by tripartite alliances (State, unions, and businesses). The second model is developed from ad hoc programmes, which are decentralized, run under the auspices of the country’s Ministry of Labour or the IFPs, delegating training to other institutions (private centres or civil society). This model was developed to address two types of training provision: one on the open market whereby tenders are invited for the development of specific training courses, for formal employment; and the other, which operates through subsidies to institutions that benefit vulnerable sectors, and that aim to foster social cohesion through employment (informal or self employment).

According to the review by Jacinto (2010), the new governments during the first decade of the twenty first century, and criticism of the social costs of privatisation policies, led to a certain reformulation of this kind of training, significantly bolstering efforts to reach vulnerable groups affected by different forms of exclusion. At the same time, efforts have been made

to improve the quality of training in programmes and to decentralise resources and capacities for administration by local stakeholders. The majority of countries have adopted the approach of learning based on capacity building. Despite recent efforts to link together existing institutions, the sector remains very poorly articulated; there are significant differences in approach and distances between for the formal education system, the professional training system, and institutions in the production sector. Policies and programmes are often discontinuous, beset with duplications, and lacking in relevance for young people's entry into the workforce.

The developed world better understands the importance of this training sector, seeing it as a vehicle for ensuring a highly trained workforce – a goal that cannot be met through on-the-job training. Changes in production and industry have eliminated the existence of the long term work relationships that make investment in specialised training for a company's employees feasible, in the case of most businesses. The OECD (2010) has suggested that the development of such programmes must focus on the development of a long term career, providing capacities that empower young people to enter the labour market directly, but that also allow them to continue their training in the future.

The quality of insertion into the workforce depends to a great extent on education level achieved, seen most clearly with the completion of higher education levels. This education-quality relationship is seen both in levels of insertion into the formal economy (or in sectors of medium and high productivity), and in access to social security, or in working income.

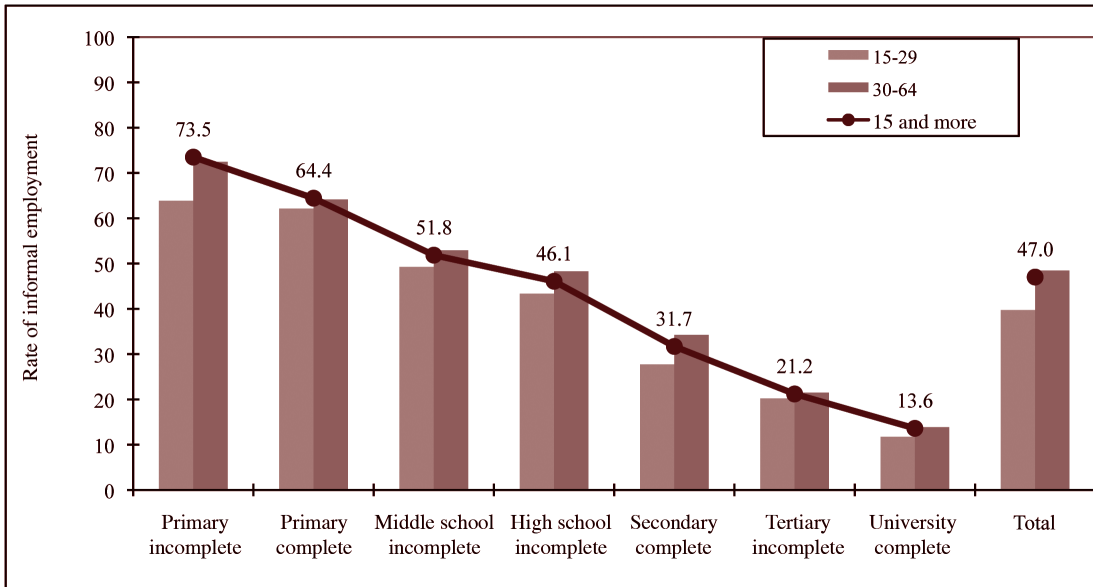
Increased education level is inversely related to insertion in the informal sector or areas of low productivity (see Figure 7.A) – a factor that is also

related, to a certain extent, to the possibility of gaining a salaried position. Thus, if in the economically active population aged over 15 the movement into the informal sector is 47%, among those who failed to complete primary education the level is 74%, while among those who completed primary it stands at 64%, and among those who completed secondary education the figure is only 32%. For people with complete university studies, only 14% are employed in the informal sector. The adult workforce shows a stronger tendency than young people to work in the informal sector (48.4% for adults, as against 39.7%).

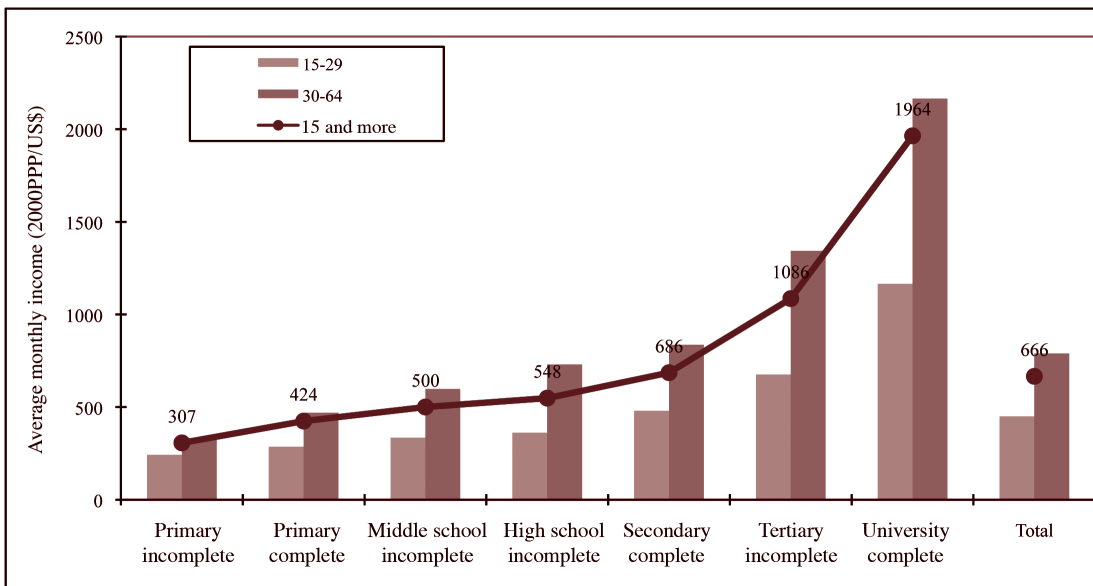
This trend is also closely linked to access to the social security systems connected to employment: the higher the education level of a sector of the workforce, the higher the proportion of persons fully inscribed in social security. Finally, and as would be expected, there is a close relation between the level of education achieved and working income. Figure 7.B illustrates the point of inflection in monthly working income of the population on acquiring higher levels of education, especially in completing university education. As a reference, the limit of poverty is shown, associated with the number of years of education required to have a lower than average probability of living in poverty (equivalent to an average of 12 years of education, for the region).

FIGURE 7: Latin America (selected countries): rates of informal employment and monthly working income for the workforce aged 15 to 29, aged 30 to 64, and all aged over 15, by education level achieved

A. Rates of informal employment by education level (In percentages)



B. Average monthly working income (In year 2000 purchasing power parity dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on special tabulations of household surveys in the countries.

a The definition of the duration of school cycles was conducted in accordance with the 1997 International Standard Classification of Education (ISCED).

3. NEW INEQUALITIES: THE DIGITAL DIVIDE

The penetration of information and communication technologies (ICT) into all corners of society also imposes a new and necessary condition for social inclusion: passing the watersheds of digital competition, in which the pace of change is even more precipitate than in education. Although educational credentials are very important for full participation in the economy, in society, and in politics, full access and usage of ICT is also becoming an ever more indispensable factor. While the digital divide exacerbates divides in learning achievements, broadened communication, social networks, access to productive employment, and possession of a voice in public affairs, digital convergence clearly helps reduce these divides.

Although the school system plays a key role in bringing access, training, and usage of new digital technologies to the masses, efforts to use the school system to compensate for the digital divide that affects the market (and which is reflected in the digital divide between homes of high and of low socioeconomic level) have not succeeded in closing the divides and setting a clear course for digital convergence. The power of ICT in the classroom is not limited to the digital literacy of the population. It is also hoped that ICT can be introduced across all facets of the teaching and learning process, fostering modern skills and improving learning achievements among the student base (ECLAC, 2010b).

In Latin America a digital divide has emerged that relates, in part to inequalities in access that are manifested in the vast differences in terms of availability of equipment. However, it also stems from the type of usage and the kinds of benefits that students can obtain from this equipment. In this level, inequality is manifested in the differences in capacity

to make effective use of ICT and take advantage of the opportunities that they offer in the development of skills and abilities that are ever more necessary for integration into the globalized world (ECLAC, 2010c).

ICT penetration in the region has been rapidly accelerating through market forces, and has very significantly generated disparities in access between social classes. While approximately 55% of homes in the highest income quintile (an average across 13 countries in Latin America) have a computer with access to the internet, only 26% of homes in the lowest income quintile are thus equipped³. In general studies suggest that, despite this segmented access to technology, children and young people are integrating into the technological world across the board. In fact, the increase in connectivity of homes with residents aged 13 to 19 is faster than in homes where all residents are aged over 20.

The school system has been called upon to take a leadership role in politics to broaden access, training, and usage of new technologies among the population, precisely because of its capacity to compensate for inequalities of origin. As shown in information compiled by the PISA 2009 study, computer and internet access for 15-year-old students is considerably higher in the education centre (90% with computer access, 73% with internet access) than in the home (52% and 42%, respectively) (see Figure 8.A). Access levels in the school environment are largely similar to the average among the more developed OECD member states, while access levels in the home are not. Chile and Uruguay are the two Latin American countries with the highest general ICT access levels, out of the countries that participated in PISA 2009.

Figure 8.B. also shows the role that the school system

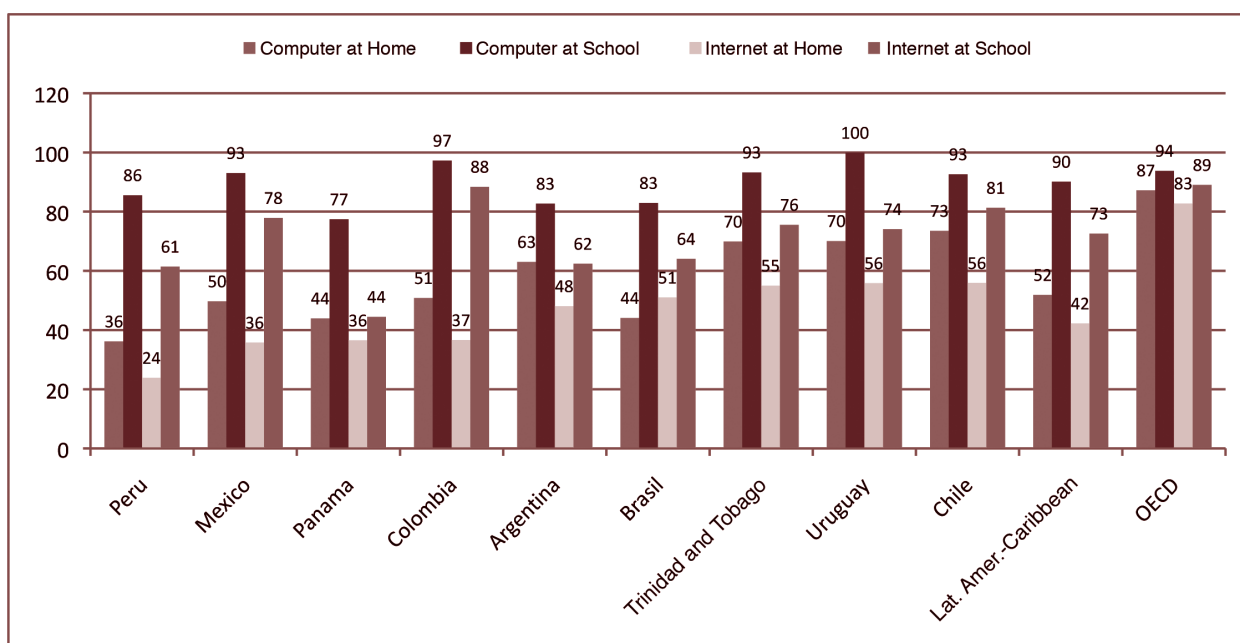
3 Unweighted average of special tabulations of household surveys standardised by the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) from the following countries: Brazil (2008), Chile (2006), Colombia (2008), Costa Rica (2008), Plurinational State of Bolivia (2007), Guatemala (2006), Honduras (2008), El Salvador (2007), Mexico (2008), Paraguay (2008), Peru (2008), Bolivarian Republic of Venezuela (2008), and Uruguay (2008). See ECLAC (2010b).

has taken in reducing the divide in access to technology. Uruguay stands out for having almost no divide among schools, even showing higher levels of internet connectivity in schools attended by students of lower socioeconomic and cultural level. It is followed by Chile and Colombia, with minimal differences, contrasted with levels of equipment present in the home. For the average of these nine countries in Latin America and the Caribbean, 72% more students from higher socioeconomic groups have access to a computer in the home, compared to the percentage of students from the lowest quartile with access. In terms of internet connections, the difference is 68%.

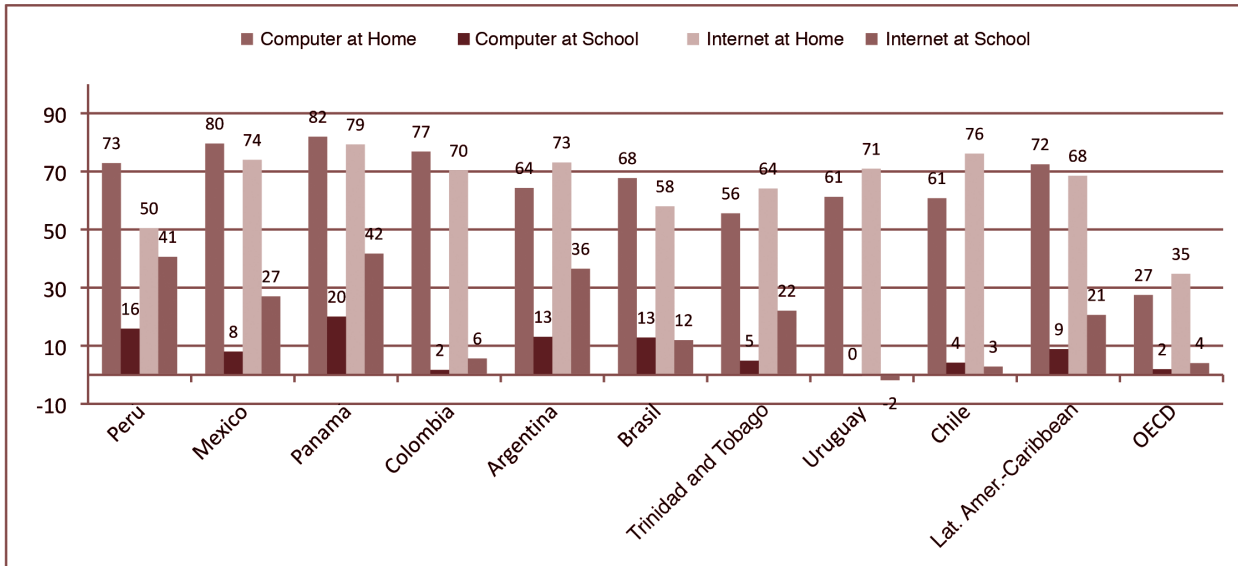
the education centres are really available for students, and with what frequency they may use them. Given the type of access opportunities provided by the education establishment, and in some cases at internet cafés (which are very widespread in the less favoured social sectors of many countries in the region), individuals are often unable to make use of the technology with sufficient intensity. Those who use ICT in such places generally do so for less time than those who have access in their homes, giving them more limited possibilities to develop digital skills for social and occupational integration. This leads to another dimension in the digital divide: not lack of access, but rather a matter of modalities and intensities of usage (ECLAC, 2011).

The problem that is hidden by these statistics is that they fail to show the extent to which the computers in

FIGURE 8: Latin America and the Caribbean (9 countries): access and disparities in access to computers and the internet in the home and in the education centre for students aged 15
 A. Percentage of students with access to ICT, by place of access



B. Disparity in access between students in the highest and lowest quartiles of socioeconomic and cultural status, by place of access



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on special processing of PISA 2009 microdata.

Note: Averages for OECD countries in Latin America and the Caribbean are unweighted averages of figures for countries.

4. DISTRIBUTION AND TRENDS IN PUBLIC SPENDING ON EDUCATION IN THE REGION

During the last two decades, the countries in the region have made a significant effort to increase the resources available for the execution of social policies. Practically all budget items in the area have shown an increase in both absolute and relative terms, with certain exceptions and periods.

Much of this effort has gone alongside economic growth, which aided in the expansion of available resources. Increases in total budgets, and particularly in social sector budgets, have outstripped growth in GDP – principally during the 1990s – but slight reductions in GDP have also led to budget cuts that have been more extreme than necessary. Although the dynamics of budget execution in line with economic cycles is generally guided by fiscal responsibility and international recommendations, cuts to certain areas of spending – such as education, health, or social aid – can bring serious economic and social costs.

Although all sectors or major items of spending have increased alongside social spending, this growth has been uneven: social security and aid have seen the highest growth, to almost three percent of GDP, a little over half of all public social spending. This has been followed by increases in education spending, in line with the wide range of international commitment made by countries in the region. The proportion of GDP given over to this budget item has grown by a slightly over 50%.

However, the dynamics of education spending are heavily affected by economic cycles: in periods of strong economic growth education spending can increase heavily, but during times of economic stagnation or contraction, cuts can be even more serious than would be expected from changes in GDP.

Despite this elastic dynamic, efforts made by countries have led to relative increases in their education budgets, in terms of GDP; economic growth in this decade has heavily aided the extension of education services. In this way, education spending in countries for which sufficient information is available grew from an average of 3.1% of GDP in 1990 to 3.6% in 2000, and to 4.2% in 2008. Given that between 1990 and 2008 the regional GDP almost doubled (3.4% per year, and 84% overall during the period), the absolute expansion in public spending on education in the region was 5% per year or 140% over the 18 year period; in terms of spending per capita, it rose from \$86 per person in 1990 to \$119 in 2000, and \$171 in 2008.

TABLE 2: Latin America (18 countries): indices of public spending on education in 1990 and 2008^c
(In percentages and year 2000 dollars)

	Education spending as % of GDP		Education spending per capita		Population in age range for primary or secondary		Spending (primary & secondary) per person aged to receive it	
	1990	2008	1990	2008	1990	2008	1990	2008
Argentina	3.4	4.9	190	489	23.7	20.6	616	1773
Bolivia (Est. Pluri. de)	2.7	6.7	23	76	29.2	27.8	70	166
Brasil	4.6	5.3	154	232	24.6	19.3	349	911
Chile	2.7	3.6	83	224	22.3	19.8	258	837
Colombia	2.8	5.1	59	147	25.3	21.4	139	531
Costa Rica	4.5	5.2	140	268	23.8	20.2	331	974
Ecuador	2.6	2.1	34	36 ^{b/}	29.3	24.7	72	120
El Salvador	2.0	3.6	33	82	31.4	25.2	70	196
Guatemala	1.4	3.2	20	61	28.8	27.8	43	160
Honduras	3.7	7.0	39	101 ^{b/}	30.7	29.0	84	288
Mexico	4.0	5.8	197	378	27.8	21.6	398	1185
Nicaragua	4.4	3.2	30	29 ^{b/}	30.8	26.3	37	49
Panama	5.4	4.1	159	229	26.9	22.8	356	463
Paraguay	1.1	4.1	15	62	29.0	26.8	35	173
Peru	1.5	2.7	25	81	26.5	22.2	48	269
República Dominicana	2.0	2.5	37	91	28.7	25.1	80	279
Uruguay	3.1	3.1	169	272 ^{b/}	20.8	18.9	551	998
Venezuela (Rep. Bol. de)	3.1	3.8	150	227	25.7	21.7	144	515
Unweighted average	3.1	4.2	86.5	171.4	27.0	23.4	205	549

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from UNESCO Institute for Statistics (UIS) and ECLAC/Organization of Ibero-American States for Education, Science, and Culture (OEI), "Metas Educativas 2021: estudio de costos", Documentos de proyecto, N° 327 (LC/W.327), Santiago de Chile [online at] <http://www.eclac.org/publicaciones/xml/0/40520/metas-educativas-2021.pdf>, 2010.

a The figures correspond to the administrative classification of public spending and may not coincide with figures derived from functional classifications.

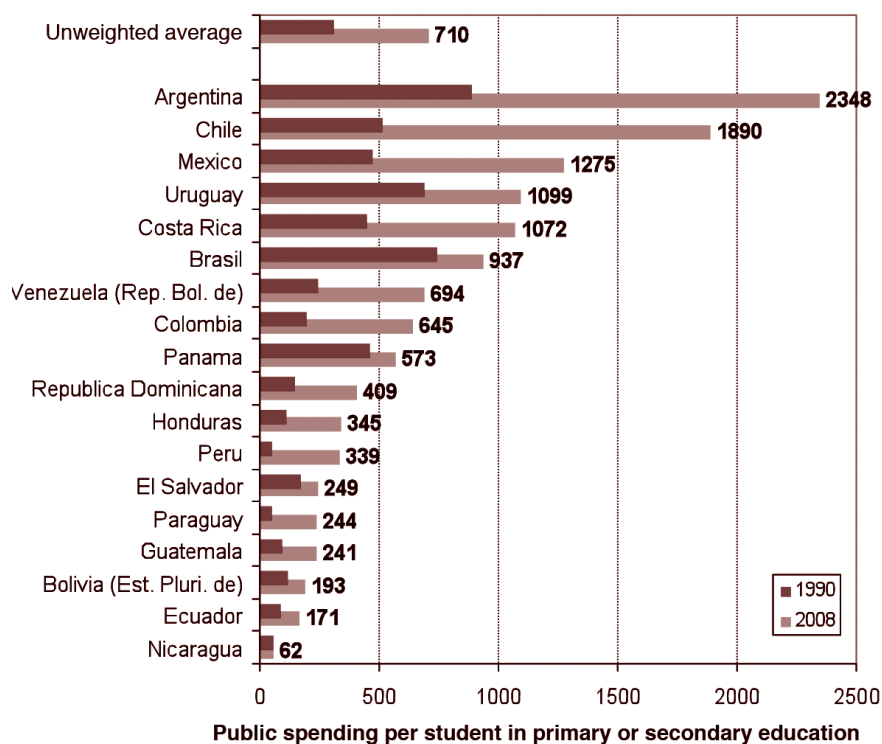
b Population in the age range to study in primary or secondary education, according to the 1997 International Standard Classification of Education (ISCED).

c Estimates on the database of the UNESCO Institute for Statistics (UIS).

These figures belie a greatly variegated situation, in terms of both per capita spending and the speed of growth: countries such as Ecuador, El Salvador, the Plurinational State of Bolivia, Guatemala, Nicaragua, Paraguay, Peru, and the Dominican Republic earmarked less than 100 dollars per capita for education in 2008, while Argentina, Costa Rica, Mexico, and Uruguay spent over 250 dollars per capita. Furthermore, Ecuador, Nicaragua and Panama have shown the least growth in per capita spending (in the case of Ecuador, even a slight reduction), while spending in the Plurinational State of Bolivia, Guatemala, Paraguay, and Peru at least tripled.

Economic growth, fiscal measures, growth and aging of the population, and increases in education coverage, are among the effects that brought about unequal growth in public spending on education per student at the primary or secondary level. Argentina, Chile, Costa Rica, and Mexico have increased public spending per student by \$600 or more during the period, and all of these countries – as well as Uruguay – have reached spending levels of over \$1000 per student.

FIGURE 9: Latin America (18 countries): public spending per student in primary or secondary education ^{a/}
(In year 2000 dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from the UNESCO Institute of Statistics (UNESCO/UIS) and ECLAC/OEI, 2010.
^{a/} In order of spending per student, 2008.

In contrast Ecuador, El Salvador, the Plurinational State of Bolivia, Guatemala, and Panama have shown an increase of less than \$150 per student, over almost two decades. According to available information, Nicaragua has shown no significant increase in spending per student between 1990 and 2008. It should be pointed out that within the group of countries that have registered little growth in this area, Panama's spending was over \$500 per student, while El Salvador and Guatemala spent around \$250 (see Figure 9). On average, spending directed towards students in public schools in the region more than doubled (an annual increase of 4.7%).

Spending per student has grown markedly, although this largely follows the significant economic growth seen over the past two decades. Significant actions have also been taken by States themselves, aiming to increase the proportion of the budget earmarked for education. Although the aging of the population and the reduction in the proportion of people in the age range of education tend to lead to a relative reduction, an obstacle in the path of further increases in spending per student has been the very expansion of education coverage. Nonetheless, this expansion also served to make education spending more progressive, as at least at the levels of pre-school, primary, and middle school, it is spent on a larger proportion of student from lower income backgrounds.

Spending on primary education is the most progressive in the region. This is largely due to the achievement of nearly universal coverage in a large majority of the countries. The next most progressive is spending on pre-school education. Nonetheless, in most countries this education level is not compulsory, so coverage is relatively low, most of all in low income sectors. High income families tend to use private services at this level.

At the middle school level spending is still progressive in absolute terms, as in all countries attendance is still compulsory and access is generalised. However, by the final years of secondary education, access among the lower income sectors drops severely, and so at that level the distribution of public spending becomes slightly regressive, concentrated among the middle income segments, as usage of private education is higher at the secondary level: on average, 25% of students in the region attend private schools, mostly persons from high income groups.

Spending on post-secondary education, and particularly at the university level, is openly regressive, mainly favouring students from the most well off families. This has led to positions that are inclined towards a reduction in public spending on post-secondary education, instead diverting the funds to lower education levels where they can be focalized on lower income segments. Nonetheless, and given that self-focalization mechanisms work best in education systems, it is precisely the existence of public higher education that gives the lowest income segments a real option for social mobility. Public efforts should therefore be oriented towards allowing an ever higher proportion of low income students to continue post-secondary education, thus making spending at this level more progressive.

In order to analyse ways to achieve increased equality in Latin America and the Caribbean, the approach adopted must take into account different generations and the life cycle. The analysis of national transfer accounts represents a valuable reference for public policy debate and in order to examine the assignment of public and private transfers from a cross-generational perspective. This allows the identification of certain "generation biases" on the part of the State in its functions of providing wellbeing and the formation of human capital.

In Latin America and the Caribbean, States and their transfers have little effect on the consumption structure of families with young and adolescent children. While in many OECD countries the consumption habits of persons aged under 19 depend almost equally on family transfers and transfers from the State, in Latin America state transfers account for less than 20% in this age range. This implies that redistributive impact is very restricted, compared to primary family income. The persistence of inequality after public transfers towards families with children should therefore not be surprising.

This limitation is exacerbated by the low efficiency of education systems (which make up a large proportion of public transfers to the youngest sector of the population) in generating achievements that address the structures of inequality of origin. All in all, the region faces enormous challenges in activating States' role in redistribution and the intertemporal struggle against inequality.

5. POLICY CHALLENGES FOR THE REGION

In order to address the perpetuation of educational opportunities through generations, education must be linked to other social promotion and protection policies. In terms of interventions inside the system itself, certain key factors should be noted:

1. Extension of coverage of early childhood education.

All countries in the region have made at least primary education (from age 6) compulsory. Nonetheless, during recent years many of them have lowered the age for starting education, and have included the pre-school stage as part of compulsory education. The country that has included the most years of compulsory pre-school education is Mexico, with three years (from age 3 to 6); it is followed by Chile, El Salvador, Guatemala, Panama, and Uruguay, with two years of compulsory education (from age 4 to 6).

Publicly financed institutional care for children under the age of six brings well documented benefits. First, it aids in the integration of women into the labour market, increasing the resources available in the home as well as women's autonomy. This represents an opportunity for the younger age group, particularly young mothers who as a result have more time available to continue their studies and not interrupt their education. As care available in the school offers more services such as meals, healthcare, and early childhood stimulation, it makes up for deficiencies present in the homes with least resources.

These care services have a positive impact on the future development of children, as they are essential for cognitive and psychomotor development, attention capacity, and activity levels, having a significant influence on the child's educational prospects during subsequent education levels. A broadening of pre-

school (3 to 5 years) and initial (0 to 3 years) education provision, along with the necessary policies to provide attention and access for the most vulnerable sectors, would contribute to the struggle against problems such as school abandonment and grade repetition.

2. Extension of the primary school day

In the majority of countries in the region, most provision of extended school days is to be found in private schools, and coverage depends on the families' capacity to pay, leading to segmentation (ECLAC, 2010a). The main efforts to extend the school day in public education have been made at the secondary level. The countries that have made most efforts to extend the primary school day are Cuba, Chile, and Colombia.

Current advances in teaching models and the needs of the modern world make extended school days ever more important. An extended day is expected to change the relationship between work time and rest time, increasing the study load of children while in the school and reducing time spent on homework in the home.

This is particularly important for students who lack an educational environment and suitable spaces to stimulate and support their learning in the home. The full school day also brings positive externalities for families, reducing concerns over out of school care, including meals and the prevention of dangerous behaviour.

Changes in the school day require the extension of school spaces, the improvement of available equipment, and consideration of the infrastructure and costs associated with the provision of additional

meals for the students. In order to apply this lengthening of the school day, resources must be assigned in accordance with the needs of each establishment, such as provision of drinkable water, sufficient bathroom facilities, and educational resources – including libraries and computer laboratories – that ensure an improvement in the quality of the education environment. In effect, the conditions at the school can have a positive or negative influence on the students. Another very relevant cost associated with the lengthening of the school day is the consideration of the teaching staff. A longer day brings costs associated with the type of contract and working hours, which must be taken into account when planning the change.

3. Incorporation of digital technology into education as a front line opportunity in the battle for equity

The definition of criteria for the selection of models to incorporate ICT into teaching practices should depend on the goals put forth by the State for education in each country. One of the priority goals of Latin American States and those in charge of their education systems is to use the universalisation of access to ICT skills as a key tool in the struggle to disassociate social origin from educational achievement – which is seen as a fundamental step in the reduction of poverty and inequality, and the strengthening of social integration.

Schools should play a fundamental role in compensating for inequalities of origin in this additional area, and equip themselves to offer more and better access for those unable to access ICT in the home, to enhance penetration so as to increase

the usage time per student, and to offer teacher based orientation that motivates students to use the technology autonomously in their research and homework.

As was suggested in ECLAC's research project on the social impact of the incorporation of ICT through education systems (ECLAC, 2010), most of the region's education systems face a situation in which they are forced to 'double down' on equity, as unresolved problems from earlier times are now added to issues favouring the incorporation of ICT into learning processes. Given the magnitude of the challenges, it seems unreasonable to expect the education system to be able to make this contribution without the solid support of other fundamental social institutions.

4. Support families via conditional cash transfer programmes (CCTs)

Public policy cannot sidestep the role of the family environment in the perpetuation of inequalities across generations. A very relevant activity is the testing of techniques and strategies that support the retention of students in the system during this school stage – that is, advancing opportune and maintained school progression.

In this regard the CCT must be born in mind, as one of the pillars that countries have built during the past two decades in order to generate a commitment from low income families to support their children's staying in the education system. This mechanism has the virtue that it adds to the monetary resources in low resource homes – albeit only marginally – and reduces the probability of school desertion based on opportunity costs (children staying in school is part of the conditional contract of the transfer programmes).

However, given that primary education is moving towards universal coverage, and that most desertion by children from vulnerable families occurs during secondary education (as the opportunity cost is greater for older children, in terms of lost family earnings), the extension of benefits for children attending school throughout the secondary cycle emerges as a priority.

5. Articulation of the occupational training system

The path of young people into the work of work is highly segmented according to educational achievements. Capacity building among those aged 15 to 20 is highly relevant in allowing them to join the labour market in a suitable way, with significant opportunities for their future. Therefore, public efforts must be made for focalize efforts in this area of teaching, linking education provision to the production sector.

The wide ranging field of occupational training includes a variety of learning activities that are hard to classify. Coverage and type of provision are very variable in this level of education. In developed countries, and most of all in Europe, coverage and impact are much greater.

6. Creation of compatibility between the educational quality of higher education and the enhancement of access for excluded sectors.

During recent decades, the higher education system in Latin America has shown strong expansion and growth. Nonetheless, its coverage is still highly restricted and has become concentrated in medium

and high income sectors. In order to ensure greater equality of opportunities at this level of education, policies must be created that compensate for the lack of monetary resources and time among young people leaving secondary school who have to work in order to survive or to contribute to their families.

University education should meet the demands of the labour market and contribute to the consolidation of the knowledge society, in such a way as to contribute to the strengthening of the university as a centre for the production and transfer of knowledge (Malagón, 2004). During recent decades, the higher education system in Latin America has expanded and grown significantly. Nonetheless, as mentioned in previous sections of this chapter, its coverage is still highly restricted and has become concentrated in medium and high income sectors.

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