2008/ED/EFA/MRT/PI/58/REV.

United Nations
Educational, Scientific and
Cultural Organization

Country profile prepared for the

Education for All Global Monitoring Report 2008

Education for All by 2015: will we make it?

Guatemala
Country case study

Emilio Porta and José R. Laguna
2007

UNESCO

PRESENT STATE OF EDUCATION FOR ALL:

THE CASE OF GUATEMALA

MONITORING EDUCATION FOR ALL IN GUATEMALA

Emilio Porta and José R. Laguna[1]

Summary: Guatemala's education budget doubled from 2000 to 2005, but is still too low to achieve the education for all (EFA) goals. The present report describes progress with pre-school, primary and secondary coverage, but notes that this progress remains very patchy at the departmental level, with some regions lagging badly behind and levels of school repetition and adult illiteracy remaining high. At the institutional level, the Government of Guatemala has designed a set of plans that are consistent with the education for all goals, the most promising developments being the national evaluation system and the considerable progress made with decentralization and community participation. Concerning policies to promote equity, a very important innovation has been the school supplies and grants programme, whose targeting is consistent with the objectives of reducing school repetition and drop-out rates. Lastly, the report presents some recommendations that should be treated as priorities if the education for all goals are to be met.

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CONTENTS

INTRODUCTION

Despite the efforts made by the Government of Guatemala and society at large to give all citizens access to quality education, there is still a long way to go before the education for all (EFA) goals are met.

Accordingly, the present report sets out to analyse the progress made in Guatemala and the challenges the country faces before it can achieve the EFA goals, identifying strategies and actions to enable decision-makers to overcome the obstacles encountered. To do this, it makes extensive use of official Ministry of Education (MINEDUC) statistics, household surveys and the most recent literature on the country.

This document is structured as follows. Section 1 describes the progress made by Guatemala towards the education for all goals, specifically in the 2000 to 2005 period. Section 2 describes the institutional framework of the education system designed in Guatemala to help achieve these goals and the way efforts are being coordinated with cooperation agencies, local organizations and civil society. Section 3 examines government policies and programmes designed to increase the opportunities of the most disadvantaged population groups. Section 4 contains a critical analysis of the efforts made by Guatemala to ensure quality education for all, taking the results of academic performance tests, school infrastructure and equipment and other factors into account. The final section contains the main conclusions and recommendations for achieving the EFA goals.

WORKING TOWARDS THE EFA GOALS

From 2000 to 2005, the Government of Guatemala increased public education spending (excluding tertiary education) from $362 million to $611 million. This represents a modest increase in education investment as a share of gross domestic product (GDP), from 1.69 to 1.77 points of GDP over the period.[2]

A number of comparative studies for the region have shown that Guatemala allocates a smaller proportion of its resources to education than any other country (Porta and Laguna, 2006a, and Di Gropello, 2004, among others). The situation could worsen yet further in the current year, since the National Assembly did not approve the draft budget presented by the executive, which means that investment in 2007 will remain at the same level as the previous year. Considering that UNESCO advises countries to earmark at least 6% of GDP for education, an effort is clearly needed in Guatemala to increase investment in education.

While it is true that a great deal of work lies ahead, the efforts made in recent years have had a positive impact on trends in the main educational indicators. The chapters that follow will look at the progress made with each of the education for all goals: (a) early childhood care and education, (b) universal primary education, (c) youth and adult learning, (d) literacy, and (e) gender equity. The education quality goal will be given a chapter of its own since, as we shall see in the course of the document, it is in this area that the greatest challenges have to be met.

EARLY CHILDHOOD CARE AND EDUCATION

In the 2000-2005 period, the net enrolment ratio (NER) at the pre-primary level rose by a little over 6 percentage points, from 28.2% to 34.6%. Despite this substantial increase, it should be noted that pre-primary education coverage is considered low by comparison with other Central American countries.

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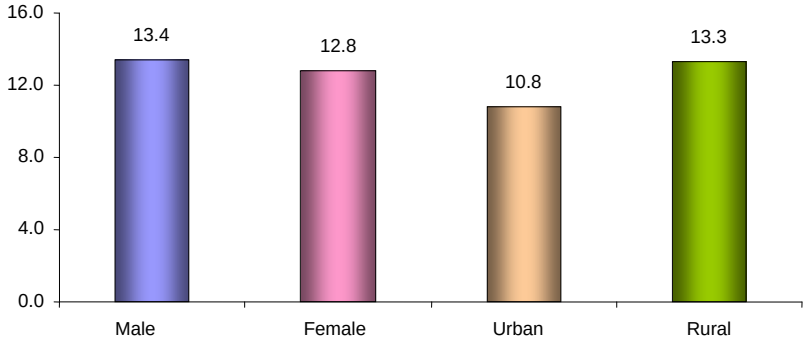
[2] See Porta, Somerville, Álvarez and Martínez (2007).

It is also important to note that the regional trend was mixed over the period. While the departments of Zacapa and Retalhuleu saw an increase of more than 10 points in their coverage, in a department like Sololá the rise was a mere 1.4 points. The situation in Alta Verapaz and Huehuetenango is also a cause for concern, with just one in four children receiving education at this level (see annex A3). These are more rural departments with lower per capita GDP.

There is ample evidence for the importance of pre-primary education in the emotional and intellectual development of the young.[3] This being so, it would be advisable for Guatemala to continue its efforts to increase coverage and retention rates at this level of education. Here it is worth noting the substantial progress made in bringing down the school drop-out rate[4] during the post-Dakar period, as this fell from 25.7% in 2000 to 13.1% in 2005. The latter figure is still considered high, however, and it particularly affects boys and residents of rural areas.

Chart. Pre-primary drop-out rate, percentages (Guatemala 2005)



Source: MINEDUC

UNIVERSAL PRIMARY EDUCATION

MINEDUC statistics show that Guatemala made substantial progress towards universal primary education in the 2000 to 2005 period, reflected in a rise from 84.3% to 93.5% in the NER for this level of education.[5] As with the other educational levels, however, girls, inhabitants of rural areas and those in the most disadvantaged socio-economic groups have significantly less access to primary education than other groups. The country will have to deal with this situation if Guatemala is to attain the goal of universal primary education by 2015 (see annex A1).[6]

With regard to the inequity in primary education access suffered by girls, it is important to note that the intake of girls in the first grade has been increasing faster than that of boys, making it possible that the disadvantage girls are currently under in education coverage may be reversed in the near future, so that it is boys who are underrepresented.

When progress with primary education coverage is broken down at the departmental level, it transpires that the departments of Sololá and Quiché scored highest, increasing their school coverage by 16 and 17 percentage points, respectively. The department that has the most ground to

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3 Young (1996), Carneiro and Heckman (2003) and Ministerio de Educación (2005a).

4 According to Porta, Somerville and Ramírez (2006), the formula for calculating the school drop-out rate is to divide final enrolment by initial enrolment for a given grade or level in the same year.

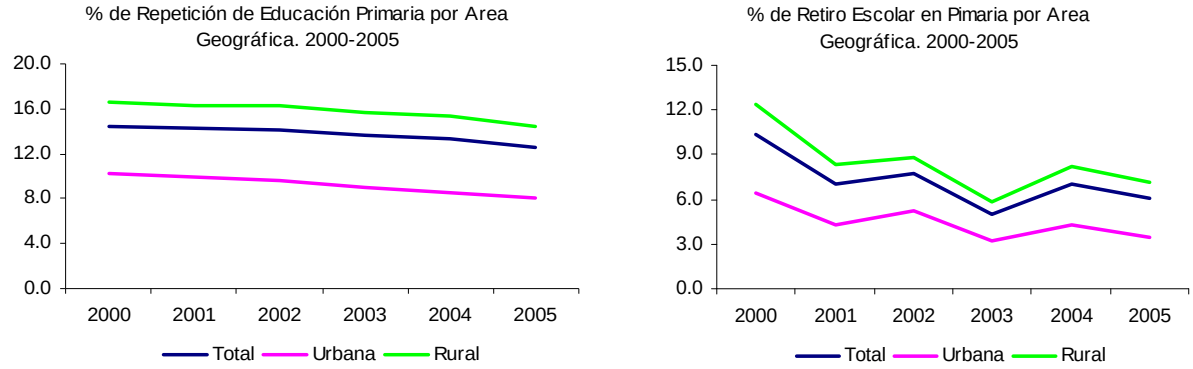
5 Preliminary data based on the summary enrolment count carried out by MINEDUC put the primary school NER at 90.1 for 2006.

6 See Porta and Laguna (2006b) for a detailed analysis of educational equity in Guatemala.

make up is Alta Verapaz, where one in four 7- to 12-year-olds is outside the Guatemalan education system (annex A1). Porta and Laguna (2007) have the following to say: "The departments that have the greatest percentages of their populations living in rural areas are usually the ones where the largest percentages of the school-age population (aged 5 to 17) are out of school."[7]

While the progress made by Guatemala in increasing coverage is seen as positive, school retention and progression are just as important as the primary intake if the education for all goals are to be achieved. The following chart shows that the primary school drop-out ratio fell significantly in the 2000-2005 period, especially in the rural areas (from 12.4% to 7.2%), while repetition rates declined very slightly.

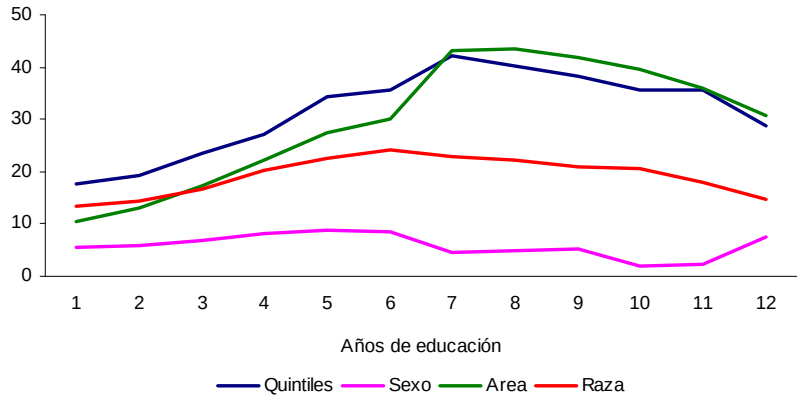
Chart. Primary school repetition and drop-out rates by geographical area, percentages



Source: MINEDUC.

Despite the progress noted, there are still disparities by area of residence, sex, socio-economic stratum and ethnicity, with girls and rural residents consistently coming off worst (see chart below).

Chart. Differences in probable retention in the Guatemalan education system



Source: ENCOVI 2000.

The improvements in the school repetition and drop-out indices resulted in a higher primary school completion rate. This rose by some 13 points to 69.9% in 2005 (see annex A3).

7 See Porta, Somerville and Álvarez (2006) for an in-depth report on departmental and municipal differences in the performance of the main education indicators.

On the basis of the average cost per pupil given in Porta et al. (2006), we estimate that in 2005 Guatemala spent some $64 million dealing with repeating pupils, equivalent to about 11.4% of total public spending on education (excluding the tertiary sector) and about 14.1% of primary education spending.

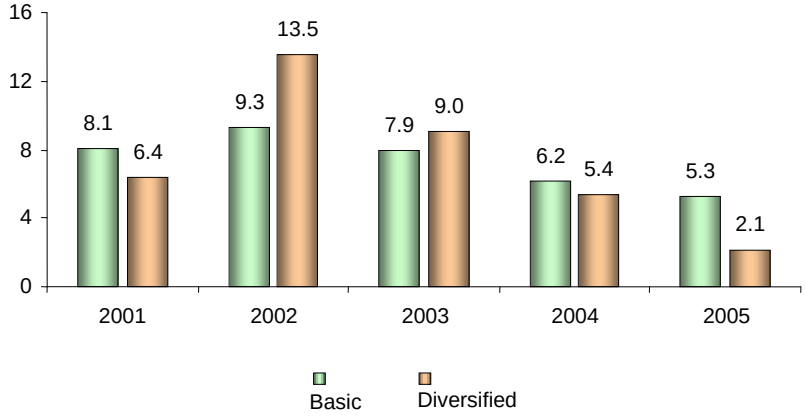
The significant opportunity costs incurred when education system resources have to be used a second time to deal with repeating pupils suggest a need for more cost-effective models to reduce the country's high repetition rates, especially in the early years of primary school. Accordingly, it is recommended that consideration be given to the use of special programmes to improve pupil learning levels and bring down repetition rates.[8] The lessons learned from implementing the *Salvemos Primer Grado* (Save First Grade) programme unquestionably provide a helpful starting point. According to recent research by USAID-Guatemala, the schools implementing the programme managed to motivate pupils to stay on and complete first grade successfully. The completion and promotion rates were, respectively, 10% and 20% higher in schools where the programme was implemented than in the comparator schools. This improvement in school efficiency yielded savings of up to $70 per pupil moving up to the second grade.[9]

YOUTH AND ADULT LEARNING

At the "basic" (lower secondary) stage, the NER rose from 24% to 33.2% in the 2000 to 2005 period, while the enrolment ratio at the "diversified" (upper secondary) stage increased from 15% to 19% in the same period. An interesting point is that, whereas boys have a higher enrolment ratio than girls at the lower secondary stage, the situation is reversed to a small degree at the upper secondary stage (annex A1). This could be because more boys of an age to attend the latter stage (16 to 18) have started work.

It is important to stress that, in addition to the higher coverage seen at the basic and diversified levels during the 2000-2005 period, there have also been major improvements in retention at these levels, and this has had a positive impact on completion rates (see annex A3). These good results may be put down to the education reform policy and the grants programmes offered by MINEDUC. There are no assessments available, however, to confirm this categorically.

Chart. School drop-out rates by education level (2001-2005)



Source: Porta et al. (2007).

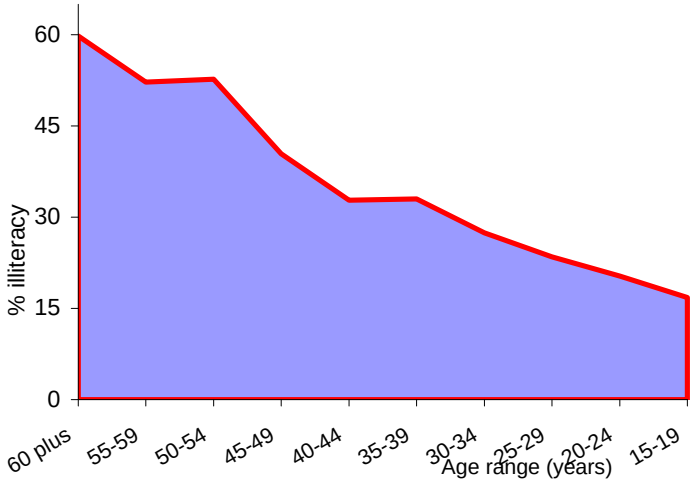
8 Some interesting models are automatic transition to a higher grade (promotion), summer courses, full-day schooling and special evening or Saturday classes for children who have fallen behind.

9 See USAID-Guatemala (2005b) for further information.

LITERACY

An alternative way of assessing progress in literacy among the adult population is to analyse the proportions of people who are literate by five-year age group. The following chart shows that Guatemala has made substantial progress in reducing the illiteracy level among the youngest, confirming that the new generations have greater access to basic education.

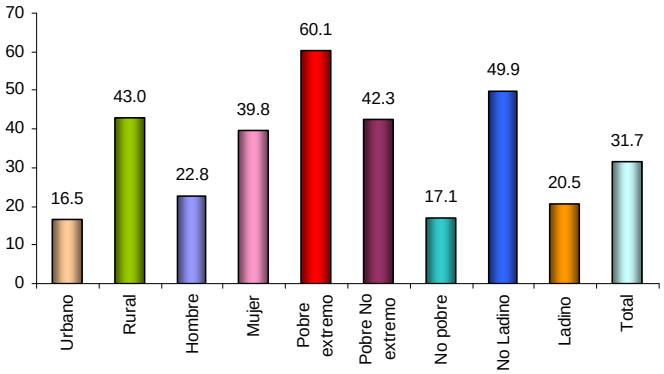
Chart. Illiteracy rate, by age group



Source: ENCOVI 2000.

It must not be forgotten, though, that the country still has the highest rates of adult illiteracy in the whole of Central America (Porta and Laguna, 2006). Using the most recent household survey available, it is estimated that 31.7% of the Guatemalan population aged 15 and over is illiterate, the worst affected being rural residents, women, the poorest households and the country's indigenous groups.[10]

Chart. Illiteracy rate in different population groups, percentages



Source: ENCOVI 2000.

[10] Shapiro (2005) shows that in the population aged 10 to 19, the literacy rate among Mayas is 74% while the rate among Ladinos (monolingual speakers of Spanish) is 90%. For a more in-depth appreciation of research on equity between ethnic groups in Guatemala, see also Hallman (2006), Winkler and Cueto (2004), Edwards (2002) and Steele (1994), among others.

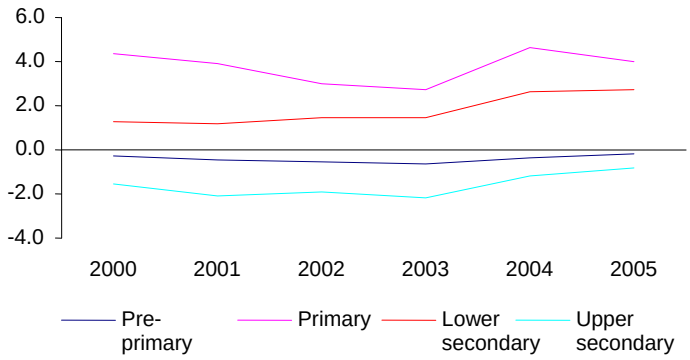
These large differences indicate that the State needs to design aggressive programmes that can significantly reduce these high illiteracy rates, using all the information available to target cost-effective interventions, especially considering the scale of the externalities that arise when illiteracy prevents youths and adults from communicating in writing. There is ample evidence of the numerous benefits accruing to the illiterate when they learn to read and write.[11] As Porta and Laguna (2007) point out, paying this social debt would not only change the living standards of today's population, but would have an impact on the development of future generations, since the children of parents who can read and write are more likely to remain in the school system. They also achieve higher average scores in academic performance tests, both for Spanish and for mathematics.

According to recent reports from MINEDUC (2006d), the National Literacy Committee (CONALFA), which meets the needs of the illiterate population by running literacy and post-literacy programmes in Spanish and 17 Maya languages with the involvement of governmental and non-governmental organizations, dealt with 223,997 people in 2005 of whom 120,669 were at the initial stage, equivalent to the first grade of primary school, 55,024 were at the first post-literacy stage, equivalent to the third year of primary school, and 48,304 were at the second stage, equivalent to the sixth year of primary school. According to CONALFA estimates, by late 2005 these measures had brought down the adult illiteracy rate to 25.19%.[12]

GENDER EQUITY

Official MINEDUC statistics reveal that girls are affected by a marked inequality of access at the primary and lower secondary levels.

Chart. Differences in NER between boys and girls



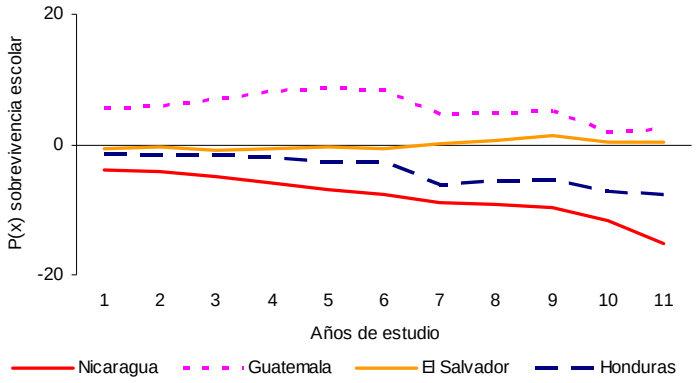
Source: MINEDUC.

In addition, it is important to note that women in Guatemala earn less on average for their work than men, which means that the private returns on each additional year of education are less for women (Porta, Laguna and Morales, 2006). This situation may be discouraging women from going into higher levels of education. As the following chart shows, women in Guatemala are at a considerable disadvantage compared to men when it comes to their chances of progressing through the education

11 See Duryea and Page (2003) and Handa et al. (2006), among others, for a regional view.
12 Further information can be found at http://www.conalfa.edu.gt/.

system. The result is that gender inequity in education access is worse in Guatemala than anywhere else in Central America (Porta and Laguna, 2007).

Chart. Differences in probable retention in the education system (boys/girls)[13]



Source: Porta and Laguna, 2006.

The table below provides follow-up and monitoring information for the EFA indicators. It is based on information available from MINEDUC, with further input from the latest household survey.

Table. Follow-up and monitoring of education for all indicators[14]

No.	EFA indicators	2000	2001	2002	2003	2004	2005	2006p
1	Gross pre-school enrolment ratio	51.16%	55.44%	55.39%	55.32%	57.56%	57.92%	57.35%
2	% of new first-grade entrants who have attended a pre-school institution	unav.	unav.	unav.	unav.	unav.	unav.	unav.
3	Gross or apparent intake rate in primary grade 1	176%	172%	172%	171%	172%	163%	unav.
4	Net intake rate in primary grade 1	60.65%	61.58%	63.02%	66.71%	68.79%	70.68%	unav.
5	Gross primary enrolment ratio	102.15%	103.27%	106.40%	108.55%	112.45%	113.14%	109.72%
6	Net primary enrolment ratio	84.30%	85.14%	87.48%	89.20%	92.41%	93.52%	90.91%
7	Public expenditure on education (millions of dollars)*	362	437	451	484	527	611	unav.
	As percentage of GDP	1.69%	1.86%	1.73%	1.71%	1.70%	1.77%	unav.
8	Public expenditure on primary education as % of total public expenditure on education*	80%	80%	79%	78%	77%	78%	unav.
9	Percentage of qualified primary school teachers	100%	100%	100%	100%	100%	100%	100%
10	Percentage of teachers certified to teach in primary schools in accordance with national standards	100%	100%	100%	100%	100%	100%	100%
11	Primary school pupil-teacher ratio	32.56	30.00	30.13	30.93	30.89	31.06	unav.

13 The chart shows the results by gender of the methodology developed by Porta and Laguna (2006) whereby the percentage point differences in school survival rate functions are charted for selected population groups.

14 There are no untrained teachers in Guatemala because at the upper secondary stage students can either work for the general secondary diploma or train as teachers, accountants, secretaries or industrial technicians. Unlike other countries in the region, therefore, Guatemala has a large supply of trained teachers.

12	Repetition rates per primary grade	15.16%	14.66%	14.86%	14.17%	14.00%	12.86%	unav.
	Grade 1	27.50%	26.98%	27.63%	27.28%	27.23%	24.02%	unav.
	Grade 2	14.42%	14.51%	14.82%	14.32%	14.57%	14.07%	unav.
	Grade 3	11.02%	10.7%	11.43%	10.73%	10.88%	10.65%	unav.
	Grade 4	7.72%	7.71%	8.06%	7.30%	7.25%	7.47%	unav.
	Grade 5	4.90%	4.79%	5.05%	4.67%	4.77%	4.75%	unav.
	Grade 6	2.04%	2.01%	1.82%	1.76%	1.71%	1.52%	unav.
13	Survival rate to grade 5	unav.	unav.	unav.	unav.	unav.	unav.	unav.
14	Coefficient of efficiency	unav.	unav.	unav.	unav.	unav.	unav.	unav.
15	% of children having reached at least grade 4 of primary schooling who master a set of basic learning skills at national level	n/a	n/a	n/a	n/a	n/a	n/a	n/a
16	Literacy rate of 15- to 24-year-olds**	14.53%	unav.	unav.	unav.	unav.	unav.	unav.
17	Illiteracy rate (15 years and over)**	25.64%	unav.	unav.	unav.	unav.	unav.	unav.
18	Literacy gender parity index**	49.89%	unav.	unav.	unav.	unav.	unav.	unav.

Notes: unav.: data not available; n/a: not applicable; p: preliminary data

* Excludes tertiary education

** ENCOVI 2000

Source: DIGEPE, MINEDUC

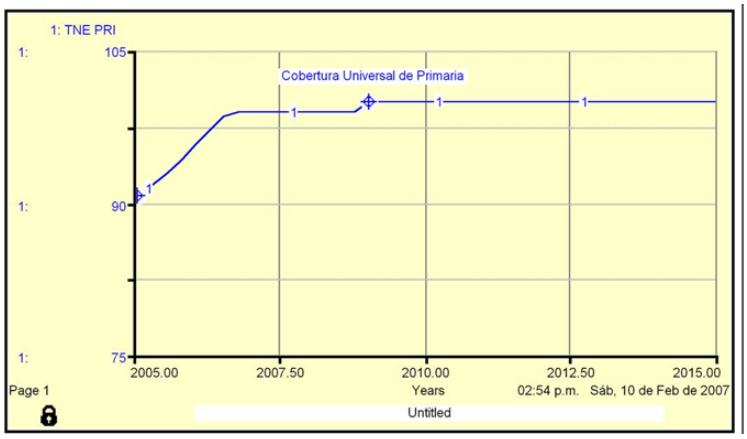
GOAL ATTAINMENT PROJECTIONS

Using the strategic education planning simulation model (MSPEE)[15] to project the primary NER, it can be estimated that if the country continues to perform as well as it has done, universal primary education coverage could be achieved by 2009. This would be sooner than provided for in the goals set out in the country's medium- and long-term education plans. It would thus seem that, looking ahead, the main problem for education in Guatemala is not so much coverage as quality.

It is important to note, however, that universal primary school coverage requires a greater effort to target coverage expansion strategies on the municipalities where there is the most ground to be made up. A start has already been made on this work during the current academic year by the coverage unit set up for the purpose.

15 The MSPEE uses the system dynamics (SD) approach, which allows each component of the education system to be analysed separately, giving a fuller picture of its inputs and outcomes and the relationships between system components. See Porta (2006) for more information on this model.

Chart. Projected attainment of universal primary enrolment



Source: Scenario created using MSPEE.

INSTITUTIONAL FRAMEWORK

The Guatemalan education system comprises five levels of education: initial, pre-primary, primary, secondary (including the "basic" or lower secondary and "diversified" or upper secondary stages) and tertiary. According to the national Constitution (art. 74), inhabitants have the right and obligation to receive initial, pre-primary, primary and lower secondary education. MINEDUC is responsible for supervising and providing services at all levels of education other than the tertiary level.

Guatemala now has a set of plans for meeting the education for all goals, the main ones being the Guatemala Education Plan 2004-2007, the National Education for All Plan 2004-2015, the Long-term National Education Plan 2004-2023 and the Vision for Education.[16] In general terms, the objectives of these documents can be summed up as: (a) universalizing education, (b) improving education quality at all levels, (c) building citizenship, (d) promoting gender equity, and (e) contributing to recognition of a multiethnic, pluricultural and multilingual nation.

MONITORING AND ACCOUNTABILITY SYSTEMS

As part of the efforts to monitor the different goals laid down in the various institutional plans, since 2005 MINEDUC, with technical support from USAID-Guatemala,[17] has engaged in a number of initiatives aimed at integration of statistical information, training in the use of specialized information analysis tools and the production of a series of publications to facilitate the dissemination and use of data. To this end, the national system of education indicators (SNIE) has been brought into use. This not only provides important information about the sector, but clearly explains the methodology used by the institution to process data and calculate the main education indicators.

Pursuant to its commitment to ensure public access to information held in the different information systems, MINEDUC is redesigning its website and it is expected that information on aspects such as coverage, quality, internal efficiency, school infrastructure, teachers, etc., will be accessible to

16 See annex A4 for information about the coverage and efficiency goals referred to in these documents.

17 USAID-Guatemala has been working through the Guatemala Social Sector Investment Policy Dialogue to provide MINEDUC with technical and financial assistance to improve the institution's analysis and planning capabilities. See Porta et al. (2007) for information on the scope of the project.

every one of the country's schools through a geographic information system (GIS) by the first quarter of 2007.[18]

In addition, MINEDUC is preparing a series of national, departmental, municipal and individual school reports intended to provide feedback to communities while stimulating debate on education policies and the implementation of local solutions.

Civil society, meanwhile, has carried out social audits to check whether MINEDUC is properly implementing certain support programmes such as school meals and the distribution of educational material. Also worth highlighting is the educational progress report brought out by PREAL in 2002,[19] which triggered a public debate on the main problems the education system is currently going through.

With respect to data quality, it is important to note that in 2006 MINEDUC began to conduct sampling studies to check the accuracy of the information reported by schools. The results of this research will be used to design a number of interventions aimed at improving data quality and reliability. Business intelligence technology has also been introduced[20] with the acquisition of Business Objects (BO) XI software, making it possible to integrate the different databases and reduce consultation and analysis times.

SWAp

In 2005, external cooperation provided about 9% of the total MINEDUC budget ($53 million), 63% of this being used for programmes carried out with domestic cooperation agencies and the remaining 37% with various international agencies and organizations. Most of the resources went into primary education and were targeted using information from the poverty map.

Most external resources go on infrastructure investments and the provision of educational materials to teachers and students. Broadly speaking, external resources are not being used for current spending in the school system, so there cannot be said to be over-reliance on external funding.

At the same time, MINEDUC and donors are taking the first steps towards implementation of a sector-wide approach (SWAp), with a view to improving the coordination and harmonization of international cooperation. The idea is that planning and monitoring procedures for the different programmes and projects undertaken with such support should be agreed with the international donors concerned.

Taking the experience built up in Nicaragua as a basis,[21] a start has already been made on preparing a common working plan and a national system of education indicators. The current administration has set itself the goal of initiating SWAp implementation before its term in office ends, so that the government that comes to power after this year's elections can start its administration with full implementation of this mechanism.

Having the inter-agency education network in place is greatly facilitating implementation of the SWAp. The inter-agency network meets regularly once a month and has undertaken a series of

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18 The system is currently operating on a pilot basis and can be accessed using the following link: www.mineduc.gob.gt/ie.

19 PREAL is expected to bring out an updated version of this study in the coming months.

20 For further information, see Loshin (2003), Terpeluk and Rejda (2003), Burke (2003) and Biere (2003), among others.

21 See Anderson (2005) and Porta et al. (2004) for further information about Nicaragua's experience with the SWAp.

harmonization efforts and activities in recent years, creating a favourable environment for the implementation of this new cooperation mechanism.

DECENTRALIZATION[22]

In Guatemala, the subject of educational decentralization has been part of education policy for a number of years. The priority given to it has largely depended on the political will of the government of the day, however.

In the 1996-2000 period, MINEDUC set up a modernization department with the goal of consolidating and improving the capacity of the central administration to regulate, formulate and evaluate education policy, while at the same time the restructuring plan included the transfer of certain administrative responsibilities to the departmental education services, to bring education closer to the community (CIEN, 2000).

Meanwhile, there have also been moves to decentralize education to the municipal level. This process has proved more difficult than the decentralization effort made at the departmental level, however. A good example is the decentralization and deconcentration pilot plan implemented in 2000 in the municipalities of Chiquimula and Sololá, which was unsuccessful for reasons unconnected with the process and because it was rejected by teaching staff.

Despite the setbacks, MINEDUC has persisted over time with its determination to strengthen the educational role of municipalities and has tried out different initiatives to involve them. The task has proved extremely difficult, however, because the municipalities suffer from a lack of trained staff and thus of management capabilities, which leaves them ill-equipped to run education services (CIEN, 2003).

This being so, it could be argued that the most successful educational decentralization process so far has been the one undertaken at the individual school level, involving subcontracting of first-level services to private-sector companies. The CIEN study "Por una política efectiva de descentralización" points out that school boards have made a positive impact on the administration of support services to State schools by targeting the most urgent needs. This has made it possible for school coverage and attendance to expand considerably throughout the country (CIEN, 2003).

One of the most important steps towards school-level decentralization has been the PRONADE programme. This began to operate on a pilot basis in the early 1990s, but the decision to expand it was taken in 1996 after the peace agreements. Evaluations of PRONADE by the World Bank (2005) show that parents' councils have more control over issues such as the school timetable and schedule, teacher supervision and teaching methods.

At present, measures relating to decentralization and/or deconcentration of the education system form part of the School Belongs to the Community (*La Escuela es de la Comunidad*) education policy, whose objective is to promote the participation of parents, teachers, community leaders and local authorities in the different educational management programmes and projects, especially decision-making at the departmental, municipal and local levels.

In 2005, community participation in educational management was expanded by means of school boards and education committees (COEDUCAS), which led to improvements in decision-making and quality control and in educational administration. In that same year, 9,847 school boards were organized, legalized and made operational in State schools in 21 of the country's departments. At

[22] See World Bank (2005) for a comparative analysis of World Bank-financed decentralization programmes. For a detailed account of the educational decentralization process in Guatemala, see MEDIR (2004).

the same time, 4,633 education committees (COEDUCAS) operated at the pre-primary and primary levels in 21 departments, the exception being the department of Guatemala.

POLICIES FOR PROMOTING EQUITY

A study on educational equity in Central America indicates that Guatemala is the country with most inequality when it comes to the distribution of schooling (Porta and Laguna, 2006). While the poorest 40% of the population accounts for 3.5% of total school attendance, the top 10% of the distribution accounts for 31%.

Like most Latin American countries, Guatemala has declared primary education compulsory and free of charge. Besides enrolment costs and school fees, however, there are other costs, both direct (uniforms, exercise books, textbooks, transport, etc.) and indirect (the opportunity cost to households of sending their children to school rather than out to work). These are barriers to entry for the poorest families in particular, as these have the most limited budgets and alternative uses for their money have a direct impact on the family's day-to-day survival. Using ENCOVI 2000, Porta and Laguna (2007) have estimated that the average amount of money spent by a Guatemalan family on primary education for its children out of its own resources each month represents 12% of the value of the household's basket of basic provisions.

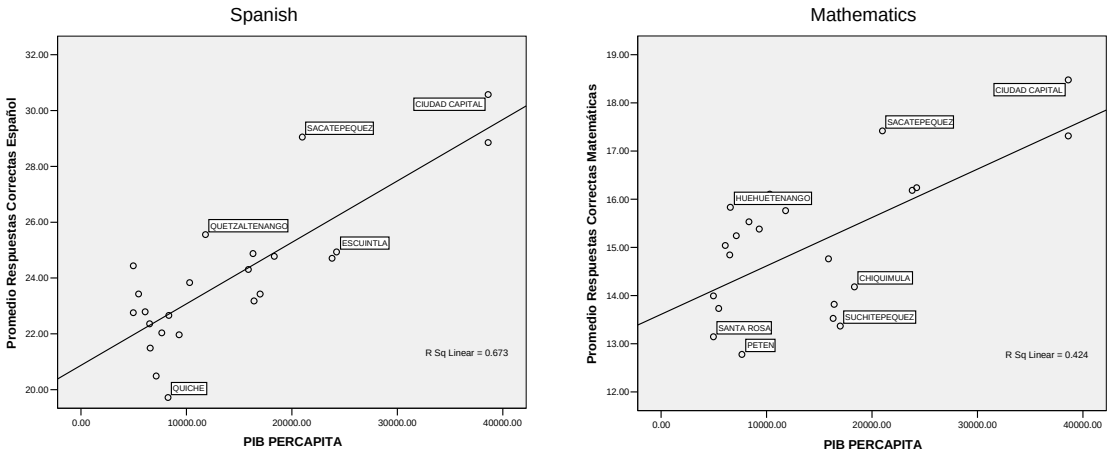
Given all this, it is not surprising that over half of all children aged 7 to 12 who do not attend school put this down to lack of financial resources (lack of money, the need to work in or outside the home). A further substantial percentage of this population (16%) explains non-enrolment by lack of interest, perhaps because too low a value is put on the importance of education, or because the curriculum is not sufficiently relevant to everyday life (Porta and Laguna, 2006).

Porta and Laguna (2007) carried out a detailed analysis of educational equity in Guatemala in terms of access, retention, quality and the distribution of educational investment. Their conclusion was that, for all the efforts made, the Guatemalan education system was instrumental in replicating and perpetuating the pattern of inequality which characterized the country and that State investment in education was not only inadequate, but sometimes provided the greatest benefits to those least in need.

As for school access and retention, they found significant inequalities working to the detriment of women, indigenous peoples and, especially, those living in rural areas and belonging to lower-income families. By way of example, Porta and Laguna (2007) judged that: "A Ladino boy living in an urban area who has no other occupation but study and whose parents have 12 years of schooling and do not belong to the poorest quintile has a 97% chance of being in school. A girl in a rural area who works and belongs to an ethnic group, and whose parents are illiterate and belong to the poorest 20% of the income distribution, has just a 22% chance of being in the school system."

Similarly, where education quality is concerned, there was found to be a strong correlation between the results of Spanish and mathematics tests taken in 2005 in the third year of lower secondary school and the socio-economic characteristics of the families concerned. The following chart shows how strongly per capita GDP correlates with the average number of correct answers in Spanish and mathematics at the departmental level.

Chart. Correlation between per capita GDP and the average number of correct answers in Spanish and mathematics, by department

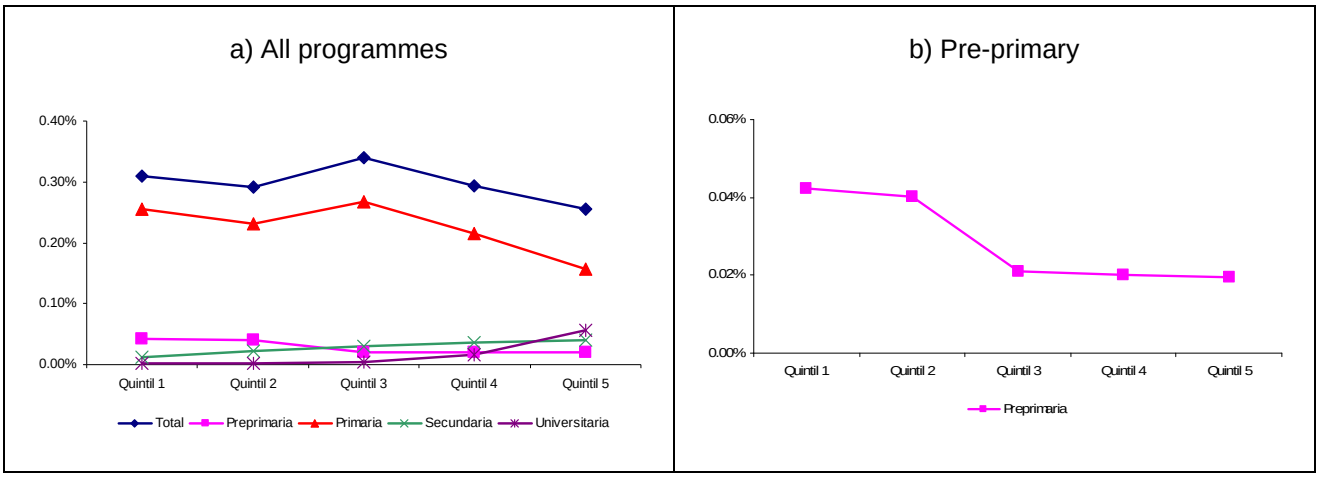


Source: Porta and Laguna (2007).

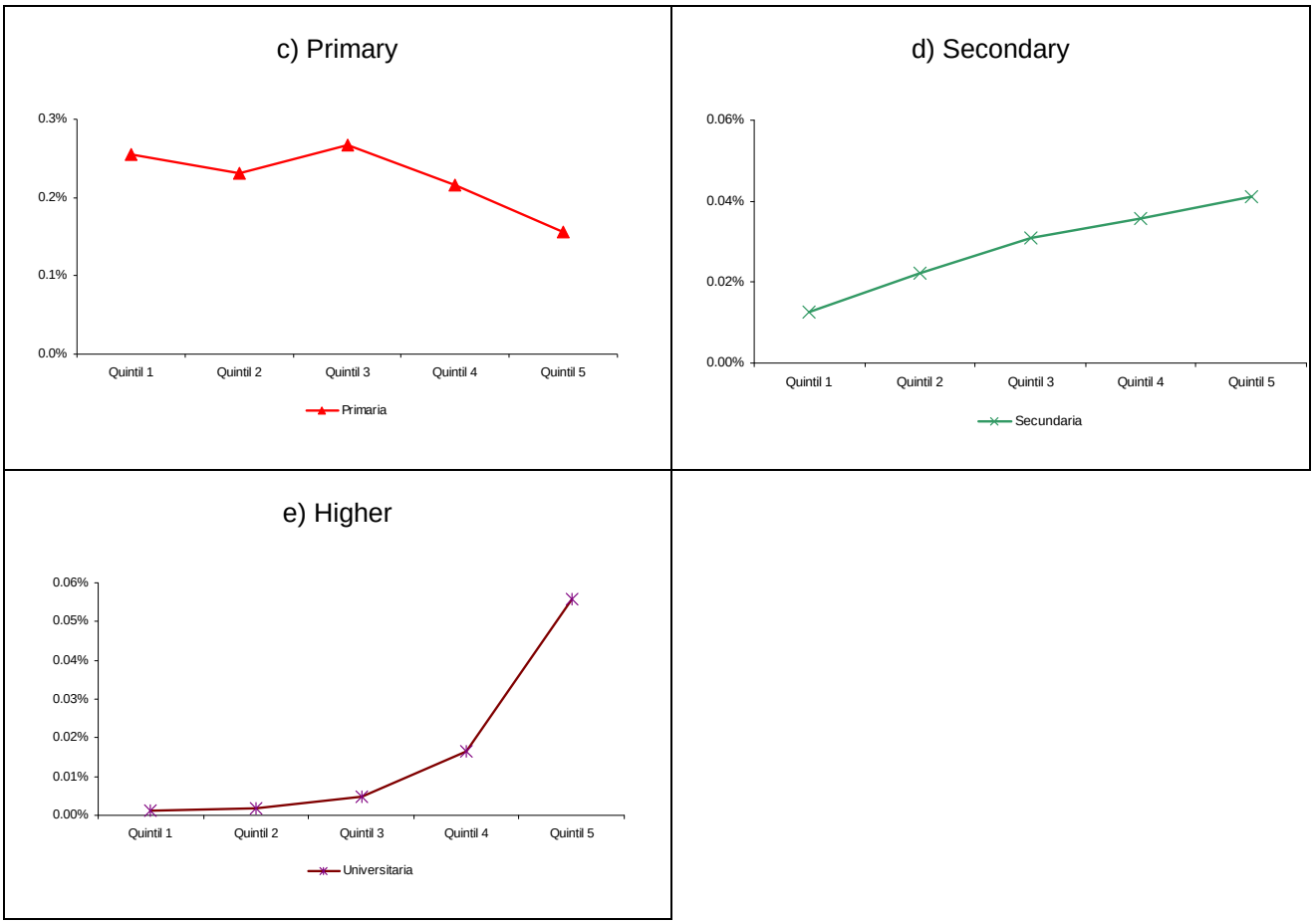
To get a clear picture of the relative impact that certain variables have on academic performance, Porta and Laguna (2007) suggest the following example: "It is estimated that a Ladino boy from an urban area who attends a private school where there is no corporal punishment, who ate before the test and whose parents are literate would get 30[23] correct answers in Spanish. A non-Ladino girl from a rural area who attends a State school where she is subject to corporal punishment, did not eat before the test and has illiterate parents would get only 12 questions right (60% less than the first case)."

Regarding investment in education, attention is drawn to the need for the country to improve the targeting of public investment, as this is sometimes clearly regressive in character (benefiting the higher-income socio-economic strata most).

Chart. Public investment in education by quintiles, as a percentage of GDP



23 Out of a total of 50. For further information on the test, see Ministerio de Educación – MINEDUC (2006a, 2006b and 2006c). For examples of the link between school performance and the factors associated with it, see Mizala, Romaguera and Reinaga (undated), Chávez (2002), Glewwe (1996), Hanushek (1995) and Arcia, Porta and Laguna (2004)



Source: Porta and Laguna (2007).

The above charts show that investment is progressive only at the pre-primary level, while at the lower (basic) and upper secondary (diversified) and higher levels there is a clearly regressive tendency.

In the case of primary education, investment is considered regressive when the first three income quintiles are compared and progressive when the last two are included. A recent report from ECLAC (2005b) bears this out and notes that of the 11 countries compared, it is only in Guatemala that education resources are not distributed in a way that most favours the neediest groups in the population.

In the MINEDUC report on ongoing activities for 2005, the President of the Republic, Oscar Berger Perdomo, wrote that the Guatemalan education system had to provide the greatest possible opportunities to make Guatemala a more prosperous, democratic society with equal opportunities for all. One of the main efforts made by MINEDUC on behalf of children with this end in view are the so-called **support programmes**, comprising: (a) the grants programme, which in 2005 benefited 167,655 children and young people in primary and secondary education; (b) school supplies; (c) school furniture; (d) the school meals programme, which benefited 2,066,677 students in 2005 (80% in rural areas). Other important programmes are the school transport subsidy and the programme of financing for non-profit education institutions.[24]

24 See MINEDUC (2006d) for further details.

The grants programme includes the following:

- Grants for girls. In 2005, this benefited 49,671 female pupils from first to fourth grade of primary school in rural areas; the grant was $393 a year per pupil and was paid to the parents, who undertook to monitor their children's attendance and diligence.

- Grants for peace. In 2005, these were awarded to 2,400 schools with school boards and benefited some 94,000 pupils, girls and boys, with an average financial allocation of $25 each. The funds are used to improve conditions for boys and girls by providing them with clothing and footwear, food and school equipment, and to increase the attention children receive from teachers by means of vacation courses, tutoring and training in active methodology.

- Grants administered by the ILO to eradicate child labour. These are provided to pupils at 45 schools, giving a total of 8,500 beneficiary children.

- Study grants. These are payments of $120 a year for young people studying at the lower (basic) and upper (diversified) secondary levels. They have been provided to 13,494 adolescents.

- Boarding grants. In 2005, 1,784 young people received an annual payment of $475.

- Scholarships for excellence. These are paid to students who have shown a high level of academic performance but whose socio-economic situation restricts their opportunities for continuing their education. The programme began in 2004 and is designed to increase upper secondary coverage, quality and equity. In addition, students performing well in the final year assessment tests in 2004 were given scholarships to study at private upper secondary schools. These cover fees, maintenance, uniforms, supplies, transport and insurance. In 2005, 15,454 young people were in receipt of an annual payment of $1,970 to take various technical courses at private schools.

- The "Becatón". This is an initiative to raise funds which will then be invested in personalized grants for the country's poorest children. The idea is for the State, civil society and private firms to join forces to break the cycle of poverty and create a path towards inclusive development. The "Becatón" (the word is a combination of "grant" and "Telethon") is meant to raise funds to be invested in grants for over 140,000 children aged 7 to 12 who cannot enrol in school.

Despite these efforts, there are still wide gender gaps in primary and secondary education access in Guatemala. This means that, as well as financial incentives, there is a need to design advertising campaigns to raise social awareness about the importance of going to school and completing at least the primary education stage.

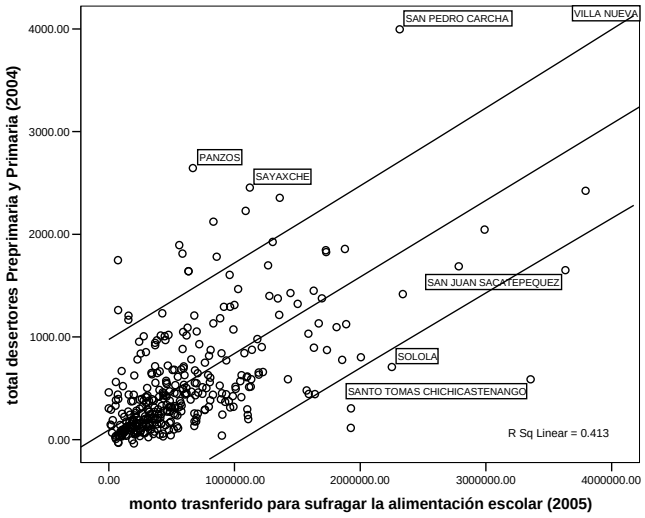
A recent evaluation by USAID-Guatemala (2005a) of the girls' grants programme in Quiché highlights the need for a rigorous examination of the cost-effectiveness of grants, since other types of measures can produce similar or better results at a lower cost. It also draws attention to the need to improve the programme's targeting criteria, since the findings of the research suggest that many girls in receipt of grants would actually have continued their primary studies without them.

Analysing the degree of targeting in other support programmes, such as the school materials and school meals programmes, Porta and Laguna (2007) find that:

- the distribution of school materials and textbooks is progressive, i.e., the greatest benefits go to lower-income households, although there is still room for improvement given that over 7% of school materials and textbooks distributed by the government go to higher-income households.

- the school meals and grants programmes are strongly correlated with the municipal school drop-out rate, indicating that these resources could well be allocated in a manner consistent with the objective of reducing this rate.

Chart. Correlation between the total number of students dropping out of primary school (2004) and the total school meal subsidy (2005), by municipality.



Source: Porta and Laguna (2007).

Despite these efforts, there are still disparities in school access and retention by gender, area of residence and socio-economic stratum, and continuing efforts are therefore needed to close these gaps given that, as different studies show, access to higher levels of education significantly increases people's chances of escaping from poverty.[25]

QUALITY

As UNESCO (2002) points out, quality is expressed in a variety of ways and is associated with a wide range of explanatory factors. Accordingly, quality can be said to be a multidimensional phenomenon involving the relationship between material and human resources, what happens at school and in the classroom, curricula and learning expectations as compared with actual learning experience, among other aspects.[26]

According to MINEDUC (2006d): "A high-quality education is one that allows students to learn about the world and produces people who are inspired by an ideal and are capable of building a better Guatemala. For this objective to be attained, students have to receive the resources they need for effective learning: not just textbooks and learning aids, but better trained teachers who have

25 See World Bank (2003).

26 For a fuller treatment, see Fernández, Oliveira and Almeida (2005).

mastered innovative education methodologies and approaches, and the ability to aspire to a better future for the country."

With the support of USAID-Guatemala and the Universidad del Valle, MINEDUC has managed to consolidate a national evaluation system which since 1998 has applied a set of tests with scores for Spanish and mathematics.[27] It is also important to note that Guatemala has participated in the international Second Regional Comparative and Explanatory Study (SERCE) test organized by the Latin American Laboratory for Assessment of the Quality of Education (LLECE) and UNESCO, which will provide information about the situation in the Guatemalan education system and yield lessons from the other countries participating in this evaluation.

In 2005, MINEDUC conducted language and mathematics tests for the sixth grade of primary, the third year of lower secondary and the final year of upper secondary, and found that "most students have difficulty mastering the content they are taught in the areas of language and mathematics. In the case of the sixth grade, students have greater difficulties with language than with mathematics, whereas by the third year of lower secondary and the final year of upper secondary the situation is reversed" (Porta et al., 2006).

Table. Percentage of students failing to reach the required level of proficiency or achievement (2005)

Grade/Area of evaluation	Sixth primary	Third lower secondary	Final upper secondary[28]
Language	52.1	47.2	51.8
Mathematics	44.7	58.3	55.3

Source: MINEDUC.

Using a correlation analysis, Porta and Laguna (2007) find that "there is a positive linear correlation between per capita GDP and the average number of correct answers", i.e., that the mere fact of having higher incomes could have a positive effect on children's educational attainments. Closer analysis by these authors shows that the variables with the greatest negative impact on academic performance are: illiterate parents, ethnic group and area of residence. For instance, the effect on the Spanish results of having illiterate parents accounts for more than 14% of the test total. Considering the high levels of violence in the country,[29] furthermore, it is important to note that students' performance also suffers when they are subjected to frequent physical ill-treatment at school.[30]

SCHOOL INFRASTRUCTURE

When the amount invested by the State per student is corrected for purchasing power parity (PPP),[31] Guatemala emerges as one of the countries with the lowest levels of investment per primary pupil in the region (PREAL, 2006). It is not surprising, then, that only 15% of schools in the State sector have the facilities required for teaching and learning (Porta et al., 2006), namely electricity, drinking water, classrooms in good condition, an adequate number of toilets (less than 35 students per toilet) and enough space (at least 2.5 square metres per student).

27 See MINEDUC (2006a, 2006b and 2006c) for further information.

28 Students completing the second grade of upper secondary.

29 The homicide index in Guatemala City is 101.5 per 100,000 inhabitants. Comparison with the Latin American average of 22.9 homicides per 100,000 inhabitants shows how alarming the problem is. See IDB (2006b) for further information.

30 See Espinoza (2006) for a more detailed look at the impact of violence on academic performance.

31 Purchasing power parity (PPP) is an economic term introduced in the early 1990s by the International Monetary Fund to allow realistic comparisons to be made between living standards in different countries, with per capita gross domestic product (GDP) being adjusted for the cost of living in each country.

In its report for general release on the evaluation of reading and mathematics performance among students in the first and third grades of State primary schools in 2004, MINEDUC (2005b) points to a positive correlation between school infrastructure conditions and test results. According to the report, there is a positive and statistically significant correlation between the presence of a running water and electricity supply and the results achieved in the first grade, while results in the third grade are influenced by the presence of running water, electricity and toilets.

We believe, however, that these findings should not be overemphasized but should rather be approached with caution when it is a matter of determining education policy, since they were not corrected for socio-economic factors that might provide a better explanation for this correlation. It would be logical to assume that students from higher-income families do not attend schools with poor infrastructure. This being so, the correlation would have more to do with self-exclusion than with the impact that running water and electricity might have on the teaching and learning process.

The school infrastructure situation was severely affected not long ago by the passage of tropical storm Stan (2005), which damaged a total of 712 State school buildings (2% of all establishments) in the countryside. The investment required to rebuild school infrastructure was some $7.4 million and was targeted at the 212 establishments worst hit by the storm.

The vulnerability of school infrastructure to the natural phenomena which afflict the region's countries with some frequency means that school rebuilding and restoration projects are needed to prepare premises for possible natural disasters.

FLEXIBILITY AND INNOVATION

Since Dakar, MINEDUC has tried to increase school coverage by doing more to introduce flexible forms of education that better meet students' needs and can help bring education to places that are hard to reach.

At the pre-primary level, it is introducing Community Preschool Education Readiness Centres (CENACEP), designed to prepare children aged 6 and over from the country's different ethnic groups who will be entering the first year of primary school and have not had any access to the pre-primary level or any other contact with school. They are prepared for school in 35 days; the programme now has a nationwide presence and teaching guides and support material have been prepared to aid the work of the volunteers implementing the programme. According to a UNICEF (1996) evaluation, CENACEP pupils enter the first year with the same level of readiness as children who have a pre-primary background, which suggests to us that this teaching method is cost-effective and that consideration ought to be given to expanding the programme, given how low pre-primary coverage is.

To provide greater coverage in remote areas, MINEDUC is pursuing a project to strengthen 5,476 unitary or multigrade schools[32] which will benefit 326,389 primary-level students and has four components: preparation of baseline, evaluation of performance in reading, writing and mathematics, provision of educational materials, and training in active methodology and follow-up of educational activities (MINEDUC, 2006d).

Almost three decades ago, MINEDUC implemented the Family Education Centres for Development (NUFED) programme to provide young people coming out of primary school in rural areas with the education that best matched their needs. This programme currently has coverage in 21 departments and serves more than 9,000 students. Upon completing the syllabus, which operates on a self-

[32] These schools have one to four teachers covering more than one grade, i.e., they teach six primary grades between them.

management basis, students receive certification for the equivalent of the three years of lower secondary education. The educational process is combined with an occupational technical training component, in accordance with the study curriculum authorized by MINEDUC.

Another flexible approach successfully implemented by MINEDUC has been Telesecundaria, a distance education programme whose aim is to provide a secondary education to young people living in communities where this is unavailable or in places where educational coverage is inadequate. Telesecundaria was created by ministerial agreement No. 39-98 of 3 March 1998 and implemented as an experimental programme for 5 years. The model was consolidated in 2003 with the creation of the National Institute of Telesecundaria Basic Education, ministerial agreement 675 and the publication of its implementing regulations (ministerial agreement No. 1129). As the following table illustrates, the coverage of this programme more than doubled between 2000 and 2005.

Table. Coverage of the Telesecundaria programme

Year	2000	2001	2002	2003	2004	2005
Students	14,853	20,411	23,004	25,724	30,643	32,191
Centres	407	384	403	429	452	unavailable

Source: MINEDUC.

In 2005, MINEDUC trained a total of 1,030 teachers nationwide in the Telesecundaria education model (MINEDUC, 2006d). There have also been efforts to increase the use of the new technologies as a teacher and student resource in the teaching and learning process. In collaboration with the private sector, MINEDUC is now providing teachers with credit so that they can buy subsidized computers loaded with education software that they can use to prepare their classes better and to carry out research that will enhance curriculum content.

It is also important to note that next year, with support from the World Bank, MINEDUC will begin to implement a programme of secondary education expansion in which different flexible education formats will be tried out and evaluated.

CURRICULUM REFORM

In Guatemala, MINEDUC is pursuing educational reform as a matter of policy. The objective is to strengthen the national education system so that it can meet national and international education quality standards. The primary goals of this policy are to raise education quality and reduce student repetition and drop-out rates, and to implement the new pupil-centred curriculum based on capabilities, skills, capacities and knowledge by grade. The new curriculum encompasses a transformation of learning methods and an emphasis on the relevance of education, with students planning their own schooling within the national curriculum, and enhanced capabilities in reading and writing, mathematics, and physical and artistic expression.

Its main thrust was the implementation of the new pupil-centred primary school curriculum with its focus on capacities, skills, capabilities and knowledge by grade. The chief emphasis was on:

- transforming learning methods;
- educational relevance;
- enhancing capabilities in reading, writing and mathematics;
- enhancing the components of physical and artistic expression;

- approving textbooks that matched the new orientation of the curriculum.

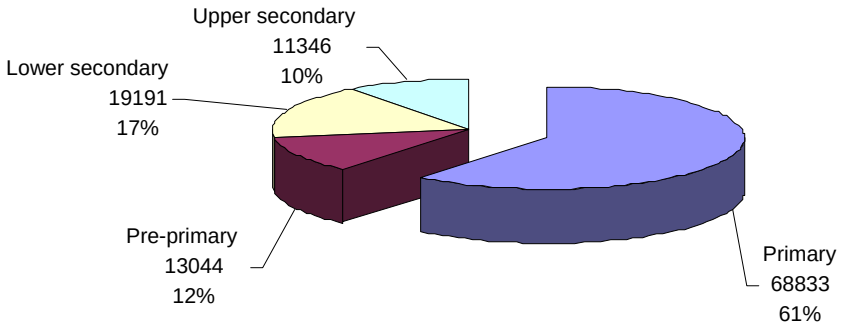
In the last two years, this policy has been reinforced by the “Save First Grade” programme, which is improving education quality through teacher training and awareness-raising measures and whose primary goal is to increase the promotion rate. No impact evaluation has yet been carried out for this programme, however.

In 2005, the new national basic curriculum was applied. This is an important component of the revised national education system curriculum, the aim of which is to improve education quality in pre-primary and primary schools and create the conditions for all sections of society to become involved in improving education and learning processes, as well as adapting education to the country’s real needs on the basis of grade-contextualized capabilities, skills and knowledge. The new curriculum was brought in at the pre-primary level.

TEACHERS

According to official MINEDUC statistics, in 2005 the teaching body consisted of 112,414 teachers, 61% of them working at the primary level. To keep step with the implementation of the new curriculum, a total of 52,350 teachers have been trained for the pre-primary level and the first and second grades of the primary level, representing just over 40% of all teachers.

Chart. Teachers by education level (Guatemala 2005)



Source: MINEDUC (2006d)

The pupil-teacher ratio at all education levels was 20.3 in 2005, which is considered acceptable by international standards. However, this average masks persistent differences associated with the ownership of the school concerned, so that whereas State school teachers have an average of 33 pupils, those at private schools have 21, allowing the latter to give their pupils more personalized attention and thus contribute to better results in education quality indicators.

In response to the need to implement cost-effective measures, Porta et al. (2006) have advised MINEDUC to assign a higher proportion of teachers with 5 years and more of experience to the first grade, since international experts consider that placing the best teachers in the first grade significantly enhances school performance (Schiefelbein et al., 2000).

STRATEGIES TO INCREASE AND DEVELOP THE SUPPLY OF TEACHERS

Teachers' salaries increased significantly from 2000 to 2005, with the annual salary at pay grade A rising by 4,900 quetzals (22%). Every time teachers move up a grade in the pay scale they receive an additional 25% over the basic salary. In terms of GDP per capita, teachers' annual salaries range, depending on their pay grade, from 1.4 times this at the lowest grade to 3.2 at the highest. On average, therefore, teachers earn 1.8 times Guatemala's per capita GDP a year.[33]

A World Bank (2005) study points out, however, that the high average pay of Guatemalan teachers is not correlated with improved teaching performance (teachers earn higher average hourly salaries than other professionals with a similar educational background; as noted earlier, Guatemalan teachers have at least a full secondary education). The study argues that the lack of connection between teacher pay and performance in Guatemala is not surprising, since the teacher pay structure does not reward special effort or better teaching. At present, teachers rise up the scale and thus receive higher incomes simply with the passage of time. Teachers are moved up a grade every four years, irrespective of classroom results or any efforts they may have made to upgrade their skills.

This method of classifying teachers provides a perverse incentive to early retirement for teachers who reach the highest pay grade. Because they have no prospect of earning more in future, it is in their interest to retire on the highest possible salary and then carry on working on temporary contracts or move over to the private sector.

This being so, it would be desirable for the country to capitalize more on its information system and its national evaluation system and move towards the establishment of teaching performance incentives, particularly given that recent research by USAID-Guatemala (2005c) indicates that teachers' average capabilities are low for Spanish reading and very low for mathematics.

At the same time, extra pay and a training programme should be established for teachers acting as school heads. At present they are not trained for this role, and because it is not remunerated many regard it as a punishment to be assigned to it, as they usually continue to take classes and have to work harder to run the school without receiving any additional reward.

CONCLUSIONS

The main conclusions and recommendations suggested by the analysis conducted in this document are:

1. While the progress made in increasing pre-school education coverage is regarded as positive, it is suggested that incentives be designed to encourage children to enter and remain in this stage of the education system, especially in rural areas.

2. It is recommended that greater efforts be made to meet the needs of Guatemalan girls at the pre-school level as a key medium-term strategy for reversing the significant gender inequality seen at the higher levels.

3. In 2005, Guatemala is estimated to have spent about 489 million quetzals, or 11.4% of total public education spending, on dealing with students who repeated years. Consequently, it is recommended that consideration be given to implementing special programmes to improve students' learning levels and reduce repetition rates.

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[33] In 2005, Guatemala's per capita GDP was 19,245.28 quetzals.

4. It is important to give continuity to the efforts being made by CONALFA by trying to target literacy programmes at the poorest households, rural people, women and members of the country's indigenous groups.

5. Equity of access should not be viewed solely as a gender issue, but should encompass other variables such as area of residence, ethnic origin and socio-economic stratum, among others, and should be a cross-cutting consideration in the different methods and programmes used in the Guatemalan education system.

6. The efforts made to measure education quality in the country are to be applauded, but the findings need to translate into more concrete measures that result in higher levels of learning among Guatemalan students in the medium term.

7. The system of teacher pay should be reviewed with the aim of creating incentives for better performance. We also believe there is a need to provide training for teachers who perform the duties of a school head.

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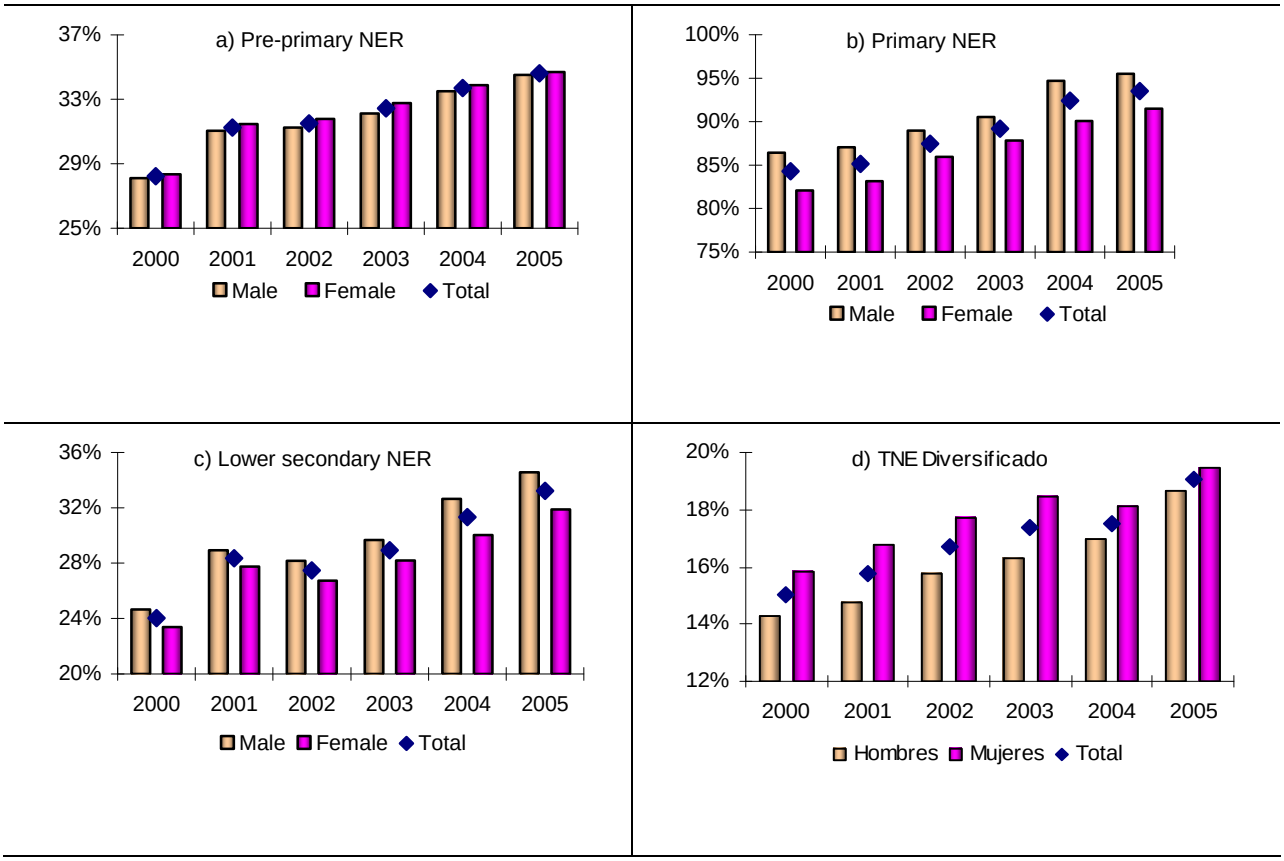
STATISTICAL ANNEX

A1. Net enrolment ratios by sex and education level in Guatemala



Source: Porta and Laguna (2006).

A2. Increase in primary NER, by department (2000-2005)

Department	2000	2005	Increase
QUICHE	70.8	87.8	16.9
SOLOLA	77.9	93.8	15.9
TOTONICAPAN	79.2	93.2	13.9
HUEHUETENANGO	73.2	87.1	13.9
EL PROGRESO	89.2	100.2	11.0
QUETZALTENANGO	94.7	105.5	10.8
BAJA VERAPAZ	81.2	91.5	10.2
CHIMALTENANGO	81.2	90.9	9.7
JUTIAPA	95.8	105.4	9.6
RETALHULEU	92.3	101.9	9.5
SAN MARCOS	88.4	97.8	9.4
SANTA ROSA	94.2	103.2	9.0
SUCHITEPEQUEZ	85.4	93.0	7.7
ALTA VERAPAZ	68.1	75.7	7.6
JALAPA	86.2	93.9	7.6
SACATEPEQUEZ	84.1	90.0	5.9
ESCUINTLA	89.6	95.3	5.7
CHIQUIMULA	85.2	90.3	5.1
IZABAL	87.5	92.5	5.0
PETEN	89.9	93.7	3.8
ZACAPA	88.5	91.2	2.7
GUATEMALA	95.6	97.9	2.3
National	**84.3**	**93.5**	**9.2**

Source: MINEDUC.

A3. Pre-primary NER, by department and sex (2005)

Department	Total	Male	Female
Alta Verapaz	23.4	23.7	23.0
Huehuetenango	38.1	38.2	38.1
Quiché	28.4	28.3	28.6
Sacatepéquez	33.9	33.0	34.8
Chiquimula	39.1	37.9	40.3
Chimaltenango	37.8	37.7	37.9
Zacapa	47.2	46.7	47.7
Baja Verapaz	24.0	24.6	23.5
Izabal	34.2	33.7	34.7
Suchitepéquez	28.5	28.7	28.4
Totonicapán	30.6	29.8	31.5
Petén	38.3	37.5	39.1
Sololá	40.1	39.9	40.4
Jalapa	27.7	28.1	27.4
Escuintla	41.7	41.6	41.8
San Marcos	36.6	36.3	36.9
Guatemala	30.2	30.7	29.7
El Progreso	32.5	31.8	33.3
Retalhuleu	37.9	38.0	37.8
Santa Rosa	36.6	36.7	36.4
Jutiapa	29.0	29.0	28.9
Quetzaltenango	44.0	43.7	44.4
National	**34.6**	**34.5**	**34.7**

A4. Completion rates by education level

Year/Level	Primary	Lower secondary	Upper secondary
	6th	3rd	5th
2001	57.2	20.4	12.4
2002	59.9	22.8	11.1
2003	64.1	25.5	13.8
2004	65.5	27.2	15.6
2005	69.9	32.0	17.1

Source: Porta et al. (2006).

A5. Coverage and internal efficiency targets set in different MINEDUC documents

Indicator	Breakdown	Rates observed 2003	2007		2008	2011	2013	2015		2018	2023	2025
			GEP 04-07	EFA	NEP 04-23	EFA	NEP 04-23	VE	EFA	NEP 04-23	NEP 04-23	VE
Net enrolment ratio	Pre-primary	44.2%	75%	56.38%	40%	70.46%	60%	75%	89.53%	75%	89%	100%
	Primary	89.2%	100%	90.96%	92%	96.91%	100%	99%	100%	100%	100%	100%
	Lower secondary		40%	40.87%	30%	52.68%	36%	75%	68.91%	45%	55%	100%
	Upper secondary	28.95%	20%	19.39%	22%	21.11%	27%	20%	25.73%	35%	41%	20%
Drop-out rate	Pre-primary	6.57%		3%		2%			1%			
	Primary	5.03%		4%	12%	2%	8%		1.50%	6%	4%	
	Lower secondary			3%	4%	1.50%	2%		1%	1.70%	1.50%	
	Upper secondary	7.92%		4%	3%	2.50%	1.50%		1.50%	1.20%	1%	
Repetition rate	Primary	14.17%		8.0%	12%	4%	8%		2%	6%	4%	
	Lower secondary			2.50%	4%	1.80%	2%		1%	1.70%	1.50%	
	Upper secondary	2.96%		1.20%	3%	1%	1.50%		0.50%	1.20%	1%	
Literacy rate				86.60%	80%	89%	88%		98.60%	90%	93%	

Note: The 2003 rates were taken from the report “El desarrollo de la educación en el siglo XXI”, the primary source was the 2003 statistical yearbook, and the data for lower and upper secondary are aggregated into a single figure for secondary education.

GEP 04-07: Guatemala Education Plan 2004-2007

EFA: National Education for All Plan 2004-2015

NEP 04-23: Long-term National Education Plan 2004-2023

VE: Vision for Education