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The Education Challenge in Mexico

**DELIVERING GOOD QUALITY EDUCATION TO
ALL**

Stéphanie Guichard

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GOOD QUALITY EDUCATION TO ALL**

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By Stéphanie Guichard

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ABSTRACT

The education challenge in Mexico: delivering good quality education to all

The growth of potential GDP in Mexico is not fast enough to narrow the income gap with other OECD countries at a sufficient pace. The persistent weakness in human capital development contributes to this situation. In particular, Mexicans spend comparatively few years in formal education, and the quality of the education they receive is lower than in other OECD countries. This paper discusses the performance of education services up to the upper secondary level. It assesses both the efficiency (outcome for money invested) and the equity of the system and shows that the education system has to be improved further to narrow the human capital gap with other OECD countries at a faster pace and to better prepare children for life and work in a modern economy. The key problem is not a lack of resources but rather inefficiencies and misallocation of spending together with weak incentives for education professionals to perform well. The paper makes specific recommendations to improve the system. The ongoing efforts undertaken by the authorities go in the right direction but are not sufficient.

This Paper relates to the 2005 OECD Economic Survey of Mexico (www.oecd.org/eco/surveys/mexico).

JEL classification: I20, I21, I22, I28, J2

Keywords: Education, Human capital, Mexico.

RÉSUMÉ

Le challenge de l'éducation au Mexique: donner une éducation de qualité à tous.

La croissance du PIB potentiel au Mexique n'est pas assez soutenue pour permettre une réduction de l'écart de revenu avec les autres pays de l'OCDE à un rythme suffisant. La faiblesse persistante du Mexique en termes de développement du capital humain contribue à cette situation. En particulier, les Mexicains passent relativement peu d'années sur les bancs de l'école, et la qualité de l'enseignement qu'ils reçoivent est moins bonne que dans les autres pays de l'OCDE. Ce papier examine la performance des services d'enseignement au Mexique jusqu'au deuxième cycle du secondaire. Il évalue tant l'efficacité (les résultats obtenus par rapport aux sommes investies) que l'équité du système et montre que ce dernier doit être encore amélioré pour que le Mexique puisse combler plus vite son retard de capital humain par rapport aux autres pays de l'OCDE et mieux préparer ses enfants à vivre et travailler dans une économie moderne. Le cœur du problème n'est pas tant le manque de ressources, mais plutôt l'inefficacité et la mauvaise allocation des dépenses, ainsi que le manque d'incitations motivant les professionnels de l'éducation. Ce chapitre contient des recommandations spécifiques pour améliorer le système. Les efforts actuels des pouvoirs publics vont dans la bonne direction mais sont insuffisants.

Ce Document de travail se rapporte à l'Étude économique de l'OCDE du Mexique, 2005 (www.oecd.org/eco/etudes/mexique).

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THE EDUCATION CHALLENGE IN MEXICO: DELIVERING GOOD QUALITY EDUCATION TO ALL

*Stéphanie Guichard*¹

Introduction: the human capital challenge

1. Since the 1995 financial crisis, Mexico has made substantial progress in terms of macroeconomic stabilisation, and important reforms have been undertaken to further open the economy, improve the functioning of product markets and strengthen the financial sector. However, the improvement in economic performance has remained insufficient to narrow noticeably the income gap with more advanced OECD countries. With potential output growth currently estimated at around 4%, it would take several generations for Mexico to catch up with the average OECD GDP per capita. The overriding challenge for policymakers in Mexico is to raise potential growth, and thereby the convergence of living standards towards those in more advanced OECD countries. The income gap in Mexico is to a large extent explained by low labour productivity, and the persistence of the gap by low productivity growth gains over the past decades.

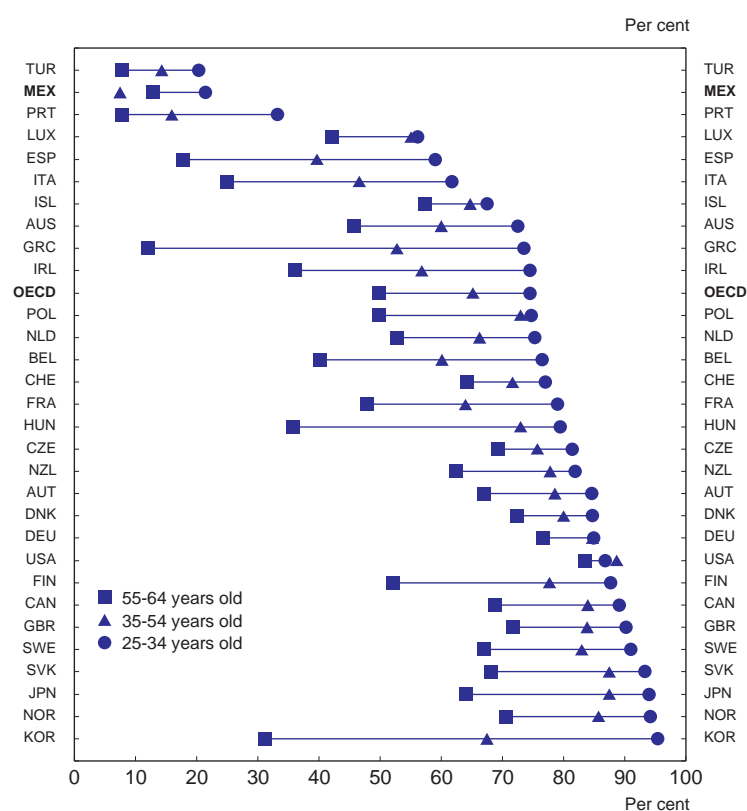
2. One important factor behind low productivity is the low level of human capital. Human capital in Mexico, as measured by average years of schooling amongst the working-age population, is the lowest in the OECD and there has been only limited progress over recent decades (in contrast with Korea or even Spain and Greece) (Figure 1). Moreover, while primary education has become nearly universal, Mexican enrolment rates are still lagging at lower and upper secondary education levels (Figure 2).² About 20% of the population aged 12-15 has already left school and a quarter of those still at school have already repeated at least one class.

3. The quality of education, defined as the impact of the education system on the academic, economic and social capabilities of students, is also low. Most indicators, including repetition rates, drop-out rates and students' achievements tested at both national and international levels show that the average quality of education services is poor and although repetition and drop-out rates have decreased in recent years there has not been any improvement in international literacy surveys such as PISA. This could be just a short-term effect: Mexico's success in lowering the less than 15-years old drop-out rate might have

1. Stéphanie Guichard is an economist in the Country Studies Branch of the Economics Department of the OECD. This paper was originally produced for the *OECD Economic Survey of Mexico* published in September 2005 under the authority of the Economic and Development Review Committee of the OECD. The author is indebted to Jean-Philippe Cotis, Andrew Dean, Val Koromzay, Bénédicte Larre, Nicholas Vanston, Andreas Schleicher and Carla Belmont, for valuable comments on earlier drafts or for sharing their knowledge. Special thanks go to Sylvie Toly for excellent research assistance. The paper has also benefited from discussions with numerous Mexican experts on education including from the Ministry of Education of the Mexican Federation and the States of Chiapas and Sonora.

2. The situation is comparable in other Latin American countries (cf. Wolff and Castro, 2000).

Figure 1. Educational attainment of the working-age population
Population with at least an upper-secondary qualification, 2002¹

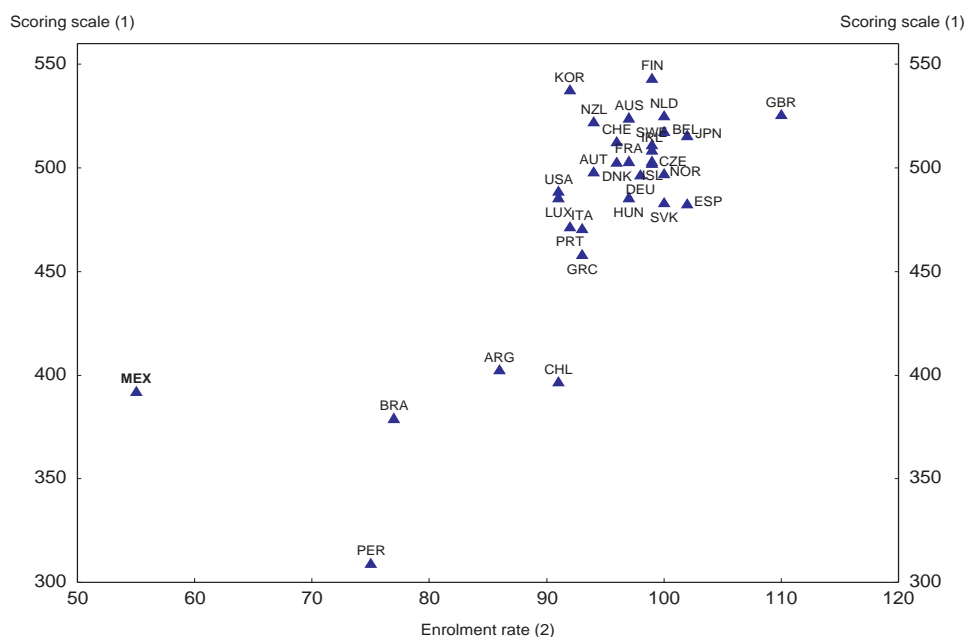


1. Per cent of each age group. 1999 for Hungary.
Source: OECD, Labour Market Statistics Database.

lowered average performance. However, other Latin American countries, such as Argentina, Brazil and Chile, achieved comparable results at PISA with a much larger enrolment (*i.e.* an even more diverse student population). And, examples in other OECD countries, such as Korea and Poland, show that it is possible to increase both quality and quantity. Overall, the education system does not yet provide Mexicans with the skills they will need to face international competition.³ Raising the quantity of education has been a policy priority for several decades, but only in the early 1990s did quality move to the top of the agenda. However, these reforms have been insufficient and their implementation has proved difficult. Quality reforms are indeed usually more complicated to design than programmes to increase coverage, and they are usually politically harder to implement.⁴

3. Beside PISA, national tests also show large inadequacies. For instance, in 6th grade close to 60% of students are below the acceptable level for reading (see Quesada García *et al.* (2004)). According to the Ministry of Education (see *Secretaría de Educación Pública* (2004)) at the end of upper secondary 38% of the students were below the national standards in reading and 90% in mathematical reasoning.

4. As argued by Corrales (1999) resources invested in expanding the coverage of the education system produce visible gains for most actors and losses for very few, if any. On the other hand, quality reforms, aiming at improving efficiency and the academic performance of students, imply increased teacher productivity, penalising teachers' inadequate performance and giving greater autonomy for schools; hence

Figure 2. Student performance and enrolment rate at age 15

1. Average performance across the combined reading, mathematical and scientific literacy scales in 2003. Except for the United Kingdom, Argentina, Chile and Peru for which 2000 results are shown.

2. Net enrolment rate at age 15. Public and private institutions

Source: OECD, *Literacy Skills for the World of Tomorrow: further results from Pisa 2003* (2004); OECD, *Education at a Glance* (2004).

4. Reducing the human capital gap of Mexico in all its dimensions is crucial to reap the full benefits of Mexico's young and growing labour force at a time when competition from less-developed countries is putting pressure on Mexico to move towards more value-added and competitive products and services.⁵ Education and training are not only key for growth, they are also the most powerful tool to reduce income inequities and poverty by preventing them from repeating themselves from one generation to the next. The distribution of income in Mexico is one of the most uneven in the OECD reflecting widespread poverty and the quasi absence of a middle class. Despite progress, nearly half of Mexico's population still lives in poverty and one person out of six lives in extreme poverty, while the two poorest deciles share less than 5% of the income.

5. This paper focuses on basic and upper secondary education. It does not deal with tertiary education and adult and on the job training which are also key pillars of human capital development in Mexico.⁶ After presenting a global picture of the education system, this paper assesses the efficiency and

they imply real or perceived losses for some "insiders", while their positive impact is less visible in the short term.

5. A.T Kearney's 2004 Offshore Location Attractiveness Index shows for instance that the skills of the labour force are a key disadvantage of Mexico in attracting offshore outsourcing of business services.

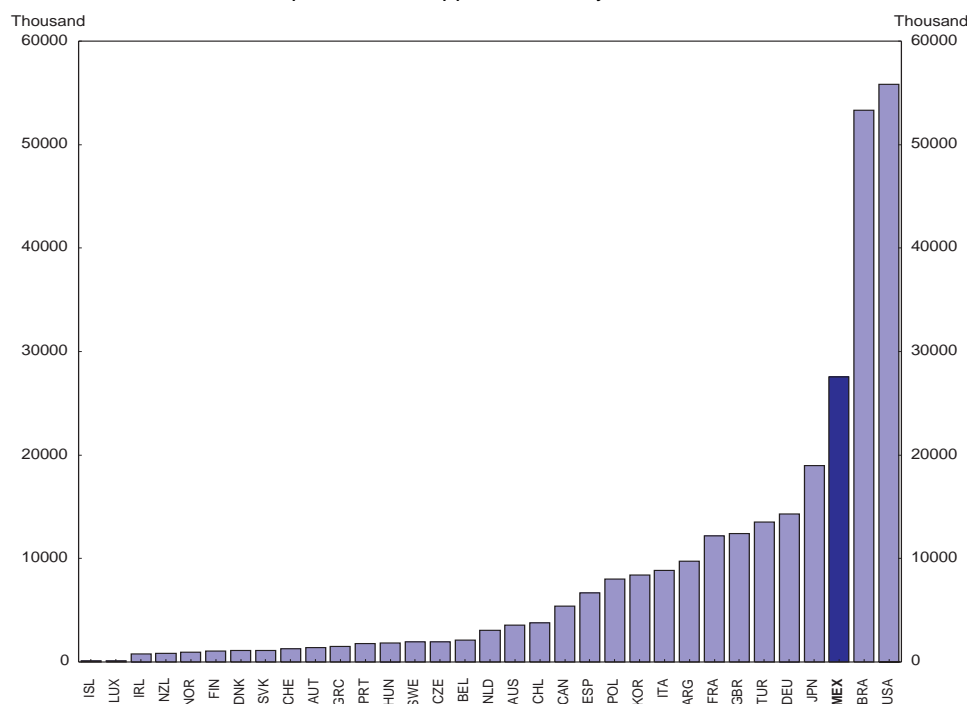
6. Furthermore, given the low educational attainment of the population, repairing the skills of those already in the labour force (including basic literacy) is necessary to increase labour force mobility and to remove unskilled adults from poverty traps. Despite notable progress over the 1990s, less than a quarter of the labour force has ever received some form of training from their employers and, among these, qualified workers have been the main beneficiaries. See *Encuesta Nacional de Educación, Capacitación y Empleo*

equity of education services in Mexico, pointing out the main weaknesses of systems and the current policy responses, and proposing possible steps forward.

Delivering services to one of the largest school-age populations in the OECD

6. Education has been a policy priority for several decades in Mexico, with a focus on increasing school enrolment in primary education and, more recently, in secondary education. As a result, the average duration of schooling was brought up from 2.6 years in 1960 to close to 8 years in 2004, and children entering school now are expected to stay in the system for close to 13 years. The illiteracy rate was reduced from more than a third of the population to 8.5%. This quantitative increase in education is impressive given the huge demographic pressure the education system faced and the difficulty of reaching that part of the population living in small remote rural communities. Overall, the number of students enrolled has risen fivefold since 1960 and education services now cover 30 million students, with 92% of them in basic and upper secondary education (see Annex 1). Measured by the number of students enrolled in these two levels, Mexico has the largest education system in the OECD after the US (Figure 3). For instance, there are more school-aged children in each of the 6 largest Mexican states than in Greece or Portugal.

Figure 3. Number of students enrolled in school in OECD countries and selected Latin America countries
From preschool to upper secondary in 2001



Source: OECD, Education database.

(2001). Access to training has nevertheless increased in the past decade. The 1999 ENESTYC survey shows an increase in the share of the workforce having been trained from 25% in 1992 to 38% in 1999 in the formal manufacturing sector, with increased access for low-skilled workers working in companies that also employ high skilled workers (see Tan, Lopez-Acevedo, 2003).

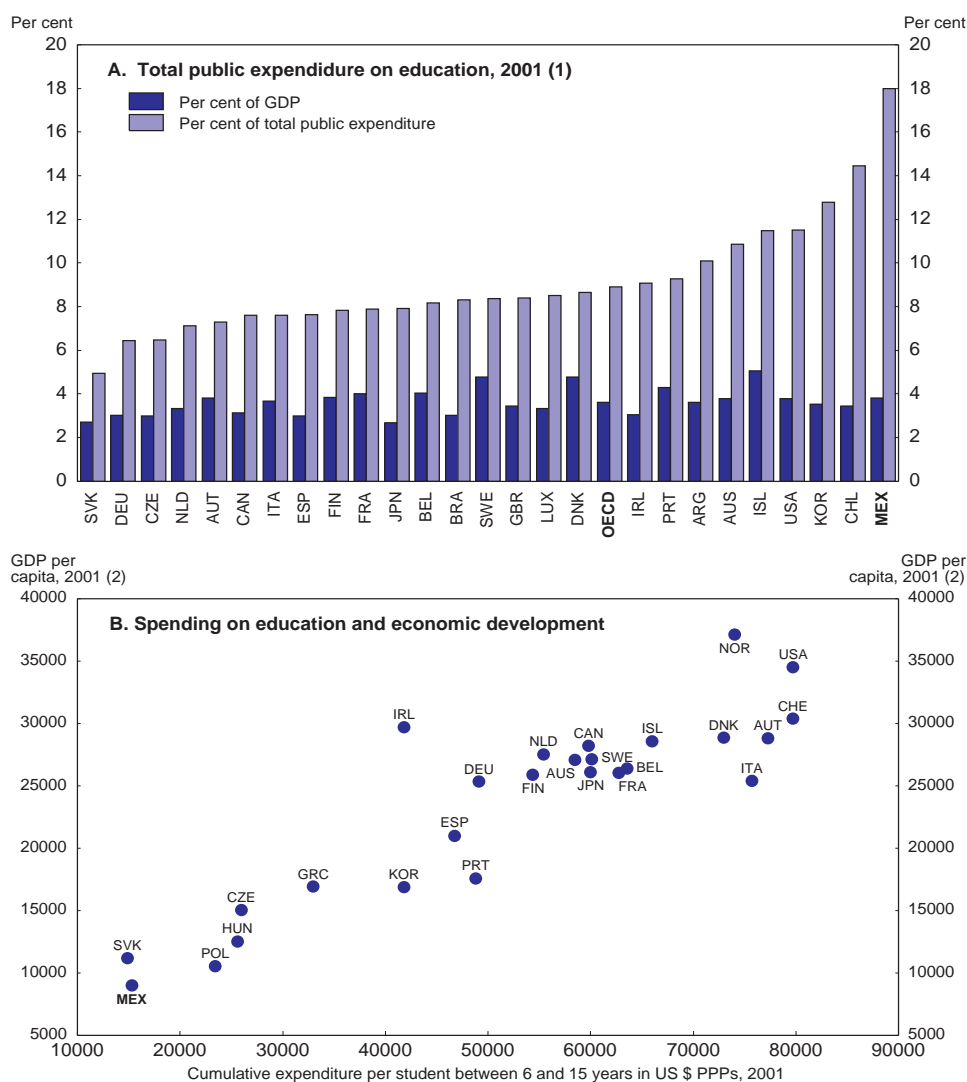
7. Education, especially at the basic education levels, is provided mainly by the public sector. More than 90% of students in basic education are registered in public schools. The share of private schooling is higher in upper secondary education (about 20%), and tertiary education (about one third) but overall it has a much smaller role than in most countries in Latin America.⁷ Both the states and the federation run upper secondary education institutions.⁸ Education is the largest single public expenditure item, which is in line with the challenge it represents for the country (Figure 4). One of the key reforms of the past 20 years was the 1992 decentralisation that gave states the responsibility for providing basic public education services.⁹ The way public financing is channelled to states is described in detail in Joumard (2005). Each state can decide on the rules to allocate spending to lower levels of government. Their autonomy is however limited by the large share of transfers that goes to the payment of wages (see below).

8. In absolute terms, spending on education remains low compared with other OECD countries. Although total spending on primary and secondary education increased by 36% in real terms between 1995 and 2001 and total spending per student increased by 25%,¹⁰ Mexico's cumulative spending on education per 15-year-old student is, at US\$ 15 312, the second lowest among the OECD countries after the Slovak Republic. This is broadly in line with Mexico stage of development but might not suffice to allow rapid catching up. For instance, the current education budget cannot finance the planned generalisation of preschool and the much needed expansion of secondary education. And, beside insufficient coverage, international comparisons point to a lack of all types of inputs in the education system.¹¹ This does not imply that spending more on education will erase the human capital gap. Though a necessary condition for the provision of high-quality schooling, increased spending alone will not guarantee better outcomes. And weaknesses in spending efficiency have to be addressed before spending more. A law was passed by Congress in 2002 targeting public spending on education at 8% of GDP by 2006 (compared with 5.1% in 2001), but it was not accompanied by the in-depth reform which is required to improve the quality of

-
7. The share of private school is much higher in the Distrito Federal (DF) than in the rest of the country (about 20% for basic education for instance). Private schools attract mainly high income groups who turn to private services as a response to low quality of services in public education. Indeed, private schools do much better than public schools at PISA but this effect disappears when the socioeconomic background is taken into account. A key factor behind the lower share of private schooling is that it is not affordable for most of the population. This reflects the magnitude of income inequities as well as the absence of public subsidies (that exist in other Latin American countries, such as Chile and Argentina for instance). A few autonomous schools have appeared in indigenous areas as response to mismatching between public services provided and local needs.
8. The *Primera Convención Nacional Hacendaria* noted some unwelcome competition between the two systems and called for reforms including further decentralisation. The decentralisation has just started for technical upper secondary services but not for the general upper secondary ones.
9. States are responsible for the administration and operational management of basic education and teacher training. They are also in charge of defining the local content of the national curriculum. Municipalities are in charge of maintenance and equipment of schools and states have to provide them with the financial resources to fill these tasks. The Federal Government is responsible for planning and developing programmes in basic education and in teacher training, and updating and distributing free text books. The Federal Government also runs community (CONAFE) and bilingual education programmes as well as the education component of the poverty alleviation programme *oportunidades*. The Distrito Federal (DF) was not concerned by the decentralization process till 2005.
10. The gap between spending per tertiary student and spending per primary student is the largest such gap among OECD countries; it has decreased slightly in recent years, as spending per tertiary student has declined reflecting higher enrolment.
11. OECD, *Education at a Glance* 2004.

services. The powerful and well organised teachers' union, *Sindicato Nacional De Trabajadores De La Educación* (SNTE), gathers 1.4 million education professionals. It is a necessary partner in the reform process, as it is a key player in public education, especially in wage negotiations and assigning teachers' positions. It could play a critical role in improving quality: however, it has so far given priority to raising members' salaries and expanding teaching staff. Continuous dialogue with the union is essential to encourage them to become partners in raising educational standards and outcomes, rather than actors defending current practices and entrenched interests.

Figure 4. Total public expenditure on education
Primary, secondary and post-secondary non-tertiary education



1. Public expenditure includes public subsidies to households for living costs, which are not spent on educational institutions. 2000 for Brazil; 2002 for Chile.
2. In US dollars, at constant prices using 2000 purchasing power parities (PPPs).

Source: OECD, *Education at a Glance* (2004), Table B4.1; *Education at a Glance*, various issues; OECD *National Accounts database*.

9. The 2001-2006 National Education Programme aims at “offering the entire population a quality and relevant education”. There are indeed examples of other OECD countries that have filled the human capital gap within a generation (Korea in particular). This is however a tough challenge for Mexico in a context of limited fiscal resources, fast growth of the secondary-school-age population, sizeable internal and external migration flows, acute income inequities, the existence of widespread poverty including a high proportion in extreme poverty¹² and great cultural and linguistic diversity (for instance about 62 different languages, each with several dialectal variations, are spoken by the 9% indigenous population).¹³

Spending better

10. Even after adjusting for differences in spending, the quality and coverage of education services are poor in comparison with other countries.¹⁴ With the same or only slightly higher spending per student, eastern European countries achieve much better results at PISA (Figure 5). While increases in expenditure cannot be expected to translate immediately into better outcomes and the accumulation of expenditure matters, Mexico’s lag also reflects weaknesses in the allocation of resources and the productive use of these resources. Against the background of limited additional financial resources, efficiency gains are essential so as to spend more in areas where it is needed without increasing the total cost of public education by the same amount.

Improving the allocation of resources¹⁵

11. A striking feature of education spending in Mexico is that most of it goes to current spending and most current spending at primary and secondary levels goes on teachers’ salaries. As a result, the share of salaries in total spending is the highest in the OECD (above 90%) and the shares of capital expenditure and of other current expenditure, such as teaching materials, are consequently well below the OECD average (Figure 6). In recent years, increases in wages have absorbed the lion’s share of expenditure increases, amplifying this feature. Mexico is the OECD country where teachers’ wages increased the most in real terms between 1996 and 2002. The way salaries are negotiated with the union, first at the federal level, and then topped up at the local level in some state level negotiations, contributes to this trend. Paying teachers more makes a teaching career more appealing and should thus attract better professionals in the future, but this does not guarantee quality increases: although low in absolute terms, teachers’ wages relative to GDP per capita are already among the highest in the OECD, as is usual in a lower-income country, but also among the highest in Latin America. Moreover, when teachers’ wages are compared with wages of comparable professionals, they seem fairly paid.¹⁶

12. About 20% of children live in households in which revenues cannot cover nutritional needs and minimum spending on education (INEE 2004).

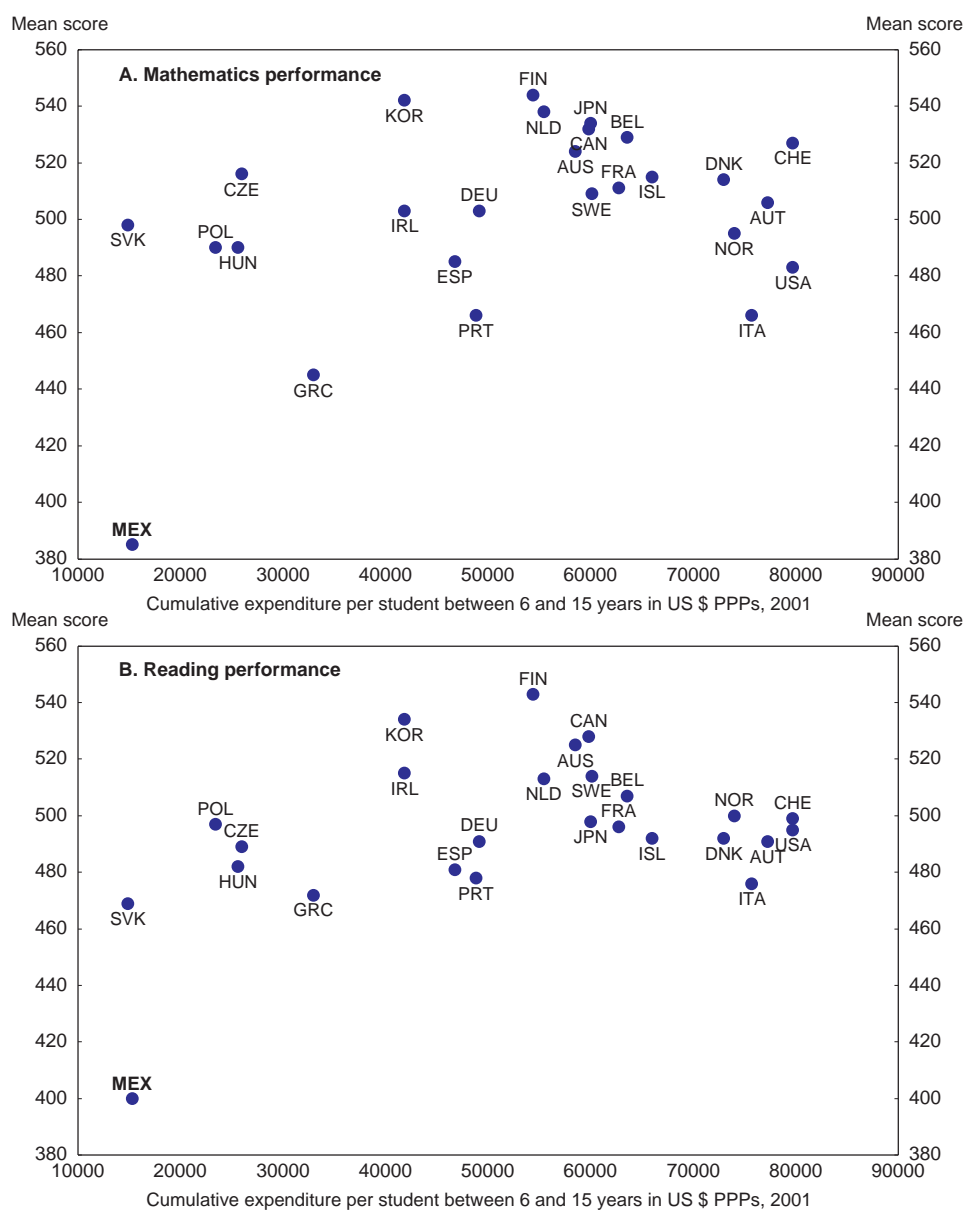
13. Primary education is provided in 43 different indigenous languages. The 6 main indigenous languages spoken in Mexico account for about two thirds of the total indigenous population.

14. Even after correcting PISA results by cumulative expenditure per student, Mexico remains at the bottom of the OECD. See OECD (2004a).

15. Jourmard (2005) provides more details and recommendations on several points related to relations across levels of government.

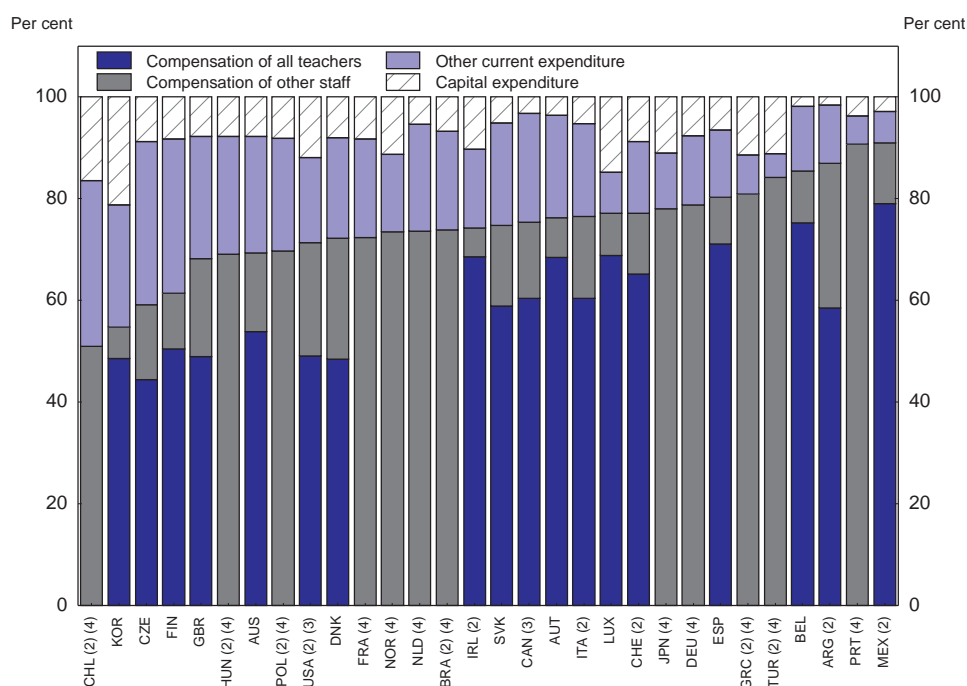
16. Using the INEGI survey López-Acevedo (2004) shows that teachers in basic public schools are better paid early in their professional lives than other comparable individuals and that they face little uncertainty regarding their future standard of living. In these conditions, salary increases are unlikely to be a crucial factor on recruiting and retaining better teachers in the public schools.

Figure 5. Spending per student up to 15 years old and PISA results in 2003



Source: OECD, *Learning for Tomorrow's World: first results from PISA 2003*; OECD, *Education at a Glance* (2004).

Figure 6. Distribution of total and current expenditure on educational institutions¹
By resource category in primary, secondary and post secondary non-tertiary education



1. In 2001. Brazil: 2000; Argentina: 2002.
 2. Public institutions only.
 3. Excludes post-secondary non-tertiary.
 4. The breakdown of compensation of teachers and compensation of other staff is not available.
- Source: OECD, *Education at a Glance* (2004), Table B6.3.

12. Expenditures other than teachers' pay are also essential to the quality of teaching. Besides, they can also play a decisive role for the motivation of teachers by improving their working environment. There is an important backlog of all types of investment from basic equipment to ICT.¹⁷ The role of schools in providing skills in using new technologies is more critical in Mexico, where less than 10% of households have access to a home computer, than in other OECD countries. However, students' access to these is limited, even at the upper secondary level.¹⁸ Although some of the best performing countries at PISA have much higher numbers of teachers per student than Mexico, this is not always the case (for instance Korea

17. For instance 9% of primary schools and 5% of lower secondary schools did not have electricity in 2004. 12% of primary schools and 8% of lower secondary had an earthen floor. Laboratories and library are insufficient at all levels, including upper-secondary. Spending needs in basic infrastructure alone are estimated at 44 billion pesos (which represents 1.5 times total public capital spending on education over the period 2000 and 2004).

18. The ratio of students per computer is among the highest in the OECD and upper secondary students' access to email or internet is far behind. In 2001, Denmark, Sweden, Norway and Finland had a ratio of five students or fewer per computer and, on average, more than 90% of computers were connected to the Internet. Portugal, Spain and Mexico had the highest number of students per computer (over 14), and among the lowest percentages of computers connected to the Internet (53%, 61% and 27%, respectively). Moreover where computers are available, they are often outdated (as mentioned by 70% of principals in Mexico). In many cases, too, teachers do not know how to use the computers as a pedagogic tool (see OECD (2004b)).

has on average as many students per class as in Mexico).¹⁹ On the other hand, they all have a much larger share of their budget allocated to investment or non-wage current expenditure (for instance Australia, Finland and Korea) and better access to ICT. The quality school programme “*escuelas de calidad*” launched in 2001 to increase quality for primary education and covering now 22 000 schools (see Box 1) allocates additional resources to non-wage expenditure, including teachers training, but its scope is very limited. *Enciclomedia* launched in 2004, as well as *Red Escolar* and *Edusat* are other examples of federal programmes directed at non-wage expenditure. In particular, *Enciclomedia* digitalises textbooks for the primary level and connects them to each other and to other sources. The government targets the equipment of all the classrooms for 5th and 6th grades of primary education by the end of 2006. This programme should give incentives to teachers to update their skills.²⁰

Box 1. Quality school programme (*Escuelas de calidad*)

Escuelas de calidad was launched in 2001 to improve the quality of basic education in poor socio-economic areas by giving competitive grants for improvement and encouraging local decision making. It was initially open to urban schools with low-income student intake only, and from 2003 to all schools. It also contributes to allocate additional spending to non-wage items (acquisition of books and teaching materials, investment and/or maintenance of schools equipment and infrastructure, training of teachers and parents). Schools that participate have to design a medium-term project to improve infrastructure and/or quality of education; and meriting projects receive annual grants to be managed directly by the school. The role of parents is also encouraged.

The programme is co-financed by the federal government (which provide more than 50% of the financing), states, municipalities, and private funds. The total annual cost of the programme is 0.42% of the education budget. Each participating school can benefit from a maximum of 300 000 pesos a year (it receives an initial support of 50 000 to 100 000 pesos, and an additional support equivalent to twice the funding gathered by the school and municipality). In 2003/04, 15 360 schools were enrolled, and about 20 000 in 2004/05 (*i.e.* 10% of all schools).

The programme is monitored through impact indicators of student achievements and schools drop-outs. External evaluations are positive. The main limitation of the programme is its limited scope and the fact that most disadvantaged schools, which do not have the skills required nor the co-financing capacity, cannot participate.

See <http://basica.sep.gob.mx/dqdgje/escuelasdecalidad/> for more details, including the external evaluations of the programme.

13. It is virtually impossible to change the structure of expenditure in the short-term, *but it is important that additional financing to education be allocated in priority to non-wage expenditure*. This implies, in particular, resisting pressure for rises in teachers’ real wage and taking advantage of changes in enrolment patterns. When more students attend upper secondary education, it would be efficient to have on average slightly larger size classes than now with better teaching material; therefore the need to hire new teachers will not be fully proportional to the increase in coverage. Similarly, when the cohorts attending basic education shrink, instead of systematically reducing the size of the classes it would be preferable to

19. In fact the PISA survey was unable to detect a significant relationship between class size and student performance.

20. The other two programmes also promote the use of ICT in the education sector. *Edusat*, the Educational Television Satellite Network, supports not only *telesecundarias* but also all levels of education in Mexico with its 9 TV channels and more than 30 thousand located reception points in Mexico. It also covers the south of the United States, and part of Latin America. *Red escolar* was launched in 1998 to promote the use of internet, emails, and educative CD's.

not replace all the retiring teachers so as to create some room to increase other spending. Fundamental changes in the way wages are negotiated in the education system are also necessary to improve the structure of expenditure.

14. Achieving a better balance between spending items would be greatly facilitated if teachers could be moved according to needs, which is not the case. Already, because of demographic changes and the magnitude of external and internal migration flows, some schools are almost empty in some regions, whereas others have classes of over 50 students and are not able to cope with enrolment demand, resulting in the drop-out of students who would have otherwise remained in the system. However, it is very difficult to relocate individual teachers according to needs. Moreover, the way resources are allocated between states and within states hinders any major relocation of inputs. This allocation is not always transparent but rather driven by political interest; when rules exist, they are mainly supply driven, preventing adjustments to compensate for the deficit in inputs and changes in terms of school-age children.²¹ *As a minimum, new teachers' positions should only be created in states that have the largest enrolment lags. Within states, mechanism to ensure a better match between the geographical distribution of resources and needs should be put in place.* Some states, Sonora for instance, have already taken steps to improve this matching and this is very welcome.

15. There are several examples of cost efficient programmes, such as *telesecundaria*, which has been instrumental in increasing enrolment of children in remote areas, or *oportunidades*, which is helping reduce drop-out rates for children from low income families.²² On the other hand, an obvious example of inefficiency in Mexico is pervasive teachers' absenteeism in some areas.²³ Overall, several improvements could help reaching better outcomes for the same money spent.

Improving the selection and training of teachers

16. The selection and training of teachers present some weaknesses that are detrimental to the quality of education. Only the younger generation of teachers has the required level of education: in primary schools for instance, 60% of teachers do not have a bachelor degree (*licenciatura*).²⁴ This is especially the case for indigenous schools and community courses (CONAFE). In secondary education, 70% of teachers hold university degrees but have no training in teaching.²⁵ Until recently there were no entry examinations to teachers schools (*normales*), nor before starting to teach and the selection and hiring of teachers was to a large extent controlled by the teachers' union. There is also anecdotal evidence that some teaching positions have been sold.²⁶ According to OECD (2004c), future teachers are selected through exams in only 13 states while the union decides alone on filling new position openings in 3 states and on filling

21. One exception is the Fund of Multiple Contributions (FAM) which is demand driven but represents only 1% of federal spending.

22. *Oportunidades* began under the name PROGRESA in 1997, with the goal of developing human capital of poor households by increasing the demand of health and education services. Monthly monetary transfers and nutrition support are provided to poor women and children in return for increased use of education and health services. The programme provided financial support to 5 million households in 2004. (See OECD *Economic Survey on Mexico*, January 2004, Annex 3). Parker (2004) finds a significant favourable impact on enrolment as well as on the reduction repetition and drop-out rate.

23. According to Velez and López-Acevedo (2004) several studies have concluded that, in rural areas, only 20 to 55% of prescribed teaching hours are effectively taught.

24. See INEE (2004).

25. See OECD (2004c).

26. For instance, according to a recent survey from *Este País*, one third of teachers admitted that buying teaching positions was a common practice.

vacancies in 13 states; it shares responsibilities with the state authorities of filling new position openings in 11 states and of filling vacancies in 7 states. The National Agreement for Education Quality signed in 2002 by the Ministry of Education and the union foresaw the generalisation of selection exams but it has not yet been implemented in all states. In the same way, some states are moving forward in the selection of future teachers. For instance, following a local agreement with the teachers' union, Chiapas was the first state to impose a test at the end of the teachers' initial training programmes, while Sonora imposes examinations to those entering teachers' schools. As a result, in those states in particular, the teachers' union has started to lose its traditional control over teaching positions. Important efforts have also been made at the federal level to strengthen teacher's initial training. Actions in that direction should continue, both at the states and at the federal level. Besides, there have been efforts to update teachers' skills in the past decade with the implementation of three initiatives the National Program for the Permanent Update of the Teachers of Basic Education (*Pronap*), the National Update Courses (*Cursos Nacionales de Actualización*) and the General Update Workshops (*Talleres Generales de Actualización*), which provide training to half the teaching force every year. On the job training for teachers needs nevertheless to be further strengthened.

Improving teaching practices and contents

17. Teaching practices also play a central role in education outcomes. In Mexico, teaching is still largely based on rote learning rather than comprehension skills and communication, even at the upper secondary level. This reflects weaknesses in the training of teachers mentioned above, the organisation of classes and outdated curricula. Interactions and cooperation among teachers of the same school are very limited except for some pilot projects (Ministry of Education, 2004). Official hours of teaching are longer than in most other OECD countries but the courses are shorter ranging from 20 to 50 minutes in secondary education, with a significant share of the time not devoted to teaching and frequent cancellations of classes. Moreover, curricula are very prescriptive, leaving limited autonomy to teachers and schools. The lack of integration between primary, lower secondary and upper secondary education levels, both in terms of pedagogy and curricula, has contributed to low achievement and high drop-outs.

18. At all levels, there is therefore a need to move from prescriptive curricula to outcome based curricula, as was done in most other OECD countries over the past two decades, and continue to seek a better integration with the other education levels. An important reform of the basic education curriculum and teacher training degrees was undertaken under the Zedillo Government (1994-2000), but it faced implementation problems and has not fully made it to the classroom. The reform of curricula and teaching practices launched by the current administration goes in the right direction. In particular the reform of lower secondary education (*reforma integral de la secundaria*), which will start to be implemented in pilot schools in 2005-2006, seeks a modernisation of the curriculum, a strengthening of the relationships between teachers and students, an increase in the duration of classes, and changes in the organisation of classes over the different grades and in the organisation of teaching. Further efforts are nevertheless needed, in particular in upper secondary education. Upper secondary education has been neglected up to now and enrolment drops sharply at the end of lower secondary. The creation of an under secretariat for upper secondary is a sign that it has rightly become a policy priority, but concrete actions are yet to be taken and they should not be delayed, so as to offer more and better services to coming cohorts.

19. The transition between school and work also presents some weaknesses. The efficiency of technical education and upper secondary varies from one system to the other (*Colegio Nacional de Educación Profesional Técnica (Conalep)* National Technical Professional School, *Centros de Bachillerato Tecnológico Industrial y de Servicios (CBTIS)* Upper Secondary Technological Industrial Centers, and *Centros de Bachillerato Tecnológico Agropecuario (CBTAS)* Upper Secondary Technical Agricultural Centers). Reforms were launched in 2004 to match better their curricula with the educational needs of the productive sector, and those of the students who encounter difficulties in finding jobs in line with their skills once they have finished school.²⁷ In this context, the value of school is not obvious to students and their parents, and despite high private education returns, drop-outs due to dissatisfaction with the school system are frequent.²⁸ To facilitate the transition between schools and work, the attractiveness and quality of technical and vocational education have to be improved. Apprenticeship, which is almost nonexistent in Mexico, could be developed. And, at all levels, interactions with the business sector should be sought.

Efficiency enhancing mechanisms are needed

20. Further improving the selection and training of teachers, the curricula and the organisation of teaching might not be enough. Mexico's education system also lacks most mechanisms identified as efficiency-enhancing in education. Establishing such mechanisms is a necessary condition for the mentioned reforms to be effective. This concerns in particular the devolution of responsibilities within the system and the setting up of appropriate evaluation and accountability schemes.

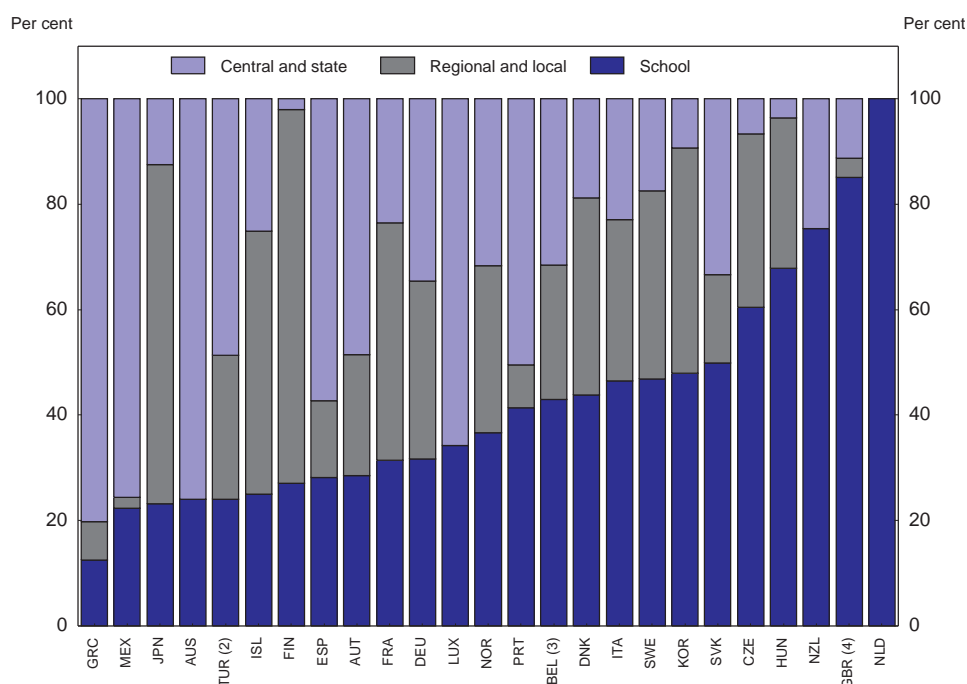
Putting schools at the centre

21. There is a presumption that the devolution of responsibilities to local authorities and schools brings efficiency (see OECD 2004d, and 2005a). Although there is no common model, in most countries that performed well in PISA surveys, local authorities and schools have substantial autonomy to adapt educational content and/or allocate and manage resources (this is the case in England, Korea, Finland, Japan, the Netherlands for instance; Australia on the other hand performed above average at PISA with very little devolution of responsibilities to schools) (Figures 7 and 8). In Mexico, decisions related to education are taken mostly at the central level by the federal government or the state authorities. Schools have some autonomy in the organisation of instruction, but have no autonomy at all in personnel management and resource allocation, and only very limited autonomy in planning and structure. Modest steps have been taken to give them more responsibilities. The *reforma integral de la secundaria* gives some autonomy to both the States and schools in designing curricula. *Escuelas de calidad* promotes deeper changes in responsibility devolution, including in terms of resources allocation. However, the scope of these programmes is limited both regarding the number of schools that participate and the means. Overall more progress is needed in terms of devolution to all schools and local authorities, especially as concerns the use of financial resources and staff management. Such devolution requires accompanying measures. First, schools principals, whose role should evolve from mainly administrative to a role more focused on improving learning processes, need training. Second accountability has to increase.

27. See Mexico's National Education Programme for 2001-2006. The 2004 IMD World competitiveness yearbook also ranks Mexico 55 out of 60 in a survey on how the educational system meets the needs of a competitive economy.

28. 39% of the children of 6 to 14 years who work say that they left school because they did not like to study. This high figure might hide various factors, including the little social value the family grants to the education of children. (INEGI, 2004).

Figure 7. Level of decision making in public lower secondary education
As a percentage of total¹, 2003



1. Data are ranked in ascending order of the percentage of decisions taken at school level.
2. Data refer to primary education.
3. Refers to the French Community.
4. Refers to England.

Source: OECD, *Education at a Glance* (2004), Table D6.1.

Fostering accountability

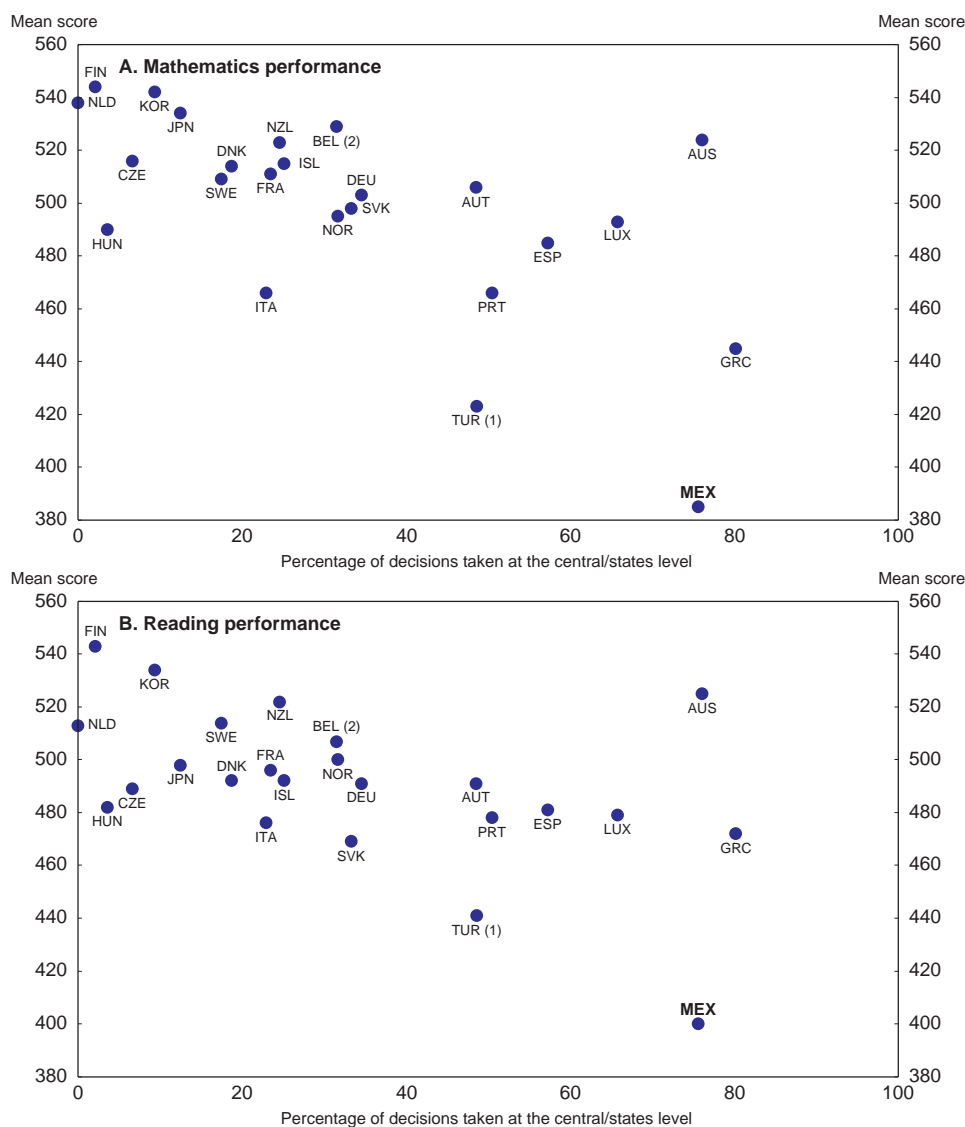
22. In education, a focus on outcomes and good evaluation and accountability systems are key to enhance the efficiency of the system, and are a necessary condition for an efficient devolution of responsibilities. Formulating educational goals and standards, and monitoring compliance are widely considered as prerequisites for raising performance levels. Most of the countries that performed well in PISA have developed such systems. In Mexico, the Ministry of Education (SEP) has been evaluating schools and teachers for many years,²⁹ but the evaluation results have mainly been used for internal information and, until recently, were not systematically made public. The creation of INEE (*Instituto Nacional de Evaluación de la Educación*) in 2002 to evaluate basic and upper secondary institutions is a first step in improving the evaluation system.³⁰ INEE's evaluations are based on samples of schools with the objective of increasing awareness in the public opinion about the weaknesses in the system and helping build a reform agenda. This is extremely important as parents' involvement in schools is still sporadic and

29. Besides, CENEVAL (*Centro Nacional de Evaluación para la Educación Superior*, <http://www.ceneval.edu.mx>) created in 1994 organises national entrance examinations to upper secondary school and tertiary education. The results of these examinations contain also valuable information on the performance of secondary and upper secondary schools and students.

30. INEE (<http://capacitacion.ilce.edu.mx/inee/acerca.htm>) has already published several evaluation reports on basic education. In the case of upper secondary education, the diversity of institutions makes systematic evaluation more difficult. A wide range of evaluation reports are summarised in INEE (2003).

their knowledge of who is responsible for the quality of the education their children receive is limited.³¹ As in most countries, the real challenges lie in: *i*) feeding data on performance back to those who deliver educational services - the teachers and school principals - and to those who use them; *ii*) establishing reward and support systems based on evaluation results; and *iii*) using the information to design policies and improve practices. To this end, with the collaboration of INEE, several States are developing systematic evaluation system at the state level (The Distrito Federal, Nuevo León, Quintana Roo, Jalisco, Guanajuato, Sonora and Chiapas among others) to complement sample evaluation done by INEE.

Figure 8. PISA results and level of centralisation of decision making
2003



1. Data for decision taken refer to primary education.

2. Data for decisions taken refer to the French Community.

Source: OECD, *Learning for Tomorrow's World: first results from PISA 2003*; OECD, *Education at a Glance* (2004).

31. Besides according to the survey by *Este País*, despite the relative effective low quality, most parents seem happy with the education their children receive.

23. Performance linked reward/sanction schemes are very limited. Teacher's absenteeism, although notoriously frequent in rural areas, is barely sanctioned. Neither are there credible sanctions for teacher's weaknesses or outright misconduct despite recurrent anecdotal evidence (the most severe punishment being a relocation to another school under the pressure of parents). Bonuses are given to teachers participating in some specific programmes (*Carrera Magisterial* and the *Programa de Estímulos al Desempeño del Personal Docente de Educación Media Superior y Superior*).³² But *Carrera Magisterial* has severe limitations. It gives higher value to teachers' background characteristics and training than to students' performance, giving little incentive to teachers with very good or very poor backgrounds.³³ Once promoted, a teacher cannot be demoted; this reduces the incentive to perform for teachers who have reached the highest level of *Carrera Magisterial*.

24. Several steps should be considered to improve accountability mechanisms within the education system. They include actions to:

- Define and enforce sanctions for teachers' absenteeism or overt incompetence and review *Carrera Magisterial* so as to make it more effective.
- Improve feedback systems to channel the results of the evaluations to those who deliver educational services (teachers, school principals), manage them (state authorities) and use them (children and parents) and ensure that evaluation results are used to influence policy decisions, school management, and users' choice. States experiences in this field could be monitored so as to define best practices across the federation. And there is a need for better articulating all evaluation agencies and efforts.
- Develop a global incentive system for schools. For instance, Chile has developed a school bonus system that fosters cooperation between teachers while avoiding cream skimming by including both outcomes and the socio-economic intake of the school as parameters of the system.
- Promote a more active role for parents.

25. A possible additional step could be to set up a compulsory national examination at the end of lower-secondary, which could be for instance organised by CENEVAL, INEE or another independent institution.³⁴ Such a examination would have the advantage of: i) giving more incentives to students to perform and complete basic education; ii) motivating teachers to ensure that students are able to reach the required level to pass this exam; iii) giving better signals to potential employers on the level of those who leave schools at the end of lower secondary and thereby facilitate the transition from work to school; and iv) providing better information to parents. Such a measure would have to be accompanied by significant improvements in the way the education system deals with low achievers (as discussed below).

32. Teachers' incentive programmes include the teacher career programme *Carrera Magisterial* created in 1992 to increase quality of basic education by encouraging teachers to continue their professional development. 63% of teachers were enrolled in 2004. An other example is the programme of performance incentives for teachers in upper secondary and tertiary education (*Programa de Estímulos al Desempeño del Personal docente de educación media superior y superior*) introduced in 1997 operates through a point system that is used to calculate cash bonuses given in reward for good performance.

33. According to OECD (2004c), summarizing the views of actors involve in this process, this programme has only encourages greater attendance in training as a way to accumulate points. López-Acevedo (2001) shows that although a teacher's enrolment in the programme has a positive impact on learning achievement, the higher the level reached by the teacher in *Carrera Magisterial*, the lower the student learning achievement.

34. An examination entrance into upper secondary schools is already in place and organised by CENEVAL a non-profit association (EXANI-I). It is proposed on a voluntary basis to students who wish to pursue upper-secondary education and cannot play the role of a final examination at the end of basic education.

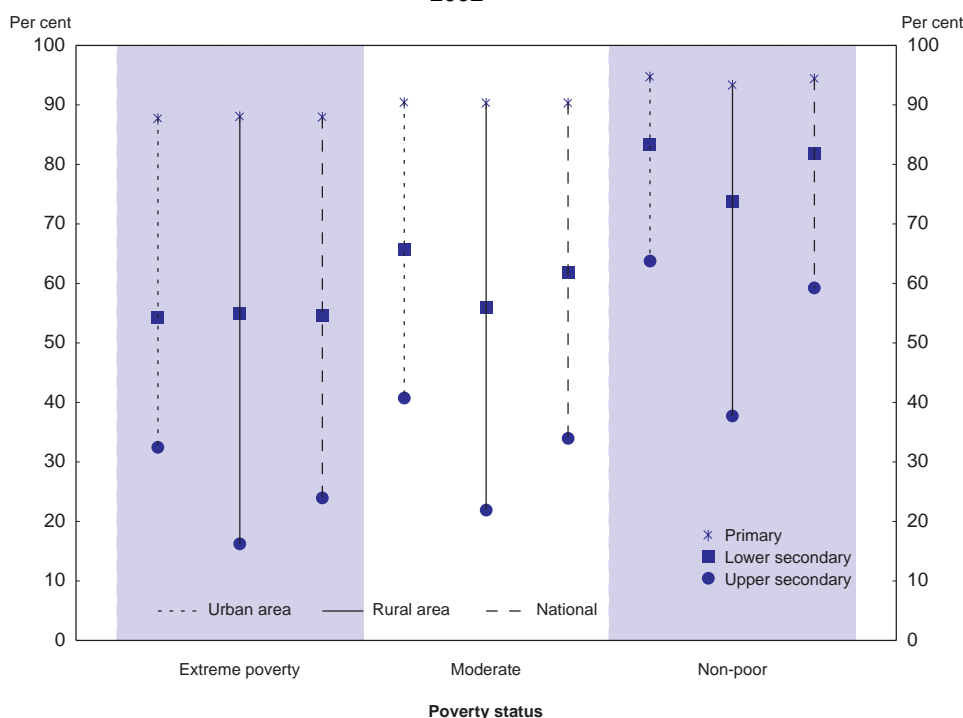
Addressing inequalities in education

26. The distribution of income in Mexico is the most unequal in the OECD and only modest progress has been achieved in reducing inequalities in the last decades (Table A.4). Education, via its direct effect on employment opportunities and income, and its positive impact on health, social and economic integration and access to levels of decision-making, can limit the tendency for inequalities in income to repeat themselves from one generation to the next. Therefore, the education system is central in Mexico to reduce income inequalities and reduce poverty. Equity in education is a wide concept that covers both equity in access to, and ability to stay in the education system, as well as equity in treatment while there (including in terms of quality of the education services provided) and of opportunities when finished.

There are strong inequalities in enrolment and outcomes

27. Despite progress, especially at the primary school level which has become nearly universal, coverage is still incomplete at higher levels, as many drop out before finishing lower secondary schooling especially in poor rural areas.³⁵ Surveys show that students' background is the main determinant of achievement of those who remain in the system (Figures 9 and 10). According to the PISA 2000 survey,

Figure 9. Enrolment rates by poverty status and location
2002



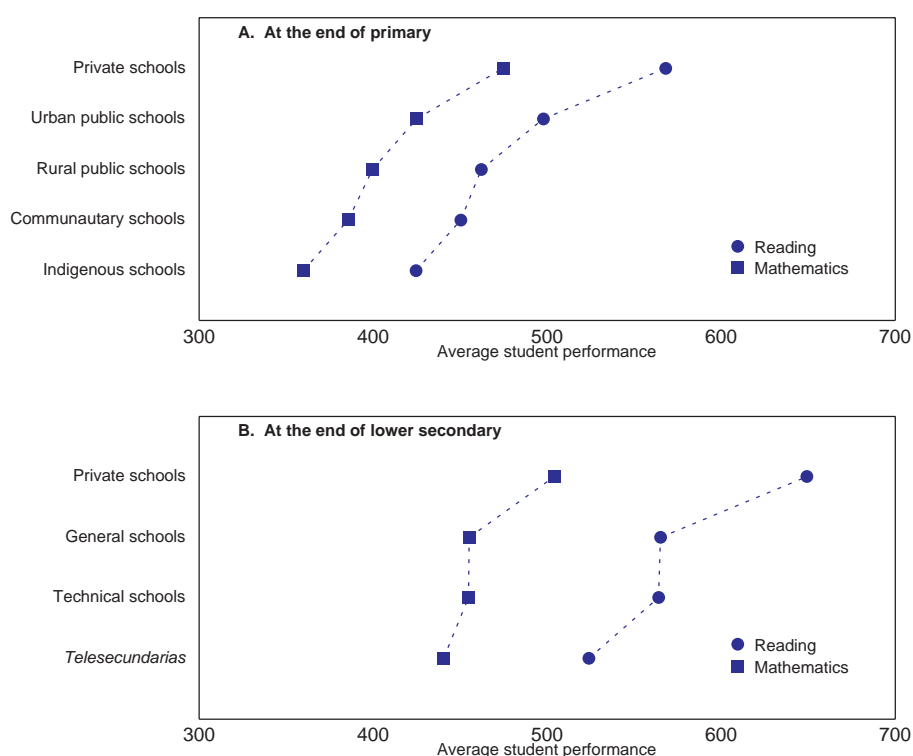
Note: Poverty calculated using SEDESOL's food- and assets-based poverty lines and current income per capita using quarterly income as reported by INEGI. Urban areas are those localities with 2 500 inhabitants or more, using INEGI's classification.

Source: World Bank, *Poverty in Mexico: an assessment of conditions, trends and government strategy* (2004).

35. According to the World Bank (2004) 57% of the 13-17 year old of the bottom quintile were enrolled in schools in 2000 compared to 90% of the top quintile. The gap had nevertheless been reduced slightly compared with 8 years ago. The southern indigenous population has on average only 2.2 years of schooling.

70% of student at the lowest level (level 0) have mothers who either did not go to school or at best finished primary. Fifty-nine per cent of those between levels 2 and 5 have mothers who have at least completed basic education. Eighty five per cent of the students speaking an indigenous language were at level 0 and none achieved level 4 or higher.³⁶ The same evidence appears in national surveys: evaluation of basic education institutions by INEE shows that rural schools, *telesecundaria* and indigenous schools (where children from the poorest backgrounds are enrolled) are the ones which perform the worst. Poor nutrition is often mentioned as a key factor limiting the ability of low-income students to learn.

Figure 10. Results of national tests by type of schools
2004



Source: Ministry of Education, *La Calidad de la Educación Básica en México*, 2004.

36. According to OECD PISA (2003), the impact of the socio-economic background is not high in Mexico compared with other OECD countries but the result is biased by the fact that it refers to the 58% of 15-year-olds that have managed to remain in school and have reached at least the lower secondary level.

Strengthening and correcting existing programmes

28. Several major ongoing initiatives deal with inequities related to social background.

- *Oportunidades* was extended to the poor urban population and to upper secondary students; it is well rated for its effectiveness by development agencies and it is used as a model in other countries.
- *Telesecundaria* (television for lower secondary education) has been instrumental in increasing coverage in remote areas for half of the cost per student of traditional secondary schools (Martínez Rizo, 2004a).
- *Bilingual primary schools* were developed in indigenous areas in the 1980s and 1990s faced with low educational outcomes of indigenous children and as a way to preserve the indigenous cultural heritage. According to Parker, Rubalcava and Teruel (2003), half the indigenous educational disadvantage is explained by a failure to learn Spanish. In bilingual schools, children are taught to read and write in their mother tongue and then in Spanish. International evidence shows that this approach is usually successful.³⁷
- *Preschool education* is being generalised, with the 3 grades of preschool becoming progressively compulsory by 2008. Studies have shown that preschool is a way to ensure that, regardless of their social background, children are ready for school.³⁸ For instance, PISA 2003 finds that participation in preschool generally has a positive impact on educational achievement later on.
- There are specific programmes targeting *children of migrants* who follow their parents and spend part of the year in their home town and the other part in the United States or in another Mexican state and may encounter specific problems of repetitive adaptation.

29. These programmes have helped reduce inequities but only slowly. Because of limited data availability, progress in terms of equity is difficult to quantify. Some progress appears at the state level: terminal efficiency, drop-out and repetition rates in rich and poor states have converged over the past 10 years (Figure 11). Here again, progress was concentrated in primary education and differences in achievement and enrolment remain large from one state to the other in secondary education.

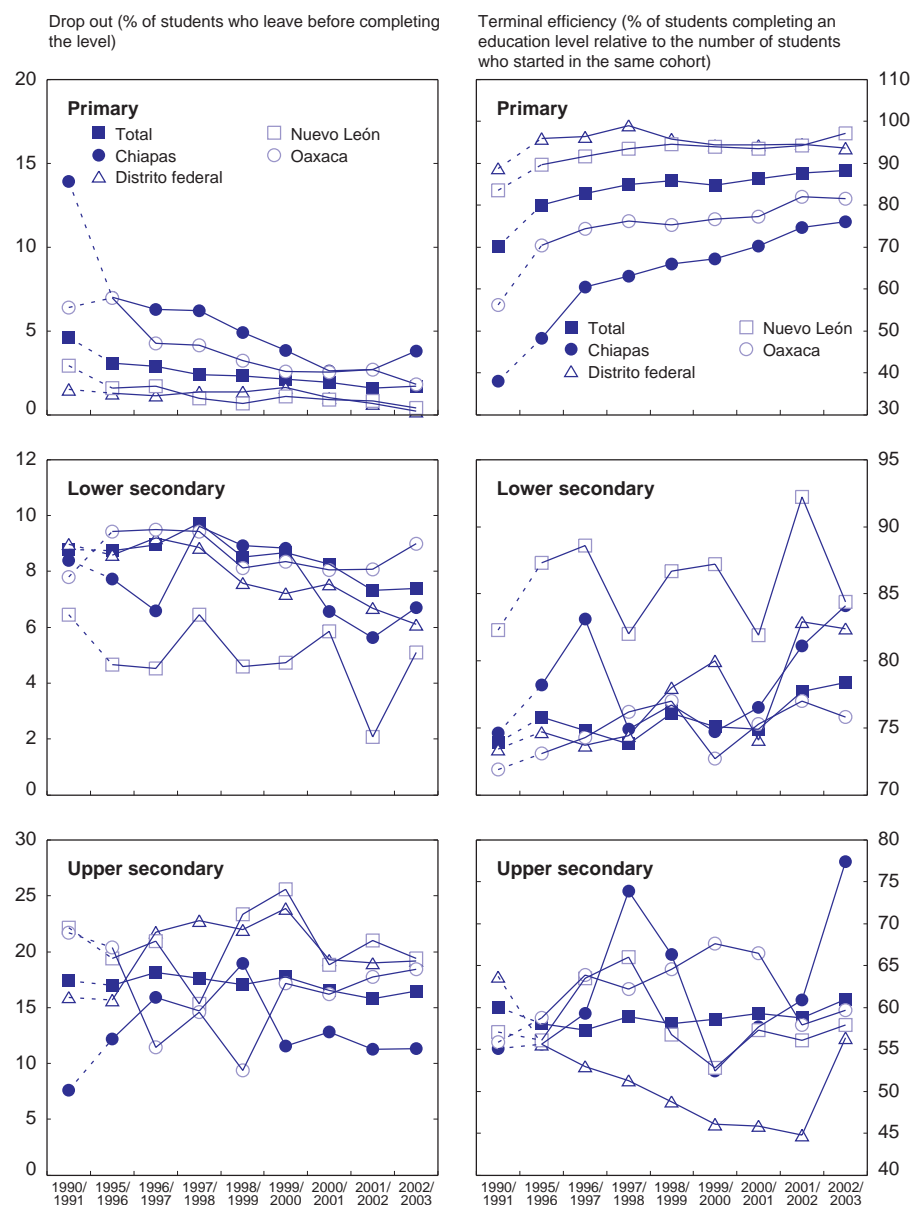
30. Some of these programmes present weaknesses that have to be addressed. Although cost effective, *telesecundaria* is confronted with a serious quality problem, partly linked to the qualification of teachers as most did not attend teacher training institutions. The implementation of bilingual schooling also faces difficulties linked to teachers availability and skills: teachers who can speak the indigenous language of the community to which they are assigned do not systematically master pedagogy nor teaching of Spanish as a second language; besides 12% of the teachers do not speak the language of the community where they work (Schmelkes (2003)). Progress in designing the training of primary teachers with a

37. According to UNESCO (2005), evidence shows that starting instruction in the learner's first language improves learning outcomes cost-effectively, reducing grade repetition and dropout rates. In the most successful models, after the first few years of schooling, a gradual transition to the second language takes place.

38. According to UNESCO (2003), in the early 2000s only 22% of the low-income families surveyed in Mexico City and Chiapas were able to send their children to formal childcare centres compared with 58% of higher-income families.

bilingual-intercultural focus has to be sped up and implementation should not be delayed. Another issue is the transition from primary bilingual education to Spanish-only secondary education. Mechanisms should be developed to smooth this transition and reduce drop-outs, while avoiding a segregation of indigenous students.

Figure 11. Education performance in selected Mexican States
Per cent



Source: Ministry of Education, *La Calidad de la Educación Básica en México*, 2004.

31. The new legal obligation to provide 3 years of compulsory pre-school education by 2008 poses even more profound problems. To reap the benefit of the generalisation of preschool, the teaching has to be relevant and of good quality - and so must be the subsequent primary and secondary schooling. If not, most of the potential gains of making preschool compulsory will be lost. In 2001, the Ministry of Education considered that preschool teaching in Mexico did not match the diversity and needs of children. Conditions

to ensure quality and relevance of preschool education for all children are still not met now despite efforts to modernise the curriculum since 2002. According to the OECD note on early childhood education and care for Mexico (OECD, 2005b), although official curricula are now more or less in line with recommended methods, teaching practices are not, as a result of excessive child-to-staff ratios and lack of supervision and support to teachers; important additional efforts are needed to raise the quality of existing preschool programmes. In these conditions, pushing all the 3 to 5 years old into preschool is likely to be at the expense of quality; it will also increase already existing inequities between the quality of preschool received by the most advantaged and disadvantaged groups and between rural and urban areas. Moreover, even without taking into account this quality issue, given the overall budget constraints,³⁹ preschool generalisation diverts scarce resources from the necessary expansion of the coverage and quality of secondary education, where quality is still poor and coverage needs are increasing, due to demographic pressures and the success of past policy to increase enrolment in primary education.⁴⁰ Several states have already mentioned that they will have to reduce money allocated to secondary education in order to finance preschool expansion and that even then they will not be able to enrol all 3-5 year olds by 2008. Besides, Mexico will be only the OECD country where preschool is compulsory. In this context, for now, the scope of the programme should be limited, focusing only on the last grade of preschool or targeting the areas where preschool is most needed - *i.e.* for children from low-income (and generally low-education) families.

Improving the distribution of inputs

32. While students' socio-economic background explains a large part of drops-outs and difficulties at school, the uneven distribution of inputs to schools, with schools in low income areas being characterised by poor public infrastructure and less qualified teachers, also plays a role (see Treviño Villarreal and Treviño González (2003)).⁴¹ Beside the unequal allocation of public resources across schools, for which only anecdotal evidence exists, further inequities are generated *de facto*. In high and middle income areas, parents usually finance what cannot be paid for by the state (including computers and school renovation) and are able to bring pressure to have non-performing teacher transferred to other schools. On the other hand, rural areas (in particular indigenous schools and *telesecundarias*), where parents' involvement is low, cumulate poor infrastructure, poorly qualified and often absent teachers and students from difficult backgrounds. Besides, the financial incentive to attract and keep good staff in remote disadvantaged areas is ineffective and should be reviewed.⁴² The fundamental issue remains the allocation of financial resources in the system, which should be more based on needs.

Addressing needs of low achievers

33. The countries that perform best in PISA (in particular the top performer Finland) are those which devote most efforts to not leaving under-performing students behind. Apart from scholarships for low income students via *oportunidades*, there are no clear mechanisms in Mexico to take care of low achievers and prevent repetition and drop-outs. Teaching is usually provided for the average student and is not able to respond to class diversity in terms of age, interest and ability (see Velez, López-Acevedo, 2004). Repetition is seen as the best way to correct lags in learning, and students repeating a class do not receive any special support. However, empirical evidence has shown that grade repeating has negative or no

39. See the 2005 *OECD Economic survey on Mexico*.

40. The generalisation of preschool requires enrolling the creation of about 2.5 million places for children in preschool by 2008 (on the top of the 3.6 places existing in 2002) (OECD 2005b).

41. OECD (2004b) shows also that Mexico is, with Switzerland, the country where the disparities in student to professional personnel are the highest, with the ratios of student per teachers in the worst staffed schools over three times higher than in the most generously staffed schools.

42. Example of such schemes in other OECD country can be found in *OECD Education at a glance 2004*.

consequence at all and several countries have abandoned such policies (the Nordic countries and the UK for instance).⁴³ In Belgium, a key difference between the successful system in the Flemish community and the less successful one in the French community is precisely the attitude *vis-à-vis* repetition. Efforts are needed to replace systematic repetition by special support to students in need. The reduction of repetition rates would increase the number of places available in schools to meet demand and it would result in more efficient spending. Increased devolution of responsibilities to schools, as recommended above, should also help them to adapt to diverse environments, and thereby reduce some inequities.

Overall assessment

34. Overall, despite an impressive increase of enrolment, some clear deficiencies of the education system are behind the limited progress in closing the human capital gap. Resources are insufficient given the needs, but more importantly they are inefficiently allocated and used; curricula do not match students and labour market needs; equipment is in short supply, there are weaknesses in teacher training, school administration and teaching practices. The authorities, both at the federal government and state level, seem to have a clear understanding of the weaknesses of the system; these are clearly stated in official documents (by the Ministry of Education and INEE) and are more and more widely communicated to parents. The government has launched some reforms to improve the performance of the system and most projects are going in the right direction and should produce positive results on the quality and efficiency of the system. The quality school programme, for instance, constitutes a major step in introducing a new approach in education by giving more responsibilities to schools, promoting quality improvement and directing additional spending to non-wage expenditure. It is hoped that this could trigger a change in the education culture in Mexico. Encouraging experiments to improve quality, efficiency and equity are also taking place at the states level. In many cases, agreements on reform have been easier to negotiate at the sub-national level. The federal government should ensure that successful experiences are shared among states.

35. There is nevertheless a risk that current efforts will mainly expand further the coverage at lower level but without the quality improvement needed for the country to reap its full benefit, or in some cases at the detriment of quality. To facilitate effective implementation of the reform programme aiming at offering the entire population a quality and relevant education, it is important that the global strategy mixes measures with a immediate and visible impact with deeper efficiency and quality reforms which have more diffuse benefits and are likely to raise resistance or opposition. This has not been the case so far. The recent decision to increase spending on education by several percentage points of GDP and to generalise preschool were taken without putting in place the right incentives for efficient delivery of services. Efforts are needed to better promote and discuss the advantages of the reforms with education professionals, so that they can feel that they “own” the reforms rather than having these imposed without consultation.

36. Progress towards better quality education could be facilitated by pressure from civil society, including from those who have immigrated to the US and already support Mexico’s development through remittances. This implies continuing to enhance the evaluation system and dissemination of these evaluations. Besides, the union can play a critical role in increasing quality. It has to be a partner in the reform process. So far, it has focused on promoting teachers wages and increasing teaching positions. But, as shown in this paper, the quality of education in Mexico does not depend only of these parameters. The union can also help change the culture and put an end to unacceptable practices such as the sales of teaching position.

43. See OECD (1998) on this issue and on the use of repetition in Mexico can be found in Martínez Rizo (2004b).

Box 2. Summing up of the main recommendations in education

Better balance spending

- *Find a better balance between wage and non-wage expenditure:* Resist pressure for unjustified rises in teachers' real wage. Take advantage of changes in enrolment patterns to reallocate a larger share of additional resources to non-wage items that, although essential to quality, are lacking. Give absolute priority to states that have the largest enrolment lags when opening new teaching positions.
- *Review mechanism of financial and human resource allocation* so as to make it more in line with needs.
- *Give more priority to lower and upper secondary education* where quality does not match the needs of students and the labour market and where enrolment is bound to increase following demographic pressures and the success of past policy in making primary education universal.
- *Review the generalisation of preschool.* This programme is diverting resources away from the needed expansion of secondary schooling and its potential gains might be lost since it is still doubtful that the children who really need it can be enrolled in good quality and relevant preschool programmes. For now, the scope of the programme should be limited to the last grade or to targeting children from low-income background.

Ensure better value for money

- *Improve the quality of teachers.* In consultation with the professionals of the sector, continue to strengthen teachers' selection and training. Define and enforce sanctions for teachers' absenteeism and overt incompetence. Ensure that the financial incentive scheme, *Carrera Magisterial*, fulfils its aim.
- *Continue to modernise curricula and teaching methods,* seek a better integration between education levels as well as more interaction with the productive sector.
- *Devolve more responsibilities at the school level* to adapt to local conditions and needs, while raising the accountability of all participants in the education system.
- *Ensure that evaluation results are used* to influence policy decisions, school management, and users' choice.
- *Promote a more active role for parents, and civil society* in general.
- *Consider the setting up of compulsory national examination at the end of lower-secondary.*

Address inequity in the education system in a better way

- *Enhance the quality of indigenous bilingual education and telesecundarias,* improving teachers training and selection.
- *Set up a better framework to take care of low achievers* instead of relying only on repetition to repair lags in learning.

ANNEX 1. BACKGROUND INFORMATION

Table A.1. Panorama of the education system (2003/2004)

Educational level	Compulsory	Theoretical age	students (1 000)	teachers (1 000)	schools (1 000)
Basic education	Yes	3-14	24 304.4	1 060.1	205.5
Pre-school	Yes ^a	3-5	3 742.7	169.1	76.1
Primary	Yes	6-11	14 781.3	559.5	99.0
Lower secondary (<i>secundaria</i>) ^b	Yes ^c	12-14	5 780.4	331.6	30.3
Upper secondary	No	15-17	3 443.7	242.1	11.9
(<i>educación media superior</i>)		-			
Technical occupational		-	359.9	31.6	1.6
Senior High School <i>bachillerato</i> ^d		-	3 083.8	210.6	10.3
Higher education	No	18-24	2 322.8	239.9	4.6
Higher technical		-	72.3
Teacher's college		-	155.5	17.4	0.5
University		-	1 951.3	199.1	2.7
Graduate school		-	143.6	23.5	1.3
TOTAL			30 070.9	1 542.2	222.0

a. Pre-school education was made compulsory from 2004 school year onwards, starting with the last year. Two years of pre-school will be compulsory in 2006, and 3 years in 2008.

b. Includes secondary for workers and *telesecundaria*.

c. Since 1993.

d. Includes general and technological senior high school.

Source: Ministry of Education.

Table A.2. Enrolment rates 2003/2004

	Gross ^a	Net ^b
Preschool (4-5)	87.2	76.2
Primary (6-11)	108.4 ^c	99.4
Lower secondary (12-14)	86.1	72.4
Upper secondary (15-17)	52.9	39.5

a. Gross = population in the level / population of theoretical age.

b. Net = population of theoretical age in the level / population of theoretical age.

c. Includes students older than 11 and younger than 6.

Source: Ministry of Education.

Table A.3. Spending per student (annual spending, 1 000 current pesos)

	2000	2001	2002	2003	2004
Total	11.1	12.6	13.4	14.2	14.9
Public	10.2	11.7	12.4	13.1	13.8
Federal:					
Preschool	7.6	8.4	8.9	9.4	9.9
Primary	6.9	7.7	8.1	8.5	9.0
Lower secondary	10.6	11.7	12.4	13.1	13.8
Technical	10.7	11.8	12.6	13.1	13.7
Upper secondary	15.3	16.9	18.0	18.8	19.6
Tertiary	34.1	37.7	40.3	42.0	43.8

Source: Ministry of Education.

Table A.4. Income distribution¹

	2004		1992	
	Percentage	Cumulative percentage	Percentage	Cumulative percentage
Household deciles				
I	1.58	1.58	1.55	1.55
II	2.89	4.47	2.73	4.28
III	3.91	8.38	3.70	7.98
IV	4.91	13.29	4.70	12.68
V	5.97	19.26	5.74	18.42
VI	7.29	26.56	7.11	25.53
VII	9.05	36.65	8.92	34.45
VIII	11.62	47.27	11.37	45.82
IX	16.16	63.43	16.02	61.84
X	36.57	100.00	38.16	100.00
Total	100.00		100.00	
Gini coefficient²				
Total		0.460		0.475
Monetary income		0.479		0.509
Non-monetary income		0.557		0.540
For deciles I to IX only		0.340		0.347

1. Average household income includes monetary receipts and non-monetary, including auto-consumption. Households in the first four deciles (which account for about half of the population) had an average income below three times the minimum wage in 2004, which corresponded broadly to the (third) poverty line.

2. Gini coefficients on a per capita income basis would be higher, revealing a more unequal distribution, because household size is on average higher in low-income families.

Source: INEGI, Income and Expenditure Survey of Households (*Encuesta Nacional de Ingresos y Gastos de los Hogares*), third quarter 1992 and third quarter 2004.

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